

# Proposed Plan Change 78 - Intensification

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Proposed Plan Change 78 - Intensification to  
the Auckland Unitary Plan (Operative in part)

**Residential and Business Zones SECTION 32  
EVALUATION REPORT**

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## Attachments and appendices

**Attachment 1: Part 1**     *Proposed Plan Change 78 – Intensification: Technical Background Report*

**Appendix 1:** Boffa Miskell (2022). *6 Storey Apartment Buildings Auckland Case Studies*; Auckland: Boffa Miskell

**Appendix 2:** Jasmax (2022). *Apartment – Residential Development Testing*; Auckland: Jasmax

**Attachment 1: Part 2**     **Appendix 3:** Auckland Council (2022). *Terrace Housing-Residential Development Study*; Tamaki Makaurau Design Open Plans & Places, Auckland Council

**Appendix 4:** Jasmax (2022). *Building Height Memo*; Auckland: Jasmax

**Appendix 5:** Auckland Council. *Width of an average of ‘typical’ residential site within walkable catchment in Auckland*; UDU Research, October 2021

**Appendix 6:** Auckland Council. *Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment*, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

**Attachment 2:**     *Policy cascades:*

- *H3A Residential – Low Density Residential zone*
- *H5 Residential – Mixed Housing Urban zone*
- *H6 Residential – Terraced Housing and Apartment Buildings zone*

**Attachment 3:**     *Residential – Low Density Residential zone (marked up version of Residential – Single House zone that it replaces)*

## 1 Introduction

1. The purpose of Proposed Plan Change 78 - Intensification (“PPC78”) to the residential and business chapters of the Auckland Unitary Plan (Operative in Part, November 2016) (“AUP(OP)”), along with consequential changes to the definitions and E38 Urban Subdivision Chapter is to respond to the National Policy Statement on Urban Development 2020 (May 2022 version) (“NPSUD”), Resource Management – Housing Supply and Other Matters Amendment Act 2021 (“RMA”) and Resource Management Act 1991 (“RMA” or “the Act”) by:
  - Incorporating the Medium Density Residential Standards (“MDRS”) as per Schedule 3A of the RMA;
  - Giving effect to Policy 3(b) and Policy 3(c) by enabling at least six storey development in specified locations;
  - Giving effect to Policy 3(d) by enabling densities and heights commensurate to the level of commercial activities and services in areas within and adjacent to neighbourhood, local and town centre zones;
  - Making consequential changes as necessary to support the implementation of the RMA.
2. This section outlines how the Auckland Council’s response to the NPSUD, and RMA has been evaluated. The rest of this report will follow the evaluation approach described in Table 1 below. In accordance with s32(6) of the RMA and for the purposes of this report:
  - the ‘proposal’ means the Council’s proposed method to implement Policy 3(b), 3(c) and 3(d) of the NPSUD, MDRS and consequential changes and includes:
  - the ‘objectives’ means the objective of the plan change, which is to implement the NPSUD; and
  - the ‘provisions’ means the proposed text changes to the AUP(OP).

Table 1: evaluation approach

Sections of this report	Evaluation Approach
<b>Section 2: Overview and Purpose</b>	Explains the legislative background and purpose of this section of the IPI. This section outlines the reasons for PPC78, the scope of changes and provides an overview of proposed changes.
<b>Section 3: Issues</b>	Explains the resource management issues and why there is a need to resolve them. It also addresses the scale and significance of the issues.

<b>Section 4: Development and evaluation of options</b>	In accordance with section 32(1)(b) and (2) of the RMA, this section examines whether the options appropriately achieve the objectives of the AUP(OP) and the sustainable management purpose of the RMA. The options are assessed by their efficiency and effectiveness, costs, benefits, and risks to resolve the RMA issue.
<b>Section 5: Evaluation of objectives and provisions</b>	Evaluates the relevance of PPC78 to Part 2 (sections 5-8) and other relevant parts / sections of the RMA.  Provides an evaluation of the proposed provisions in terms of effectiveness and efficiency in achieving the objectives.
<b>Section 6: Development of the plan change</b>	This part of the report outlines the methodology and development of the proposed provisions within PPC78.
<b>Section 7: Conclusion</b>	Concludes that PPC78 is the most efficient, effective and appropriate means of addressing the resource management issues identified.

## 2 Overview and purpose

3. The following section sets out the legislative context behind PPC78 and provides an overview of the proposed amendments in response to key legislative drivers. In summary, the key legislative drivers of the PPC78 are to:
  - Incorporate the Medium Density Residential Standards (MDRS) as per Schedule 3A of the RMA;
  - Give effect to Policy 3(b), 3(c) and 3(d) as per the NPSUD; and
  - Undertake consequential changes as per (s80E(1)(b)(iii) and s80E(2) of the RMA) to objectives, policies, standards, methods and zones in order to achieve quality built environment outcomes as directed under Section B2.3 of the Auckland Unitary Plan Regional Policy Statement (the RPS).

### 2.3 Incorporate Medium Density Residential Standards (MDRS)

4. The RMA requires MDRS to be incorporated into relevant residential zones as a permitted activity. This includes the objectives, policies and density standards set out in Schedule 3A of the RMA. In incorporating MDRS the Council is also required to consider any related provisions and qualifying matters which may exempt or make MDRS less permissive in certain locations.
5. In introducing MDRS into the RMA the government is seeking to increase the density of urban areas to give people more choices about where they can live affordably in a wider variety of housing types that have good access to jobs, transport, and community facilities.
6. The requirements will enable landowners to build up to three houses of up to three storeys as a permitted activity on most sites. This includes alterations to existing

buildings. It is intended to result in fewer resource consents being required and a simpler process.

## **2.4 Give effect to Policy 3, NPSUD**

7. The RMA requires Auckland as a tier 1 territory to give effect to policy 3(b), policy 3(c) and policy 3(d) which read as follows:

*Policy 3: In relation to tier 1 urban environments, regional policy statements and district plans enable:*

*(b) in metropolitan centre zones, building heights and density of urban form to reflect demand for housing and business use in those locations, and in all cases building heights of at least 6 storeys;*

*(c) building heights of at least 6 storeys within at least a walkable catchment of the following:*

*(i) existing and planned rapid transit stops:*

*(ii) the edge of city centre zones:*

*(iii) the edge of metropolitan centre zones; and*

*(d) within and adjacent to neighbourhood centre zones, local centre zones, and town centre zones (or equivalent), building heights and density of urban form commensurate with the level of commercial activities and community services.*

## **2.5 Consequential Amendments and Qualifying Matters**

8. As provided for under s80E(1)(b)(iii) of the RMA, PPC78 considers amendments to and inclusion of related provisions, including objectives, policies, rules, standards, and zones, that support or are consequential to the MDRS and intensification required by Policies 3(b), 3(c) and 3(d). The proposed consequential changes address a range of topics, including but not limited to, qualifying matters.
9. The AUP(OP) currently includes a range of provisions that seek to achieve key directions for urban growth set out in the Auckland Unitary Plan Regional Policy Statement (RPS). In particular, the provisions seek to enable intensive development whilst achieving a quality built environment (Part B2.3 of the RPS). This is implemented through, the AUP(OP) zones and their objectives, policies, standards and other consenting requirements that manage activities and development including building bulk, height and design.
10. The evaluation of the proposed consequential amendments and qualifying matters includes an assessment of how the AUP(OP) will continue to achieve a 'quality compact urban form' and 'quality built environment'.

## **2.6 A high-level summary of scope of PPC78**

11. PPC78 is contained within the IPI and amends the following chapters of the AUP(OP) in response to the intensification requirements of the RMA:
- H3: Residential - Single House Zone (SHZ);
  - H4: Residential - Mixed Housing Suburban Zone (MHS);

- H5: Residential - Mixed Housing Urban Zone (MHU);
  - H6: Residential - Terraced Housing and Apartment Zone (THAB);
  - H9: Business – Metropolitan Centre Zone;
  - H10: Business - Town Centre Zone;
  - H11: Business - Local Centre Zone;
  - H12: Business - Neighbourhood Centre Zone;
  - H13: Business – Mixed Use Zone;
  - H15: Business – Business Park Zone; and
  - E38: Auckland-wide Subdivision.
12. PPC78 is part of an integrated package of changes to implement and incorporate intensification provisions of the RMA into the AUP(OP). Table 2 below provides a synopsis of the extent and scope of the proposed changes considered in this evaluation report.

Table 2: Summary of the proposed key changes and regulatory scope for change

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Insert MDRS	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(b) or Policy 3(d)	Consequential changes
<b>H6: Terraced Building and Apartment Zone</b>					
Incorporate the MDRS into the Zone.	ss77G(1) requires that a relevant residential zone provides for MDRS as a permitted activity where it complies with the density standards.	Yes.	Yes.	Yes, Policy 3(d) where it relates to development outside walkable catchments.	Yes.
Retain and improve building heights outside walkable catchments.	Amendments to height in relation to boundary standards to better enable heights up to 5 storeys.				
Increase building heights in walkable catchment of at least 6 storeys.	Enable development of at least 6 storeys within walkable catchment through amendments to height and height in relation to boundary standards to enable this.				
Incorporate additional standards for 4 or more dwellings.	Consequential changes are proposed to ensure that 4 or more dwellings are provided for as a restricted discretionary activity.				



Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Insert MDRS	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(b) or Policy 3(d)	Consequential changes
Consequential and related updates in response to , qualifying matters, and including deletions, and additions to notification clauses standards, matters of discretion and assessment criteria.	Other amendments proposed to align with MDRS, 6 storey buildings and achieve quality built environment outcomes.				
<b>H5: Residential – Mixed Housing Urban Zone</b>					
Incorporate the MDRS into the Zone.	ss77G(1) requires that a relevant residential zone provides for MDRS as a permitted activity where it complies with the density standards.	Yes.	Residential – Mixed Housing Urban is not applied in walkable catchments.	No – MHU does not provide a level of commercial activity or community services that could support increased height or density anticipated by Policy 3(d).	Yes.
Incorporate additional standards for 4 or more dwellings.	Consequential changes are proposed to ensure that 4 or more dwellings are provided for as a restricted discretionary activity.				
Consequential and related updates in response to qualifying matters, and including deletions, and	Other amendments proposed to align with MDRS and achieve quality built environment outcomes.				

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Insert MDRS	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(b) or Policy 3(d)	Consequential changes
additions to notification clauses standards, matters of discretion and assessment criteria.					
<b>H9: Business – Metropolitan Centre Zone</b>					
Enable building heights of at least 6 storeys where adjoining lower intensity zones	Enable development of at least 6 storeys at the edges of the zone through amendments to height in relation to boundary standards	No.	Not applicable.	Yes, Policy 3(b) – AUP(OP) generally sufficient except HIRB	Yes.
Consequential and related updates in response to qualifying matters, and including deletions, and additions to standards, matters of discretion and assessment criteria.	Other amendments proposed to align with Policy 3(b) requirements and achieve quality built environment outcomes.				
<b>H10: Business - Town Centre Zone.</b>					
Enable building heights of at least 6 storeys in walkable catchments.	Enable development of at least 6 storeys within walkable catchment through amendments to height standards to enable this.	No.	Yes.	Yes (Policy 3(d) but no change required – AUP(OP) provisions are sufficient.	Yes.
Consequential and related updates in response to qualifying matters, and including deletions, and	Other amendments proposed to align with Policy 3(c) requirements and achieve				

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Insert MDRS	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(b) or Policy 3(d)	Consequential changes
additions to standards, matters of discretion and assessment criteria.	quality built environment outcomes.				
<b>H11: Business - Local Centre Zone;</b>					
Enable building heights of at least 6 storeys in walkable catchments	Enable development of at least 6 storeys within these areas located in walkable catchments through amendments to building height standard.	No.	Yes.	Yes (Policy 3(d) but no change required – AUP(OP) provisions are sufficient.	Yes
Consequential and related updates in response to qualifying matters, and including deletions, and additions to standards, matters of discretion and assessment criteria.	Other amendments proposed to align with Policy 3(c) requirements and achieve quality built environment outcomes.				
<b>H12: Business – Neighbourhood Centre Zone;</b>					
Enable building heights of at least 6 storeys in walkable catchments	Enable development of at least 6 storeys within these areas through amendments to building height standard.	No.	Yes.	Yes (Policy 3(d) but no change required – AUP(OP) provisions are sufficient.	Yes
Consequential and related updates in response to qualifying matters, and including deletions, and additions to standards,	Other amendments proposed to align with Policy 3(c) requirements and achieve				

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Insert MDRS	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(b) or Policy 3(d)	Consequential changes
matters of discretion and assessment criteria.	quality built environment outcomes.				
<b>H13: Business – Mixed Use Zone;</b>					
Enable building heights of at least 6 storeys in walkable catchments	Enable development of at least 6 storeys within these areas that are within walkable catchments through amendments to building height standard.	No.	Yes.	Yes (Policy 3(d) but no change required – AUP(OP) provisions are sufficient.	Yes
Consequential and related updates in response to qualifying matters, and including deletions, and additions to standards, matters of discretion and assessment criteria.	Other amendments proposed to align with Policy 3(c) requirements and achieve quality built environment outcomes.				
<b>H15: Business – Business Park Zone</b>					
Enable building heights of at least 6 storeys in walkable catchments	Enable development of at least 6 storeys within these areas through amendments to building height standard.	No.	Yes.	Yes (Policy 3(d) but no change required – AUP(OP) provisions are sufficient.	Yes
Consequential and related updates in response to qualifying matters, and including deletions, and additions to standards,	Other amendments proposed to align with Policy 3(c) requirements and achieve quality built environment outcomes.				

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Insert MDRS	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(b) or Policy 3(d)	Consequential changes
matters of discretion and assessment criteria.					
<b>H3: Residential – Single House zone</b>					
Retain the Residential – Single House zone to apply to the 24 settlements located outside of the urban area. Retain zone as <b>Residential – Single House zone</b> with modifications to the purpose statement and provisions that do not apply in these locations.	The Residential - Single House zone applies to areas outside the urban area with a residential population of less than 5000. There is therefore no requirement to incorporate MDRS or give effect to NPSUD Policy 3 to residential zones in these settlements and the zones.	Not applicable.	Not applicable.	Not applicable.	Yes.
<b>H4: Residential – Mixed Housing Suburban Zone</b>					
Retain the Residential – Mixed Housing Suburban zone to the 24 settlements located outside of the urban area. Retain zone name as <b>Residential – Mixed Housing Suburban zone</b> with modifications to the purpose statement and provisions which no longer apply in these locations.	The Residential – Mixed Housing Suburban zone applies to areas outside the urban area with a residential population of less than 5000. There is therefore no requirement to incorporate MDRS or give effect to NPSUD Policy 3.	Not applicable.	Not applicable.	Not applicable.	Yes.

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Insert MDRS	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(b) or Policy 3(d)	Consequential changes
<b>H3A: Residential – Low Density Zone</b>					
Introduce the <b>Residential – Low Density Residential zone</b> where certain qualifying matters apply. And responding to circumstances where enabling all elements of MDRS will result in incompatibilities.	ss77G(1) requires that a relevant residential zone provides for MDRS as a permitted activity where it complies with the density standards except where a qualifying matter applies.	Yes, but modified to recognise the values of the qualifying matter	Not applicable due to the incompatibility of the building height with the relevant values of the qualifying matters.	Not applicable.	Yes.
<b>E38: Auckland-wide Subdivision</b>					
Amend standards to provide for subdivision of MDRS	Subdivision of development comprising MDRS compliant with the Schedule 3A standards is a controlled activity.	Yes	Not applicable.	Yes (Policy 3(d) in that retaining relevant AUP(OP) provisions.	Yes
Consequential amendment of the minimum net site areas for sites subject to subdivision variation control	This excludes 24 settlements located outside the urban area.				
Other consequential amendments to address qualifying matters.					

## 2.7 An Overview of Proposed Changes to Residential and Business Zones.

### 2.7.1 Introduction

13. The following sections provide an overview of how:
  - the MDRS have been incorporated, as per the mandatory direction in s80E(1)(a)(i);
  - policy 3(c) and 3(d) have been given effect to, as per the mandatory direction of s80E(1)(a)(ii); and
  - consequential changes have been applied (as per s80E(b)(iii)).
14. As detailed in the IPI Overall Evaluation Report pursuant to s80E(a)(i) of the RMA, it is mandatory to incorporate the MDRS as provided for under Schedule 3A of the RMA. In summary, and as it relates to the relevant residential and business zones, this includes:
  - Clause 5 – certain notification requirements precluded
  - Clause 6 – objectives and policies
  - Part 2 Density Standards (Clauses 10 – 18) including:
    - The number of residential units per site: up to 3;
    - Building height: 11m plus 1m for roof form;
    - Height in relation to boundary: buildings must not project beyond a 60 degrees recession plane measured from a point 4 metres vertically above ground level along all boundaries, as shown on the following diagram;
    - Yards: 1.5m front yards and 1m rear and side yards;
    - Building coverage: 50 per cent net site area;
    - Outdoor living space (per unit);
    - Outlook space (per unit);
    - Windows to street: minimum 20 per cent of street-facing façade in glazing; and
    - Landscaped area: minimum 20 percent of a developed site.
15. The relevant residential zones to which this applies are identified as MHU and THAB zones. A new zone is proposed being the Low Density Residential Zone (LDRZ)

which replaces the Residential - Single House Zone (SHZ) within the urban environment and is applied to certain qualifying matters. The LDRZ has been modified from the SHZ and a marked up version is attached (refer Attachment 3) that sets out the modifications necessary to implement the MDRS to the extent necessary to accommodate qualifying matter(s).

16. Where the AUP(OP) includes a standard identified as a density standard in Schedule 3A, the operative standard is amended to reflect the MDRS requirements. This allows the general structure of the zone chapters (including purpose statements for each standard) to be retained.
17. Amendments are proposed that are consequential to the mandatory direction to incorporate MDRS and give effect to Policy 3 (s80E(a)(ii)). In summary, these include:
  - in relevant business zones, the application of amended density standards to provide for 6 storeys within walkable catchments; and
  - in MHU and THAB zones, the application of amended density standards for certain restricted discretionary activities, as identified in the zone chapter activity tables (including development of four or more dwellings) and amended and new matters of discretion and assessment criteria are proposed to support the application of standards;
  - in MHU, THAB and the LDRZ, it is proposed to include new standards and retain operative standards to manage built form. These built form standards are proposed to be applied to specific restricted discretionary activities and permitted activities (i.e. those that comply with the MDRS). Amended and new matters of discretion and assessment criteria are proposed to support the application of standards; and
  - in MHU and THAB, it is proposed to amend the preclusion of notification for four or more dwellings requiring compliance with all of the amended density standards and built form standards in order for the preclusion to apply.
18. The following sections provide more detail on the proposed changes.

### **2.7.2 The Zones**

19. The AUP(OP) is a combined plan which combines the regional and district documents as was required under the Local Government (Auckland Transitional Provisions) Act 2010. To implement the regional policy statement it includes overlays, Auckland-wide matters and zones which all include their own objectives, policies, rules and other provisions. The zones are spatially mapped areas, with the AUP(OP) containing chapters for each zone including a package of provisions which set out the way land can be used, developed or protected and the uses and activities that are anticipated and provided for.
20. Amendments to relevant zone chapters (listed in Section 2.6 above) are the key method to address the purpose of this plan change (refer to Sections 2.3 – 2.5 above).



Alongside and inter-related to this plan change are amendments to the spatial application / mapping of zones, including the introduction of walkable catchments which is described in the walkable catchments s32 report.

21. In addition to the summary provided in Table 2, the following provides a non-exhaustive overview of the proposed amendments to the relevant zones.

#### **2.7.2.1 Amendments to zones outside relevant residential zones and urban environments**

22. S77G of the RMA directs that MDRS, Policy 3(c) and 3(d) of the NPSUD are to be given effect in every relevant residential zone in urban environments. As detailed in other s32 reports, it is proposed that the following zones should only be applied to settlements outside the urban area. Therefore, these zones are not considered to be relevant residential zones to which the NPSUD applies:
  - H3: Residential: Single House Zone (SHZ).
  - H4: Residential: Mixed Housing Suburban Zone (MHS).
23. The amendments in these zone chapters are consequential to the changes in spatial application and are limited only to the zone description, this includes the removal of the activity class H3.4.1(A19) and (A20) which relates to “Offices within the Centre Fringe Office Control as identified on the planning maps”. This activity is no longer applicable given the zone will not be located in any area subject to the Centre Fringe Office Control.

#### **2.7.2.2 Relevant Residential Zones inside Urban Environments**

24. Amendments to zone chapters are most concentrated within these three zones.

##### *H3A: Low Density Residential Zone*

25. The LDRZ is a proposed new zone within the AUP(OP). The zone is characterised by residential activities and seeks a low intensity built character of one to two storey buildings. The zone provides for up to one dwelling per site as a permitted activity and two or three dwellings as a restricted discretionary activity. Four or more dwellings is a non-complying activity (under the activity H3A.4.1(A1)). The LDRZ is only applied to sites within urban environments which are subject to certain qualifying matters.
26. Key characteristics of the proposed zone include:
  - it is applied to identified urban residential areas where relevant qualifying matters require and result in a lower intensity of development, limiting the levels of development.
  - MDRS are enabled as a permitted activity in the zone to a limited extent to ensure that it does not detract from the identified qualifying matters that exist in these zones. For instance, the height in relation to boundary, landscaped area, outlook, outdoor living area and windows to street standards have all been aligned to MDRS.

- The permitted activity density standards of the MDRS relating to the number of dwellings per site, height, front yards and building coverage are less enabling than MDRS. This is to provide for a reasonable level of development whilst ensuring that development responds to qualifying matters that relate to the site and delivering quality built environment outcomes as directed under the RPS.
27. The application of the LDRZ and the relevant range of qualifying matters are discussed in more detailed in other s32 reports.

*H5: Residential: Mixed Housing Urban Zone*

28. The MHU zone is proposed to be the most widespread residential zone, covering most of the urban areas of Auckland. The proposed geographic mapping changes include significant areas of land currently zoned MHS in the AUP(OP) within the amended MHU zone.
29. Under the AUP(OP), the zone provides for a relatively high level of development, providing for up to 3 storeys and a range of residential building types. These building forms also enable differing community and some commercial uses that have been provided for. This description and anticipated urban built character outcomes are retained in the amended zone chapter. It is proposed to retain the AUP(OP) standard of up to 3 dwellings per site as a permitted activity within the zone. This aligns with the MDRS Clause 10 of the RMA.
30. Key proposed characteristics of the amended zone include:
- MDRS are enabled within the zone as a permitted activity. This has been achieved through amendments to operative standards that are similar in nature to the MDRS.
  - The zone allows for more intensive development as restricted discretionary activities subject to modified density standards to achieve quality built environment outcomes (discussed further in Section 2.7.3 below).
  - Consequential and related amendments (including additions and deletions) to the description, objectives, policies, activity table, notifications, standards, matters of discretion, assessment criteria and information requirements are proposed. This is to enable MDRS, in response to qualifying matters and deliver quality built environment outcomes as directed under the RPS.

*H6: Residential: Terraced Housing and Apartment Zone*

31. It is proposed to retain the THAB as a high intensity zone which is primarily located around key urban centres and public transport networks to support intensification. The zone provides for a range of urban dwelling typologies including terraced housing and apartments. As detailed in other s32 reports, it is proposed that the THAB zone will apply within walkable catchments except where land is already zoned as a business zone. In walkable catchments, in some instances, the land may be subject to certain qualifying matters and less enabling provisions are applied.

32. Key proposed characteristics of the amended zone include:

- MDRS are enabled within the zone as a permitted activity.
- Where the zone is within a walkable catchment additional standards apply that support a greater level of built form intensity, creating two key geographic sub areas within the THAB zone of inside and outside walkable catchments.
- Within walkable catchments, in giving effect to Policy 3(c) of the NPSUD, the height standard for consented activities is increased 21m to enable 6 storey buildings along with other consequential and enabling amendments.
- Outside walkable catchments, the 16m heights to enable 5 storey buildings is retained. It is considered that this already gives effect to Policy 3(d) of the NPSUD as the operative heights and densities are commensurate to the level of commercial activities and community services and the zone is generally located adjacent to specified centres.
- Consequential and related amendments (including additions and deletions) to the description, objectives, policies, activity table, notifications, standards, matters of discretion, assessment criteria and information requirements are proposed. This is to enable MDRS, give effect to Policy 3 of the NPSUD, in response to qualifying matters and to deliver quality built environment outcomes as directed by the RPS.

### **2.7.3 Business Zones**

33. This s32 report includes within its scope six business zones including the Metropolitan Centre, Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park zones. These are either existing or planned locations of growth and intensification.

34. Policy 3(b) of the NPSUD is specific to the Metropolitan Centre Zone requiring heights and densities to reflect demand for housing and business use. The policy specifies that building heights must be at least six storeys. Policy 3(c) of the NPSUD is to be given effect in urban environments within and adjacent to specific centres which are relevant to the remaining five business zones listed above. As detailed in the Policy 3 Intensification s32 report, walkable catchments are identified within the THAB zone and within these business zones.

35. Key proposed characteristics of the zones include:

- Within walkable catchments in the Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park zones, the height standard for consented activities is amended to enable 21m high (6 storey) buildings along with other consequential and enabling amendments. This gives effect to Policy 3(c) NPSUD. It is proposed to retain the operative Height Variation Control in relevant business zones, which in some cases enables a higher height are retained (discussed further in other s32 reports).

- In all of the relevant business zones, relatively limited number of consequential and related amendments (including additions and deletions) to the description, objectives, policies, and the Height and Height in relation to boundary standards are proposed. These changes give effect to Policy 3(b) and 3(c) of the NPSUD, respond to qualifying matters and deliver quality built environment outcomes as directed by the RPS.
- All other operative provisions are retained as these are not considered to conflict with NPSUD outcomes and provide for quality built environment outcomes.

#### **2.7.4 Provisions**

##### Standards

36. Standards are one of the six main types of plan provisions in the AUP(OP). Standards are found in each of the respective zone chapters and set out controls or requirements for development to accord with based on the activity status classification.
37. The proposed standards in the relevant residential zones can be split into three categories:
  - incorporated density standards;
  - amended density standards; and
  - built form standards.
38. Incorporated density standards are those standards provided for in Schedule 3A of the RMA. Where the AUP(OP) already includes the same or similar standard, the operative standard has either been retained, or amended to reflect specific Schedule 3A requirements. In summary, the incorporated standards relate to:
  - the number of residential units per site;
  - building height;
  - height in relation to boundary;
  - yards;
  - building coverage;
  - outdoor living space;
  - outlook space;
  - windows to street; and
  - landscaped area.

39. Amended density standards are proposed to be applied to specified restricted discretionary activities including development containing four or more dwellings per site, and 'any other development' which is more intensive than what is provided for under the MDRS. 'Any other development' includes integrated residential development, supported residential care; boarding houses; visitor accommodation; dairies; restaurants; care centres; community facilities; and healthcare facilities.
40. The amended density standards address the same matters as the incorporated density standards listed above, with the exception of managing the number of units per site.
41. Built form standards are proposed in addition to the density standards. Some of the built form standards are already in the AUP(OP). The built form standards are proposed to apply to all consented activities where relevant and development that complies with the MDRS. Built form standards are proposed to include:
- Maximum impervious area (retained from AUP(OP));
  - Daylight (retained from AUP(OP));
  - Front, side and rear fences and walls (retained from AUP(OP));
  - Deep soil area and canopy tree;
  - Safety and privacy buffer from private pedestrian and vehicle accessways; and
  - On-site waste management.
42. Where an activity does not comply with one or more of the amended density standards and / or built form standards, the activity shall be assessed as a restricted discretionary activity (as per Chapter C General rules, C1.9(2) of the AUP(OP)) and will be assessed against the objectives and policies, purpose statements and relevant matters of discretion and assessment criteria, as well as any other matters identified under C1.9(3) of the AUP(OP).
43. The amendments (including the application of built form standards) are made under s80E(b)(iii) which provides for consequential changes on MDRS or Policy 3. A summary of the rationale behind these amendments is provided in Table 3 below. However, the primary driver of this approach is to give effect to the RPS by achieving quality built environment outcomes (including responding to qualifying matters) while enabling greater density through the incorporation of MDRS and amendments to give effect to Policy 3(c).
44. The Proposed Plan Change 78 – Intensification: Technical Background Report (Attachment 1 Part 1) provides a detailed analysis of the proposed amended and built form standards, including an overview of how the proposed package of standards impact yield. Table 3 below provides a high level summary of that analysis, including the rationale, reasoning and benefits (where applicable) of each of the proposed standards. The MDRS are not included in the summary analysis.

Table 3: High level summary of the proposed changes with the rationale and benefit for the change.

Standard and Zones Affected	Summary of Standard	Rationale/Benefits
<b>Density Standards</b>		
<p><b>Height Standard</b></p> <p>LDRZ, MHU, THAB and Metropolitan Centre, Town Centre, Local and Neighbourhood Centre, Mixed Use, Business Park</p>	<ul style="list-style-type: none"> <li>- Operative 8m + 1m height standard retained in LDRZ for permitted and specified restricted discretionary activities.</li> <li>- In MHU, the MDRS 11m + 1m (3 storeys) height standard is applied to 4 or more dwellings and other specified restricted discretionary activities. Except sites subject to the qualifying matter HVC at Pukekiwiriki Pā Historic Reserve, Red Hill.</li> <li>- In THAB, the operative 16m (5 storeys) is retained as a total height limit for 4 or more dwellings and other specified permitted and restricted discretionary activities.</li> <li>- In THAB walkable catchments, a total 21m (6 storeys) height control for 4 or more dwellings and other specified permitted and restricted discretionary activities.</li> <li>- Within walkable catchments of business zones, the 21m (6 storeys) height control is introduced, noting existing higher height controls may exist which are retained.</li> <li>- In Metropolitan Zone, the AUP(OP) 27m height control is retained.</li> <li>- In Business zones height is split between an occupiable limit and roof form.</li> </ul>	<ul style="list-style-type: none"> <li>- The 21m height control has been proposed to enable 6 storey buildings in walkable catchments based on evidence and research of a range of height standards to incentivise the delivery of quality internal amenity.</li> <li>- The 16m height control for THAB outside walkable catchments enables an appropriate height (up to five storeys) in specified areas identified to have a suitable level of commercial activities and community services.</li> <li>- The proposed height controls provide for the additional height and density as required under the RMA but do not excessively increase dominance and shading to streets.</li> <li>- The proposed height controls are consistent with the anticipated urban built character of the relevant zones.</li> <li>- The variation in the structure of the height controls between business and residential zones (i.e. retaining the occupiable height limit in Business zones) manages the visual and character effects of the built form environments anticipated in different zones.</li> <li>- Increasing height controls as proposed is one of the key development controls to stimulate investment and enable growth.</li> <li>- Provisions in the LDRZ recognise locations and circumstances where there is a 'qualifying matter', and it is determined to be inappropriate to enable MDRS building heights standard, noting that values of qualifying matters are recognised through multiple methods including zoning, overlays and other Auckland-</li> </ul>

		<p>wide rules depending on the qualifying matter.</p> <ul style="list-style-type: none"> <li>- Taller buildings may be appropriate in certain locations and are provided for through the height variation control and through the consenting process to manage potential visual impact/dominance, landscape and, shading effects.</li> </ul>
<p><b>Height in relation to boundary Standard</b></p> <p>LDR, MHU, THAB and Metropolitan Centre, Town Centre, Local and Neighbourhood Centre, Mixed Use and Business Park</p>	<ul style="list-style-type: none"> <li>- In the LDRZ and MHU zones, the MDRS 4m + 60° is applied to permitted and restricted discretionary activities, including 4 or more dwellings, except for certain qualifying matters: <ul style="list-style-type: none"> <li>• 2.5m + 45° (High Natural Character, Waitakere Ranges Heritage Area)</li> </ul> </li> <li>- In THAB, 8m + 60° is proposed outside walkable catchments for restricted discretionary activities. The exception being 4m + 60° is proposed where a boundary adjoins open space zoned land less than 2000m<sup>2</sup> or the LDRZ.</li> <li>- In THAB walkable catchments, 19m + 60° is proposed for the first 21.5m of site from frontage with 8m + 60° proposed to apply parts of sites more than 21.5m from the frontage and to rear sites.</li> <li>- In Business – Town Centre, Local and Neighbourhood Centre, Mixed Use and Business Park zones the height in relation to boundary standard which applies to zone boundary sites is amended consequentially to align with the changes to the residential zone amendments.</li> <li>- In Business Metropolitan Centre zone the height in relation to boundary standard which applies to zone boundary sites is amended to enable 6 storey building heights at the edge of the zone and to align with changes in the residential zones.</li> </ul>	<ul style="list-style-type: none"> <li>- The proposed amendments are more enabling than operative standards.</li> <li>- The operative height in relation to boundary was identified as a key constraint in meeting the intensification objectives of relevant residential zones. Proposed amendments enable height controls to be achieved.</li> <li>- The standard proposed for THAB in walkable catchments enables 6 storey buildings, encouraging built form towards the street and reducing the building envelope toward the rear to assist in managing dominance and shading effects and provide benefits of passive surveillance and consistent street frontages.</li> <li>- The proposed amendments continue to enable transition in scale and built form of areas within walkable catchments and provide for greater scales of activity and intensity of built form in centres and at rapid transit stops. This is then stepped down through the residential zones in recognition of planned urban character.</li> <li>- Amendments in THAB outside walkable catchments recognise those areas which are adjacent to centres and which have a moderately high degree of accessibility and a level of commercial activity and community service which can support an increase in density.</li> <li>- The proposed amendments provide for the values associated with qualifying matters while recognising significant change in amenity and character is anticipated within walkable catchments.</li> </ul>

<p><b>Outlook Space</b> LDRZ, MHU and THAB</p>	<ul style="list-style-type: none"> <li>- Retain the operative 6m x 4m standard for ground floor principal living areas (upper levels) and 3 x 3m standard for ground floor bedrooms for specified permitted and restricted discretionary activities in the THAB and MHU zones, except:</li> <li>- Amendments are proposed to: <ul style="list-style-type: none"> <li>a. provide for outlook from a balcony edge rather than from glazing.</li> <li>b. 8 x 4m for principal living rooms in THAB and MHU, where above 3 storeys.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Standard has key role in managing effects of development on privacy and amenity for residents within development and on adjoining sites.</li> <li>- s35 monitoring identified issues with performance of operative standard in respect to these matters.</li> <li>- The proposed amendments are required to manage the additional intensity, bulk and scale of development enabled by proposed height and height in relation to boundary amendments.</li> <li>- Standard developed to work with height in relation to boundary to encourage outlook from principal living room areas being focused on the street frontage with positive streetscape and amenity outcomes.</li> </ul>
<p><b>Front, Side and Rear Yard</b> LDRZ, MHU and THAB</p>	<ul style="list-style-type: none"> <li>- MHU amended to align with MDRS and applied to both permitted and consented activities in MHU and THAB.</li> <li>- Within LDRZ the MDRS is amended to provide a 3m front yard requirement on the basis of most relevant qualifying matters, except for Special Character Area – Residential where: <ul style="list-style-type: none"> <li>• Front yard is the average of existing setbacks</li> <li>• Side yards are 1.2m</li> <li>• Rear yard is 1.2m</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- The front yard depth encourages development to be built up to and front the street, providing for passive surveillance and activation whilst allowing for privacy and amenity through the set back and area able to be used for landscape treatment.</li> <li>- The side yard standards are integrated with the outcomes sought for development in combination with height, outlook and height in relation to boundary standards to provide separation between buildings and enable a strong and consistent built form along the street.</li> <li>- The amended yard requirements in LDRZ address the values specific to relevant qualifying matters (as discussed in other s32 reports).</li> </ul>
<p><b>Building Coverage</b> LDRZ, MHU and THAB</p>	<ul style="list-style-type: none"> <li>- MHU amended to align with MDRS (increase from 45% to 50%) and retained in THAB for permitted and restricted discretionary activities. Additional standards apply for sites subject to a Significant Ecological Area Overlay as a qualifying matter which impact the location of building coverage within the overlay area.</li> <li>- Within LDRZ a 35% building coverage standard is proposed on the basis of most relevant qualifying matters, except that for Special Character Area – Residential where</li> </ul>	<ul style="list-style-type: none"> <li>- Building coverage standards manage the balance of built form on a site with open undeveloped areas and therefore have a key role in reinforcing the planned character and built intensity of a zone. Unbuilt areas are also necessary to achieve other environmental and amenity outcomes managed through other standards.</li> <li>- The building coverage standards are a long established method that consistent with the respective urban characters and intensity of</li> </ul>



	building coverage requirements vary between 25% and 55% depending on the site size.	development anticipated in the each of the zones.
<b>Landscaped Areas</b> LDRZ, MHU and THAB	<ul style="list-style-type: none"> <li>- LDRZ consistent with MDRS except for: <ul style="list-style-type: none"> <li>• Minimum 40% in High Natural Character and Waitakere Ranges Heritage Area Overlays; and</li> </ul> </li> <li>- Amended in MHU and THAB to align with MDRS (minimum 20% of the site) for both permitted and restricted discretionary activities.</li> <li>- For specified restricted discretionary activities in the MHU and THAB additional requirements are proposed (requiring 50% front yard landscaped and minimum dimensions) along with proposed changes to the landscaped area definition.</li> </ul>	<ul style="list-style-type: none"> <li>- Whilst the landscaped area minimum requirement has been reduced in THAB and MHU, positive outcomes are achieved through the following aspects.</li> <li>- The AUP(OP) definition of landscaped areas enables up to 25% of the area to be covered by areas which is not natural vegetation. The updated definition will lead to improved quality through vegetated landscaping (grass, plants and trees) in these areas, providing positive visual character and amenity outcomes.</li> <li>- Requiring 50% of the front yard to be landscaped will also have a positive effect on the contribution of landscaping to street character and amenity. Recognising that the area cannot be used for built development.</li> <li>-The increased landscaped minimums for specified qualifying matters assist in protecting the integrity of relevant values.</li> </ul>
<b>Outdoor Living Space</b> LDRZ, MHU and THAB	<ul style="list-style-type: none"> <li>- For identified restricted discretionary activities in MHU and THAB zones, the operative standard is retained which broadly aligns with MDRS (being that at least 20m<sup>2</sup> at ground floor level and 8m<sup>2</sup> for dwellings above ground floor) except that the standard does not provide for grouping of private outdoor living areas as one communal area (a new provision is proposed to that regard as outlined below);</li> <li>- Dwellings above ground floor are not required to provide outdoor space where the specified internal floor area is met and a south facing daylighting provision is retained.</li> <li>- New proposed requirement in MHU and THAB for development of 20 or more dwellings (including integrated residential development of 20 or more dwellings) to provide communal living space (10m<sup>2</sup> per 5 units) in addition to private outdoor living, and</li> </ul>	<ul style="list-style-type: none"> <li>- The application of the communal outdoor living space for 20 or more dwellings ensures that communal areas to ensure efficient use of the site and ensure those communal areas are of a sufficient space to provide for daily needs of residents.</li> <li>- The south facing daylight provision requires an offset from that building to enable sunlight access. The exception for a balcony where adequate internal floor area is provided recognises that balconies may not be appropriate in all locations and provides flexibility in design. The reasoning for these provisions is still considered sound and to result in positive outcomes in terms of the amenity provided to residents.</li> </ul>

<p><b>Window to Street (and private pedestrian and vehicle accesses)</b></p> <p>LDRZ, MHU and THAB</p>	<ul style="list-style-type: none"> <li>- The MDRS is applied to both permitted and restricted discretionary activities in the LDRZ zone.</li> <li>- For relevant restricted discretionary activities in the MHU and THAB zones the standard is extended to include a requirement for a minimum of 20% glazing on facades facing onto private pedestrian and vehicle accessways, in addition to street facing facades.</li> </ul>	<ul style="list-style-type: none"> <li>- This standard addresses safety on the street by providing opportunities for surveillance. It enhances streetscape with the building elevation designed as a frontage.</li> <li>- In MHU and THAB zones, given the intensity of development anticipated on-site, the standard is proposed to be applied to vehicle and pedestrian accessways to provide the same measures of safety and active frontages.</li> </ul>
<p><b>Built Form Standards</b></p>		
<p><b>Safety and privacy buffer to private pedestrian and vehicle accesses</b></p> <p>MHU and THAB</p>	<ul style="list-style-type: none"> <li>- Proposed new standard applied to permitted MDRS and specified restricted discretionary activities in the MHU and THAB zones.</li> <li>- A minimum 1m buffer distance between a dwelling and a private accessway which is required to contain vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>- The s35 monitoring report identified a lack of control around on-site circulation for pedestrians and vehicles was resulting in reduced privacy and safety for residents and had negative visual amenity effects.</li> <li>- The proposed 1m buffer between access ways and dwellings addresses safety and privacy issues. The vegetation requirement provides for a suitable amenity outcome and ensure the integrity of the purpose of the buffer, is well defined and cannot be used by pedestrians, services or vehicles.</li> <li>- It is not intended for the vegetation to form part of the landscaped area. Nor is it required that the buffer must be entirely vegetated.</li> </ul>
<p><b>Deep soil area and canopy tree</b></p> <p>MHU and THAB</p>	<ul style="list-style-type: none"> <li>- Proposed new standard applied to both permitted and restricted discretionary activities in the MHU and THAB zones above a 200m<sup>2</sup> threshold.</li> <li>- Applied to sites prior to development, or re-development (i.e. either vacant or proposed new buildings in addition to existing development).</li> <li>- A minimum 10% of the site is to be provided as deep soil area.</li> <li>- Differing canopy tree specifications calculated on the site m<sup>2</sup> area.</li> </ul>	<ul style="list-style-type: none"> <li>- Standard develops resilience to climate change at the time of development through either retention of existing trees, or provision of the appropriate space and resources for new tree growth.</li> <li>- This standard also responds to the anticipated increase of impervious area across urban residential areas. The increase in impervious areas will have implications in terms of stormwater management and urban-heat effects.</li> <li>- The proposed standard is able to overlap with required landscaped areas. This enables efficient use of</li> </ul>

		the site while encouraging high quality landscaped areas.
<b>Front, side and rear fences and walls</b> LDRZ, MHU and THAB	<ul style="list-style-type: none"> <li>- Operative standard is retained for permitted and restricted discretionary activities within the LDRZ, MHU and THAB zones.</li> <li>- Standard sets controls and limits for fence/wall heights dependent on the part of the development site they are located on.</li> </ul>	<ul style="list-style-type: none"> <li>- The provision is retained as a means of improving privacy and amenity between residents within and adjoining developments is a required.</li> <li>- The current operative standard balances visual and amenity considerations including privacy, dominance and shading. The standard has tailored specifications for the rear and side boundaries and the frontage of the development.</li> <li>- It is considered relevant to retain given the likely on-going occurrence of development scenarios involving fences and walls and anticipated increase in development.</li> </ul>
<b>Maximum impervious areas</b> LDRZ, MHU and THAB	<ul style="list-style-type: none"> <li>- Operative standard is retained for permitted and restricted discretionary residential activities within the LDRZ, MHU and THAB zones.</li> <li>- Standard identifies the maximum % of the site area as 60% in the LDRZ and MHU zones, and 70% in the THAB.</li> </ul>	<ul style="list-style-type: none"> <li>- The standard manages the effects of development on infrastructure from stormwater runoff.</li> <li>- Standard responds to health and safety implications of an overwhelmed stormwater system (either onsite or the wider network), potentially leading to flooding and impacts on the safety and quality of the urban environment.</li> <li>- The standard reinforces outcomes anticipated from landscaped areas and building coverage.</li> </ul>
<b>Daylight</b> MHU and THAB	<ul style="list-style-type: none"> <li>- Operative standard is retained for restricted discretionary residential activities within the MHU and THAB zones.</li> <li>- Standard utilises a formula of distance and degree angles to provide setbacks between parts of building to ensure habitable rooms have access to daylight to provide for health and safety of residents.</li> </ul>	<ul style="list-style-type: none"> <li>- Standard developed to ensure habitable rooms have adequate daylight whilst enabling development.</li> <li>- Standard reviewed and considered compatible with intensification anticipated in these zones.</li> <li>- Together with outlook space standards manages visual dominance and provides a sense of space for residents.</li> </ul>
<b>Minimum dwelling size</b> MHU and THAB	<ul style="list-style-type: none"> <li>- Operative standard is retained for restricted discretionary residential activities within the MHU and THAB zones.</li> <li>- Standard requires a minimum internal floor area of 30m<sup>2</sup> for studio and 45m<sup>2</sup> for 1 bed or more dwellings.</li> </ul>	<ul style="list-style-type: none"> <li>- The operative standard has been successful in terms of compliance and remains important to ensure that the basic standard of amenity and function provided by the standard is maintained.</li> <li>- Plan context provides scope for increasingly more intensive forms, in particular higher density apartments which are expected to increase the</li> </ul>

		proportion of smaller dwellings in Auckland's housing market. As noted above, to incentivise larger dwellings, the outdoor living standard removes the requirement for a balcony in above ground dwellings, where the required balcony area (m <sup>2</sup> ) is incorporated within the internal layout.
<b>On-site waste management</b>  MHU and THAB	<ul style="list-style-type: none"> <li>- Proposed new standard to apply to both permitted and restricted discretionary residential activities as a standard in MHU and THAB zones.</li> <li>- Range of controls regarding requirements for on-site storage of bins and arrangements for collection either on-site or from the kerb.</li> </ul>	<ul style="list-style-type: none"> <li>- Unmanaged rubbish and waste bins have the potential to generate adverse effects on amenity and to detract from the health and safety of people.</li> <li>- Increased density is anticipated to increase demand for waste collection. The proposed standard to provide on-site storage space and efficient collection access is necessary to ensure that development continues to achieve quality built environment outcomes.</li> <li>- Having controls also addresses current issues in relation to the adverse effects on access and visual amenity provided under operative controls.</li> </ul>

*Other key changes to provisions:*

The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings:

45. Standard H6.6.2 The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings is proposed to be deleted from the THAB zone. It is proposed to retain the equivalent standard (H5.6.3) in the MHU zone.
46. It is acknowledged that the conversion of dwellings is a common activity that requires a level of regulatory control to ensure quality built environment outcomes. However, with the level of development and intensification provided for in the amended THAB zone, it is considered that this type of conversion is less likely to occur. Comparatively, the MHU zone is distinctively less intensive and conversions are more likely to continue to be a desired outcome.

Expanding standards to be complied with for certain activities:

47. As discussed in paragraph 39 above, amended density standards are applied to 'any other development' (such as integrated residential development, supported residential care; boarding houses; visitor accommodation; dairies; restaurants; care centres; community facilities; and healthcare facilities). Further to this, it is proposed to apply

other standards (amended density and built form standards) to the majority of these activities in addition to those required under the AUP(OP). This particularly relates to those activities which accommodate more than 10 people. These changes are considered consequential to the overall increase in intensification provided for as a result of incorporating MDRS and giving effect to Policy 3. The primary rationale being to ensure high quality built environment outcomes for these developments.

Pedestrian safety requirements:

48. In the THAB and MHU zones it is proposed to include a package of provisions relating to pedestrian safety. The package consists of an objective, a policy, matters of discretion and assessment criteria. There is no activity status or standard. Accordingly, the provisions will only apply to those activities requiring consent.
49. The provisions are not deemed to be a qualifying matter as there is no restriction on development, but rather a requirement for an assessment of safety with proposed design solutions where necessary. The overall intent of the provisions is to require more intensive development to consider the safety of pedestrian movement to frequent public transport stops at the time of design and construction. This aligns with Objective B2.3.1(3) of the RPS which seeks the health and safety of people and communities are promoted.
50. The assessment criterion provides a list of possible pedestrian and traffic management features which assist in providing safe pedestrian movement. It is not an exhaustive list. It is not intended that development would need to provide access to all of the features listed, only to the extent that pedestrian safety was sufficiently addressed.

Building intensity:

51. Both the MHU (H5.8.1) and THAB (H6.8.1) zones contain the following as a matter of discretion:

*The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application:.....*

*(b) the effects on the neighbourhood character, residential amenity, safety, and the surrounding residential area from all of the following:*

*(i) building intensity, scale, location, form and appearance;*

52. Following the court decision in Wallace vs Auckland Council [2021] NZHC 3095 [17 November 2021], it is proposed to delete reference to building “intensity” in the relevant matters of discretion.
53. In the Wallace vs Auckland Council case, a point of law considered was the interpretation of “building intensity” and whether this related to the density or number of activities within a building or site, or whether it related to the intensity of built form and was linked to “scale, location, form and appearance”. The court ruled (para 162) that the interpretation of built intensity related to the number of activities in a building or on a site.

54. The intent of the criterion is to manage effects of bulk and mass on character, amenity, safety and surrounds. It is considered that the “scale, location, form and appearance” of development are the key elements that contribute to bulk and mass of buildings and that the term “intensity” is superfluous and confusing.

Matters of discretion and assessment criteria:

55. A number of amendments are proposed to the matters of discretion and assessment criteria to support intensification and quality built environment outcomes. Generally, these amendments (including new and amended provisions) provide greater clarification on the types of design elements that will be assessed and which are considered as contributing to management of effects and achieving quality built environment outcomes.

*Definitions*

56. New definitions and amended definitions are proposed to provide clarity to plan users and support the implementation of the PPC78. In summary, the following changes are proposed:
- New definition – Deep soil area
  - New definition – Canopy tree
  - Amended definition – Landscaped area
  - New definition – Servicing facilities
  - New definition – Urban heat island
  - Amended definition – Dwelling
  - New abbreviation and acronyms – MDRS: Medium Density Residential Standards
57. In particular, the proposed amendments to the definition of “Dwelling” include reference to “residential units” which has the same meaning as s2 of the RMA. It is acknowledged that the operative definition of “Dwelling” is similar in nature to the definition of “Residential unit” in the Act. However, to amend the operative definition would require a plan-wide change which is not considered necessary noting the established approach of the AUP(OP) to at Chapter J1.1(3) that establishes that words and phrases that are defined in the RMA have the same meaning in the AUP(OP).
58. The rationale and benefits associated with the proposed amendments to the definition of Landscaped Area are summarised in Table 3 above.

*Notification*

59. Clause 5 of Schedule 3A of the RMA introduces preclusions from limited and public notification for specified residential development and MDRS related subdivision. In summary:

- Public notification is precluded for construction and use of up to three dwellings which do not comply with density standards in Schedule 3A (excluding clause 10, number of residential units);
  - Public and limited notification is precluded for construction and use of four or more dwellings that comply with density standards in Schedule 3A (excluding clause 10 – number of residential units per site); and
  - Public and limited notification is precluded for subdivision associated with MDRS.
60. The QBE plan change incorporates the preclusions for up to three dwellings in MHU and THAB and proposes to amend the requirements as it applies to development of four or more dwellings (and any other activity listed in the activity tables) in the MHU and THAB zones. It is proposed that through compliance with all of the relevant amended density standards and built form standards (as listed in the activity tables) an application can be precluded from limited and public notification, unless special circumstances apply or any other rule in the plan is infringed. This aligns with the amendment to identify the full package of density and built-form standards (except those relating to qualifying matters) as ‘standards to be complied with’.
61. Amending the standards to be complied with in the activity table:
- An outcome of the IHP process for the AUP(OP) was the identification of ‘standards to be complied with’ or ‘core’ development standards (being height, height in relation to boundary and yards) for restricted discretionary activities within the THAB and MHU zone. These were identified as ‘core’ controls for managing off-site built character and amenity effects of development.<sup>1</sup>
  - The operative structure of the AUP(OP) is to list the relevant core standards for restricted discretionary activities within the activity table. The operative notification framework provides that activities complying with these core standards will be considered without public or limited notification or the need to obtain the written approval from affected parties unless the Council decides that special circumstances exist under section 95A of the Resource Management Act 1991. All other operative development standards are included as matters of discretion.
  - The QBE plan change proposes that all density and built form standards are considered to be core standards and are listed in the activity table for relevant activities.
62. As discussed in paragraphs 36 - 44 and Table 3 above the amended density standards and built form standards are considered to be an integrated package of standards necessary to achieve quality built environment outcomes as directed by the RPS. Accordingly, the decision to identify the full package of density standards and

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<sup>1</sup> Statement of Evidence Nicholas Jon Roberts on Behalf of Auckland Council – Planning Residential Zones – 9 September 2015.

built form standards as core standards is considered critical to achieving the overall purpose of the QBE plan change, noting this is modified where those standards are not relevant to a particular activity.

63. It is proposed that the Schedule 3A notification preclusions should not apply to those standards that relate to qualifying matters in the MHU and THAB zones. In the LDRZ, it is proposed to amend the mandatory preclusions to only preclude public notification for construction or use of one dwelling which does not comply with those standards incorporated from Schedule 3A of the RMA, being:
- Height in relation to boundary;
  - Side and rear yards;
  - Landscaped area (excluding those parts of the standard that apply to High Natural Charact Overlay or the Waitakere Ranges Heritage Area Overlay); and
  - Outdoor living space;
  - Outlook space; and
  - Windows to street.
64. The specific standards for qualifying matters in MHU and THAB zones, and the majority of the LDRZ standards are necessary to effectively avoid and manage adverse effects of development on values associated with identified qualifying matters. Enabling notification preclusions for non-compliance, or for more than one dwelling in the LDRZ (even where these comply with standards), would be contrary to the overall purpose of the relevant standards and the LDRZ zone.
65. The proposed amendments to the notification clauses and associated amendments to the activity table (to list all relevant core standards) and matters of discretion (to delete the listed non-core standards) are considered to be consequential to incorporating MDRS and giving effect to policy 3 as per s80E(1)(b)(iii).

#### **2.7.5 Chapter E38 – Subdivision**

66. Chapter E38 Subdivision – Urban ('Chapter E38') deals with subdivision as an Auckland-wide matter and applies to urban residential zones. Although the SHZ and MHS zone are not considered relevant residential areas as discussed above, it is intended that Chapter E38 will continue to apply to subdivision within those zones.
67. The Chapter E38 provisions need to support all the urban zones across the region, allowing for the creation of new titles for land that assists in enabling development of the land envisaged by the relevant zone. Aside from the zone chapters, Chapter E38 is influenced by a number of other Auckland-wide chapters (i.e. E27 Transport and E36 Natural hazards and flood) and needs to complement all the other chapters.



68. The following sections outline the evaluation undertaken for the mandatory and consequential changes to Chapter E38 in order to make subdivision provisions inclusive of the MDRS. Of particular relevance are Clauses 3, 5 and 7 to 9 in Schedule 3A of the RMA which set out the mandatory changes to the planning rules of the AUP(OP) relating to subdivision in relevant residential zones.

*Introduction, objectives and policies*

69. Minor amendments to the chapter introduction and objectives and policies are proposed to acknowledge incorporation of Clause 7 of Schedule 3A of the RMA to provide for development compliant with MDRS. Amendment are also necessary to align with the changes in the application of SHZ and MHU zone (notably that subdivision to provide for MDRS does not apply).
70. Changes also include the insertion of a new objective and policies to support incorporation of Clauses 3 and 7 of Schedule 3A of the RMA which seek to:
- Provide for subdivision which enables MDRS, except where one or more qualifying matters apply.
  - Provide for subdivision as a controlled activity unless the sites: are at significant risk from natural hazards; do not provide sufficient legal and physical access; needs to address any new qualifying matter/s; and/or there is non-compliance with relevant standards.
71. These changes are considered consequential to the incorporation of Schedule 3A matters.

*Activity status*

72. Amendments are proposed to incorporate Clauses 3 and 7 of Schedule 3A of the RMA and provide for subdivision of MDRS development, where it complies with identified standards. It is proposed that subdivision not meeting those standards will require resource consent as a discretionary activity. A discretionary activity status will enable all effects to be considered and is useful when potential environmental or site constraints are so variable and cannot reasonably be anticipated.
73. Where a subdivision proposal is around existing dwellings, and the site created results in non-compliance with any relevant development standards, and there is no associated or accompanying land use consent, it is appropriate then to require a Restricted Discretionary activity consent as the controlled activity status is no longer appropriate for managing non-compliance. It should be noted that existing dwellings cannot rely on existing use rights if a subdivision proposal around that dwelling results in non-compliance with the MDRS. In such instances, an accompanying land use consent is appropriate.
74. This is considered to be a consequential change resulting from incorporation of Clause 8 of Schedule 3A of the RMA. It addresses a potential gap which arises when there is a subdivision proposal which results in non-compliance with the standards and there is no accompanying or associated land use consent.

## Standards

75. Two new standards are proposed in order to incorporate Clause 3 and 7 of Schedule 3A and provide for subdivision as a controlled activity where relevant standards can be complied with.

### **E38.8.1A. Standards – residential controlled activities**

Subdivision listed as a controlled activity in Table E38.4.2 Subdivision in residential zones must comply with standards E38.6.2 - E38.6.6 listed in E38.6 General standards for subdivisions, standard E38.8.1.1(1) and standard E38.8.1.2 in E38.8.1 General standards in residential zones and standards listed in E38.8.1A Standards – residential controlled activities, as relevant.

#### **E38.8.1A.1. Subdivision in accordance with an approved land use resource consent**

(1) Any subdivision relating to an approved land use consent must comply with that resource consent.

(2) No vacant sites are created.

#### **E38.8.1A.2. Subdivision around existing buildings and development**

(1) Prior to subdivision occurring, all development must meet one of the following:

(a) comply with the relevant overlay, Auckland-wide and zone rules; or

(b) be in accordance with an approved land use resource consent.

(2) No vacant sites are created.

### **Standards to apply to controlled activity subdivision around MDRS development**

76. It is proposed that controlled activities must comply with the relevant standards set out in Table 4 below. As discussed above, where an application does not meet the controlled activity standards, it will be assessed as a discretionary activity.

Table 4: Standards to apply to controlled activity subdivision

<b>Standard</b>	<b>Rationale</b>
Standards – residential controlled activities (E38.8.2A.1 and E38.8.2A.2)	<p>These standards ensure that subdivision will be a controlled activity for:</p> <ul style="list-style-type: none"><li>• existing dwellings that meet the MDRS;</li><li>• new dwellings that are permitted under the MDRS; or</li><li>• existing and new dwellings that have been approved through a resource consent.</li></ul>

Standard	Rationale
<p>E38.6 General Standards for subdivision</p> <p>(except for standard E38.6.1 as it refers to vacant lots, which cannot be provided for under the MDRS).</p>	<p>Subdivision proposals must comply with the general standards (E38.6.2. to E38.6.6.). The subdivision process is technical and legal in nature, with a series of checks being required at the consenting stage to ensure the titles will be arranged in a way that is lawful. This is provided for by the E38.6 General Standards which address the following matters:</p> <ul style="list-style-type: none"> <li>• Access</li> <li>• Services</li> <li>• Staging</li> <li>• Overland flow paths</li> <li>• Existing vegetation on the site</li> </ul> <p>The above matters either relate to qualifying matters (i.e. overland flow paths and vegetation) or are necessary to ensure development can be supported within separate titles (i.e. the necessary infrastructure such as water, wastewater, stormwater and access is provided).</p>
<p>Standard E38.8.1.1(1) and Standard E38.8.1.2 in E38.8 Standards for subdivision in residential zones.</p>	<p>These standards manage the design and technical requirements of access. Access to sites is considered to be necessary supporting infrastructure to ensure functional sites and achieve quality built environment outcomes.</p>

77. The standards relevant to a controlled activity subdivision, as discussed above, are limited to addressing the following matters:

- those that relate to infrastructure servicing requirements;
- those that relate to access requirements;
- those that relate to any natural hazards and environmental protections which exist on the site; and
- any consequential technical amendments to ensure the AUP(OP) continues to function as intended.

78. The rationale and scope for setting the standards are as follows:

- The requirements to provide servicing and access will support the MDRS and NPS-UD to boost housing supply and deliver housing intensification. The issue of titles for sites that are not serviced or have safe and reasonable access is not appropriate.

- The requirements to respond to natural hazards and maintain environmental protections are qualifying matters.
- Some technical amendments are necessary in order to incorporate the MDRS. These are not policy shifts and are intended to keep Chapter E38 functional while achieving the intent of the MDRS subdivision requirements (i.e. E38.8.1A. Standards – residential controlled activities).

79. In summary, the standards which a controlled activity subdivision must comply with are either qualifying matters, technical matters or 'related matters'. 'Related matters', as set out in s80E(1)(b)(iii) and (2), are provisions which support intensification. Existing AUP(OP) provisions which support the intensification requirements of the MDRS (i.e. servicing and stormwater management), should be retained where necessary to support quality built environment outcomes.

*Matters of control and assessment criteria*

80. New matters of control and assessment criteria are proposed to support the implementation of Schedule 3A of the RMA while achieving quality built environment outcomes. In summary, the proposed provisions relate to the following:

- whether the proposal is in compliance with an approved resource consent;
- whether the proposed subdivision is in compliance with relevant overlay, Auckland-wide and zone rules; and,
- whether infrastructure such as access and services has been provided.

*Notification*

81. As outlined in paragraph 59 above, Clause 5(3) of Schedule 3A of the RMA provides that public and limited notification is precluded for subdivision associated with MDRS. Amendments are proposed to this mandatory preclusion to align with the preclusion amendments proposed in MHU and THAB zones, as discussed in paragraphs 60 - 65 above.

82. It is proposed that, unless special circumstances exist under s95A(4) of the RMA, any application for subdivision associated with the land use consent for four or more dwellings will be considered without public or limited notification provided the development complies with the relevant amended density and built form standards in the MHU and THAB zones. Given the purpose of the LDRZ to provide for and protect certain qualifying matters, no preclusion clause is provided for subdivision in that zone.

*Subdivision of sites identified in the Subdivision Variation Control*

83. Chapter E38 includes specific subdivision controls for spatially identified areas in order to set a minimum net site area for subdivision. Sites overlain with the Subdivision Variation Control (SVC) allow for a variation from the Auckland-wide subdivision (urban) provisions. The SVC is applied to specific areas for the following reasons:

- To manage the existing patterns and density in certain locations to maintain low density character.
  - To manage natural landscape qualities and maintain low density settlement pattern.
  - To manage development as a result of infrastructure constraints.
84. The MDRS applies to the following areas which are subject to the SVC under the AUP(OP):
- Beachlands
  - Herald Island
  - Bucklands
  - Eastern Whangaparāoa Peninsula.
85. As the MDRS applies in the four areas above, the retention of the SVC would reduce the capacity enabled by the MDRS and would mean that the provision of subdivision is not consistent with the level of development permitted by the MDRS in the underlying zones. As such, the retention of the SVC requires justification.
86. The SVC is not itself a qualifying matter and is not a tool required for managing any qualifying matters that apply in the above SVC areas (such as infrastructure constraints). There is no need for the SVC and any relevant qualifying matters to co-exist and manage the same environmental effect.
87. It is proposed to delete the entirety of the SVC over the aforementioned areas for the following reasons:
- Where infrastructure constraints (such as water and wastewater servicing) remain relevant, such constraints are proposed to be qualifying matters and will restrict development as necessary.
  - Infrastructure has been upgraded in areas where historical constraints were used as justification for blanket application of the SVC to limit growth potential.
  - Historic reasons for the application of the SVC are no longer applicable under the AUP(OP) and it is appropriate to rely on the zoning and region-wide subdivision rules.
  - The use of qualifying matters will adequately manage any relevant matters such as infrastructure and Significant Ecological Areas without the need to 'double up' (i.e. SVC and QM managing the same matter).
88. Additional details on each of the areas is provided below.

#### Eastern Whangaparāoa Peninsula

89. The extent of the SVC applies to coastal properties in Whangaparāoa where several of the sites are also subject to the Significant Ecological Areas (SEA) Overlay. There are no other AUP(OP) overlays which apply across the sites.
90. The 700m<sup>2</sup> SVC has its origins in the legacy Rodney District Plan and was introduced (as a new rule to Section 11: Chapter 8 Residential) through an Environment Court

consent order following an appeal to Variation 11 to the legacy plan. The legacy Rodney District Council agreed to the provisions in order to settle the appeal.

91. When the Proposed Auckland Unitary Plan was being drafted, the legacy standard was 'rolled over' into the AUP, taking the form of a SVC in Chapter E38. It is understood that the purpose of the standard was to restrict development east of the Whangaparāora Town Centre (except Gulf Harbour). Reasons for restricting development included the identification of significant natural areas (Rodney District Council Natural Areas Survey 18 October 2007) and to maintain the spaciousness and amenity of the coastal landscape.
92. Two qualifying matters will be relevant to the sites subject to the SVC. The existing SEA overlay will continue to apply over some of the sites. The proposed Water and Wastewater Servicing Constraints qualifying matter will apply across all the sites as infrastructure constraints continue to be an issue in this area.
93. The Eastern Whangaparāora Peninsula SVC is no longer necessary as the retention of the SEA overlay is sufficient for the protection of vegetation and biodiversity, and the proposed Water and Wastewater Servicing Constraints qualifying matter will require an assessment of infrastructure capacity to be undertaken as part of the resource consent process.

#### Herald Island

94. The legacy Waitakere District Plan identified Herald Island as a 'rural village' in the rural part of the city. For rural village environments, the legacy plan set a minimum net site area of 800m<sup>2</sup> for subdivision in 'sewered' (areas connected to public wastewater systems) areas. This standard was 'rolled over' into the AUP(OP).
95. As Herald Island is serviced by a reticulated water supply and wastewater network and is within the Rural Urban Boundary, it is proposed to remove the SVC over the area.
96. The Whenuapai Airbase Aircraft Noise Overlay applies over most of Herald Island. This overlay is a qualifying matter meaning stringent subdivision restrictions (for subdivision of any size) will continue to apply to sites under the overlay.

#### Buckland

97. Under the legacy Franklin District Plan, the Buckland area was zoned 'Village Zone' and a minimum lot area of 800m<sup>2</sup> applied for subdivision, provided that reticulated wastewater services were available. This standard was 'rolled over' into AUP(OP).
98. In the legacy plan, the 800m<sup>2</sup> standard was intended to direct growth into the main towns and identified key villages (Clarks Beach, Kingseat, Pokeno, Buckland, Patumāhoe) in order to manage the potential for wider dispersal of countryside living and discourage rural subdivision with the objective being to reduce pressure to develop rural land necessary for rural production purposes.
99. It is proposed to remove the SVC over the Buckland area as it is appropriate to rely on the zoning and region-wide subdivision provisions to manage growth.

## Beachlands

100. The SVC across the Beachlands area has been rolled over from the legacy Manukau District Plan's density standard (i.e. Household units not exceeding a density of one per 700m<sup>2</sup> net site area) for the Residential Settlement Serviced zone. While the zoning applied to areas connected to a reticulated wastewater network, it is acknowledged that there is limited capacity at the Beachlands Maraetai Wastewater Treatment Plant.
101. Infrastructure constraints continue to be an issue in Beachlands. Two infrastructure qualifying matters will be relevant for the area. The Water and Wastewater Servicing Constraints is proposed to apply across the whole Beachlands area. The Infrastructure - Beachlands Transport Constraints Control is proposed to apply to the MHU zoned land in Beachlands.
102. It is proposed to delete the SVC as the qualifying matters will seek to manage the effects of infrastructure constraints on development on a case-by-case basis without requiring a blanket subdivision restriction.

### *New qualifying matters*

103. Council has identified the following qualifying matters which need to be accommodated in the AUP when applying the MDRS and Policy 3 of the NPS-UD to 'relevant residential zones'. Where Chapter E38 needs to provide for these qualifying matters, amendments have also been proposed.

### Newly identified qualifying matters not previously in Chapter E38

- Water and Wastewater Servicing Constraints
- Stormwater Disposal Constraints
- Beachlands Transport Constraints

### Identified qualifying matter already in Chapter E38 requiring amendment

- Special Character Areas Overlay – Residential and Business
104. Individual Section 32 reports have been prepared for each respective qualifying matter. Subdivision has been considered in those reports, which set out the changes to Chapter E38 after taking into account the purpose of the qualifying matter and the impact of the qualifying matter on level of development enabled by the MDRS/Policy 3. Chapter E38 adopts the proposed changes to the subdivision provisions as discussed in the Section 32 reports.
  105. A number of amendments (including new standards) are proposed to ensure subdivision protects and provides for values associated with relevant qualifying matters: In summary, these include:
    - A minor amendment was made to Table E38.8.2.6.1 Special Character Areas Overlay – Residential and Business (to add an asterisk) and to the note below the activity table to inform and direct plan users about where to find the maps

for all the sub areas in the activity table, as at present the note only refers to the North Shore sub-areas.

- Figure E38.2.6 Isthmus C2a sites, under E38.8.2.6. Subdivision of sites identified in the Special Character Areas Overlay – Residential and Business has been amended to show a smaller extent, with sites to the west and south of Mt St John removed. The figure has been amended based on the site-specific survey of the Special Character Areas Overlay – Residential and Business that was undertaken for PC78. The survey was required by the NPS UD to identify where the overlay is a qualifying matter, based on the special character values of the area. For more information about the site-specific analysis and special character as a qualifying matter, see the section 32 report for the Special Character Areas Overlay.
- Standards, matters of discretion and assessment criteria to ensure subdivision in the Infrastructure Combined Wastewater Network Control, Infrastructure – Water and Wastewater Servicing Constraints or Infrastructure – Stormwater Disposal Constraints Control can demonstrate the relevant infrastructure and servicing can be achieved.
- Standards to ensure vacant site subdivision in the Infrastructure – Beachlands Transport Constraints Control is avoided unless the minimum net site area is achieved.

#### *Existing qualifying matters*

106. Chapter E38 contains a number of existing qualifying matters that apply more restrictive controls than provided for under Schedule 3A. The qualifying matters relate to:

- Creation of esplanade reserves and strips
- Subdivisions seeking to reduce or waiver esplanade reserves or strips
- Subdivision within identified natural hazard areas including;
- 1 per cent annual exceedance probability floodplain;
  - coastal storm inundation 1 per cent annual exceedance probability (AEP) area;
  - coastal storm inundation 1 per cent annual exceedance probability (AEP) plus 1m sea level rise area;
  - coastal erosion hazard area; or
  - land which may be subject to land instability.
- Subdivision involving indigenous vegetation scheduled in any Significant Ecological Area Overlay.

107. It is considered necessary to retain provisions to continue to protect and provide for the values associated with the relevant qualifying matters. Particularly given the likely



increase in risk of adverse effects on those values as a result of incorporating MDRS and giving effect to Policy 3(b), 3(c) and 3(d) of the NPSUD.

## 2.8 Higher Level Planning Documents and Legislation

108. Table 4 below summarises the strategic matters and provisions that have been specifically given effect, or had regard, to in the development of PPC78. These documents broadly identify the resource management issues for the district and provide the higher-level policy direction to resolve these issues.

Table 4: Higher order and guiding documents

Document (Statutory obligation in italics)	Relevant provisions which PPC78 is required to take into account/give effect to:
<i>Local Government Act 2002</i>	Provides a framework for the function and role of local authorities. Local authorities are directed to adopt a sustainable approach to development and play a broad role in promoting the social, economic, and cultural well-being of their communities.
<i>Hauraki Gulf Marine Park Act, 2000</i>	Manages land uses which impact on the catchment of the Hauraki Gulf.
<i>Resource Management Act 1991 Part 2 ss5, 6, 7</i>	<p>The PPC78 seeks to achieve a quality, compact built urban environment where development is integrated and responds to the characteristics of the site and neighbourhood. Provisions specifically seek to:</p> <ul style="list-style-type: none"> <li>• Maintain and enhance amenity values and quality of environment</li> <li>• Ensure efficient use and development of land</li> <li>• Build resilience to climate change</li> <li>• Protect coastal environments, waterbodies, and their margins from inappropriate subdivision, use and development</li> <li>• Protect significant ecological areas</li> <li>• Avoid effects of development which exacerbate the risk of natural hazards.</li> </ul>
<i>Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021</i>  <i>Ss77G, 77I, 77N, 77O, 80E – 80H, Schedule 3A, Schedule 3B</i>	<p>Legislates the NPSUD 2020.</p> <p>Pursuant to s77G, PPC78 incorporates the MDRS within the Low Density, MHU and THAB zones. Only the Low Density zone includes amendments to the MDRS to make development less enabling due to identified qualifying matters. Otherwise the MDRS is incorporated as provided for in Schedule 3A, with no changes.</p> <p>S80E also provides that the IPI may include those amended or additional provisions which are consequential on MDRS or policies 3, 4 and 5 (s80E(b)(iii)(A) and (B) respectively).</p> <p>PPC78 includes additional provisions that are consequential to MDRS and Policy 3. This includes insertion of amended density standards for four or more dwellings and the insertion of built form</p>

Document (Statutory obligation in italics)	Relevant provisions which PPC78 is required to take into account/give effect to:
	<p>standards for both permitted (MDRS) and restricted discretionary activities.</p> <p>Pursuant to Policy 4 and s77I, the PPC78 includes provisions which limit development to manage potential adverse effects resulting from identified qualifying matters and related matters.</p> <p>PPC78 includes additional provisions (including objectives, policies, standards, and assessment criteria) to address built form that are consequential to the incorporation of MDRS and giving effect to policy 3.</p> <p>S77N requires amendments to the AUP(OP) to give effect to policy 3 in urban based non-residential zones. The section provides this may be done either through establishing new zones, amending existing zones and provides modifications to provide for qualifying matters (pursuant to the evaluation process under s77O).</p>
<p><i>National Policy Statement for Urban Development 2020</i></p> <ul style="list-style-type: none"> <li>• <i>Objectives 1-8</i></li> <li>• <i>Policies 1, 2</i></li> </ul>	<p>As a Tier 1 council, the AUP(OP) is required to give effect to Policies 3 and 4 of the RMA within 2 years from the commencement of the NPS.</p> <p>Policy 2 requires council to provide at least sufficient development capacity to meet expected demand for housing and business land over the short, medium, and long terms.</p> <p>As detailed in the Technical Background Report ((Attachment 1 Part 1), PPC78 will provide development capacity for the short, medium, and long term.</p> <p>Policy 1 assists in defining the overall objective of the NSPUD, being to achieve well-functioning urban environments.</p>
<p><i>New Zealand Coastal Policy Statement</i></p> <ul style="list-style-type: none"> <li>• <i>Objectives 2, 5 and 6</i></li> <li>• <i>Policy 6 – Activities in the coastal environment</i></li> <li>• <i>Policy 15(b), (d) and (e)</i></li> <li>• <i>Policy 25(a).</i></li> </ul>	<p>The AUP(OP) is required to give effect to the NZCPS.</p> <p>Relevant to PPC78, the NZCPS manages activities by protecting natural features and landscapes values and recognising that some development of the coastal environment may be appropriate.</p> <p>The following are key components that address the NZCPS:</p> <ul style="list-style-type: none"> <li>• retaining the AUP(OP) standards relating to riparian, lakeside, and riparian margin yards,</li> <li>• including provisions to address coastal hazard areas in the LDRZ.</li> </ul>
<p><i>Auckland Plan 2050</i></p> <ul style="list-style-type: none"> <li>• <i>Outcome: Māori Identity and Wellbeing</i></li> <li>- <i>Direction 1: Advance Māori Wellbeing</i></li> </ul>	<p><u>Māori Identity and Wellbeing:</u></p> <p>Papakāinga development within the THAB and MHU zones has not been specifically provided for. However, papakāinga type development could occur under activities relating to development of up to three dwellings, four or more dwellings, or as integrated residential development depending on the scale of the papakāinga development.</p> <p>The anticipated increases in yield and typology, coupled with focusing development within walkable catchments of business and</p>

Document (Statutory obligation in italics)	Relevant provisions which PPC78 is required to take into account/give effect to:
<ul style="list-style-type: none"> <li>• <i>Outcome: Homes and Places:</i></li> <li>– <i>Direction 1: Develop a quality compact urban form to accommodate Auckland's growth.</i></li> <li>– <i>Direction 2: Accelerate the construction of homes that meet Aucklanders' changing needs and preferences.</i></li> <li>– <i>Direction 3: Shift to a housing system that ensures secure and affordable homes for all.</i></li> <li>– <i>Focus area 1: Accelerate quality development at scale that improves housing choices.</i></li> </ul>	<p>community services, will contribute to addressing issues of displacement that arise from housing unaffordability and limited access to education, employment, services, and facilities.</p> <p><u>Homes and Places:</u></p> <p>Proposed changes to the subject zones positively plans for growth in Auckland's urban environments. The changes notably include provisions that would set clear objectives to achieve high-quality built environment while giving effect to Policy 3 including:</p> <ul style="list-style-type: none"> <li>• Incorporating MDRS into the THAB and MHU zones,</li> <li>• enable building heights of at least 6 storeys within designated walkable catchments of rapid transit stops;</li> <li>• enable development of scale elsewhere in the THAB (up to 16m and four or more dwellings), MHU (up to 11m and four or more dwellings);</li> <li>• include amended density standards for four or more dwellings and other specified development;</li> <li>• include built form standards for permitted and restricted discretionary activities; and</li> <li>• providing new and amended objectives, policies and matters of discretion and assessment criteria where necessary to support additional standards and implementation of the MDRS.</li> </ul> <p>The PPC78 provides a framework which supports growth across these identified areas and focuses the greatest intensity and scale of development in the most well connected, integrated and sustainable locations. The framework is structured to provide for that growth while achieving quality built outcomes.</p>
<ul style="list-style-type: none"> <li>• <i>Outcome: Transport and Access:</i></li> <li>– <i>Direction 1: Better connect people, places, good and services.</i></li> <li>– <i>Focus 5: Better integrate land-use and transport</i></li> </ul>	<p>The proposed provisions enable residential development of scale and density that supports a greater range of typologies. The proposed provisions and notification framework provide greater certainty and encouragement to developers. PPC78 is anticipated to provide sufficient yield and typologies of residential development.</p> <p>This will assist in addressing current and future housing quality and supply matters identified to effect affordability issues in Auckland.</p> <p><u>Transport and access:</u></p> <p>The proposed plan change will permit and/or enable the densification and delivery of homes across the modified MHU and THAB zones. The change also includes the specific provision to focus and support development of at least 6 storeys high within the walkable catchments of key urban locations and development is limited in areas identified to have significant transport constraints. This supports the co-location of where people live with these key nodes which are generally best served by social, cultural, educational and transport infrastructure.</p>

<b>Document (Statutory obligation in italics)</b>	<b>Relevant provisions which PPC78 is required to take into account/give effect to:</b>
<p><i>Auckland Unitary Plan Regional Policy Statement</i></p> <p><u><i>B2.2 Urban Growth and Form</i></u></p> <ul style="list-style-type: none"> <li>• <i>Objectives B2.2.1(1)(a), (c), (e), (g), (3)</i></li> <li>• <i>Policies B2.2.2(5)(a) and (c).</i></li> </ul>	<p>The PPC78 responds to these objectives and policies in the following ways:</p> <ul style="list-style-type: none"> <li>• Enabling for a higher density and scale of development of at least 6 storeys within walkable catchments of identified key locations which are served by social, cultural and transport infrastructure.</li> <li>• Incorporating MDRS in THAB and MHU zones, plus enabling increased density and scale of development to enable sufficient development capacity to accommodate expected growth.</li> <li>• Inclusion of specific standards for certain development to support this higher density and growth plan context covering matters related to design quality, amenity, and environmental effects.</li> </ul>
<p><u><i>B2.3 A quality built environment</i></u></p> <ul style="list-style-type: none"> <li>• <i>Objectives B2.3.1 (b), (c), (d), (f)</i></li> <li>• <i>Policies B2.3.1 (1)(a) and (3)</i></li> </ul>	<p>The PPC78 aligns with these objectives and policies in the following ways:</p> <ul style="list-style-type: none"> <li>• Enables an appropriate building scale and height within walkable catchments of identified centres and rapid transit stops. Aligning the areas of greatest development capacity with key infrastructure.</li> <li>• Enable the delivery of additional and a greater choice of housing typologies to support choice and through supply have a positive effect on affordability levels.</li> <li>• Include specific standards responsive to climate change, outlook, landscape, amenity and safety for both the permitted (MRDS) activities and development enabled by NPSUD in the plan change.</li> </ul>
<p><u><i>B2.3 Residential Growth</i></u></p> <ul style="list-style-type: none"> <li>• <i>Objectives B2.3.1(1), (3), (4)</i></li> <li>• <i>Policies B2.4.2(2), (3)</i></li> </ul>	<p>The PPC78 responds to these objectives and policies in the following ways:</p> <ul style="list-style-type: none"> <li>• Incorporating MDRS and including built form standards and tailored density standards to enable quality higher residential intensification</li> <li>• Enabling at least 6 storeys within walkable catchments of identified centres and rapid transit stops to support compact development and increased access to employment, community, and transport services.</li> <li>• An anticipated increase in housing yield and typologies over the short, medium, and long terms.</li> </ul>
<p><u><i>B2.5 Commercial and industrial growth</i></u></p> <ul style="list-style-type: none"> <li>• <i>Objective B2.5.1(1) and (2)</i></li> <li>• <i>Policies B2.5.2(1), (2)(a), (e), (f), (g)</i></li> </ul>	<p>The proposed amendments enable at least 6 storeys within walkable catchments of identified centres and rapid transit stops to support compact urban form and higher yields for commercial development and employment opportunities.</p>

Document (Statutory obligation in italics)	Relevant provisions which PPC78 is required to take into account/give effect to:
<u><i>Other sections of the RPS relevant to values of Qualifying matters</i></u>	Refer to the relevant evaluation for the individual qualifying matter for the specific sections of the RPS they give effect to.

### 3 Issues

109. The Regional Policy Statement (RPS) contained in the AUP(OP), provides direction for the management of subdivision, use and development for Auckland. The RPS sets out the issues of regional significance, and the associated objectives and policies and other methods which seek to achieve integrated management of the natural and physical resources of the whole region.

110. Pursuant to s74 of the RMA, a territorial authority shall have regard to any regional policy statement in preparing a plan change. In consider obligations under the NPSUD, an overarching issue was identified as follows:

*“How to give effect to mandatory intensification requirements of at least 6 storeys in walkable catchments and Medium Density Residential Standards in the relevant residential zones without compromising a quality built environment or the relevant Qualifying Matters in the: Residential – Single House Zone, Residential – Mixed Housing Suburban Zone, Residential – Mixed Housing Urban Zone, Residential – Terrace Housing and Apartment Buildings Zone, Business – Metropolitan Centre Zone, Business – Neighbourhood Centre Zone, Business – Local Centre Zone, Business – Town Centre Zone, Business – Mixed Use Zone and Business – Business Park Zone.”*

111. Given the broad nature of the overarching issue, the policy framework of Part ‘B2.3 - A quality built environment’ of the RPS has been used as a lens for identifying the more fine-grain issues which PPC78 seek to resolve.

112. The following issues have been identified as key themes which the objectives and policies of Part B2.3 of the RPS seek to address and which are of relevance to the PPC78, with a summary of the matters relevant to each issue provided for in Table 5 below:

- Planned urban character;
- Amenity, health and safety;
- Infrastructure efficiency;
- Recognising and providing for values associated with cultural and historic heritage, special character and the natural environment; and
- Resilience to the effects of climate change.

*Table 5 Regional Policy Statement Part B2.3 A quality built environment, Issues relevant to the PPC78*

<b>Issue 1</b>	<b>Planned urban character</b>
<p>The AUP(OP) sets out the planned urban characters anticipated within different zones in order to achieve the RPS objectives relating to Part B2.2 Urban growth and form, particularly as it relates to a compact urban form.</p> <p>A quality compact urban form where growth is primarily accommodated within the urban area has been identified as a central objective of Auckland’s Development Strategy. This is reflected within Part B2.2 (Urban growth and form) of the RPS, Objective B2.2.1(1) which seeks a quality compact urban form and the AUP(OP) provisions seek at the zone level to deliver a planned urban character which provides a pattern of increased intensities and hierarchies of development around identified centres, infrastructure and zones. Reinforcing the hierarchy of centres and corridors is a key quality built environment outcome (Objective B2.3.1(1)(b)) which supports the strategic directive for a compact urban form.</p> <p>Height is seen as a key indicator of the intensification anticipated in a particular zone, or of the planned urban character. Taller buildings have the potential for greater gross floor area, providing the potential to accommodate a greater density of activity on a given site. This is then supported by provisions relating to height in relation to boundary and building coverage which enable a bulk and mass appropriate to accommodate the anticipated level of intensification.</p> <p>Where subdivision results in vacant lots, site size and shape can also be a useful tool in guiding planned urban character. Providing clear thresholds ensures future development of vacant lots can align with anticipated planned urban character and density of activities.</p> <p>The recent AUP(OP) Section 35 Monitoring: B2.3 Quality Built Environment Report Monitoring report (s35 report) through a sample and review of primarily residential development reviewed the extent to which these benefits are being delivered by the AUP(OP). Key relevant findings included that:</p> <ul style="list-style-type: none"> <li>• the AUP(OP) is delivering a pattern of increasing intensity, with the most significant and dense development focusing in and around centres.</li> <li>• whilst intensities are increasing there is a lack of similar clear delineation of built form, especially in terms of height, with heights of development in many cases falling below the objective enabled by the zones. This is particularly the case for the H5 Residential - Mixed Housing Urban zone where 95% of sampled development were two storey or less and H6: Residential - Terraced Housing and Apartment Zone where 25% of sampled development were two storeys, 60% three storeys and only 10% four-six storeys.</li> </ul> <p>Implementing and responding to s80E of the RMA provides an opportunity to further optimise urban areas by refining methods of realising intensification and reinforcing the hierarchy between centres and corridors.</p>	
<b>Issue 2</b>	<b>Amenity, and health and safety</b>
<p>The relationship between space and buildings (within the site, to adjoining sites and to streets), and the external and internal design of buildings have implications on high-quality amenity as well as health and safety within urban environments.</p> <p>Ensuring provisions enable and deliver quality developments that respond to the physical characteristics of sites and areas, is a key challenge. With regards to amenity, the AUP(OP) provides a suite of provisions which seek to provide high quality buildings and site designs which maintain an attractive character, streetscape, and amenity throughout the zones. This includes those provisions relating to building height, building coverage, height-in-relation to boundary, landscaped areas, impervious areas, outdoor living areas, outlook areas and front, side and rear fences and walls.</p>	

With regards to health and safety, the AUP(OP) provides policies, standards and assessment criteria that seek to provide for people’s health and safety including provisions relating to daylight, outlook and minimum dwelling size. Providing daylight to habitable rooms and ensuring sufficient internal storage, circulation and living spaces are considered necessary components of health and safety.

Key findings of the s35 monitoring report noted that while the AUP(OP) provisions can achieve good quality development, it is not consistent in its delivery. In particular:

- Provisions to manage privacy, dominance and amenity are not always effective.
- The AUP(OP) does not sufficiently manage residential waste management and collection. The report identified that there are space, hygiene, safety, amenity and operational aspects of waste management that affect the quality and functionality of residential developments and urban environments.
- Outlook spaces were an effective and efficient method for securing quality living outcomes compliance with this standard however were not exempt from poor quality outlook spaces.
- Outdoor living spaces were underperforming in terms of providing for health and wellbeing of residents.
- Conflict was identified in respect to pedestrian safety arising from the design and management of vehicular movements on sites, with findings identifying that the width and design of accessways, and in particular the provision and design of pedestrian accessways varied significantly.

Consequential changes will need to be considered to address these inefficiencies as there is a risk that in implementing intensification instruments of the RMA, the anticipated increase in density may further exacerbate the effects on amenity, and health and safety.

<b>Issue 3</b>	<b>Infrastructure efficiency</b>
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The capacity and efficiency of infrastructure creates significant challenges in planning for intensification. Key infrastructure provision important to accommodating, sustaining development and the health and social well-being of residents includes management of water, safe pedestrian network and access to frequent public transport networks.

Given the geography, climate, geology and topography of Auckland the management of water (supply, waste and storm) through appropriate infrastructure is key to avoid adverse effects on occupants and the wider environment. Similarly effective transport infrastructure that provides safe, accessible and sustainable pedestrian connectivity between places and ensuring sufficient public transport is a key challenge and issue.

In relation to water infrastructure, key findings of the s35 monitoring noted higher density development, particularly on smaller sites, had non-compliance with landscaping and impervious surfaces area which has the potential to increase stormwater runoff in both pipes and as overland flow.

There are identified areas of Auckland subject to water, wastewater and stormwater infrastructure constraints and particularly exposed to adverse effects from these matters not being managed. Generally, where these infrastructure constraints exist, development needs to be adequately serviced by existing infrastructure or infrastructure is provided prior to residential intensification. The combined wastewater and stormwater network of Auckland potentially will be overwhelmed from increased stormwater runoff from residential development leading to flooding and impacts on the safety and quality of the urban environment.

<p>The Beachlands suburb of Auckland is identified as being subject to significant public transport constraints. It is not feasible to address those infrastructure constraints in the short, medium or long term. Providing for intensification within those areas would not support directions under the RPS to achieve a quality compact urban form (Objective 2.2.1(1) of the RPS) and would generate significant adverse effects on the wider transport network.</p>	
<p><b>Issue 4</b></p>	<p><b>Recognising and providing for values associated with cultural and historic heritage, special character and the natural environment</b></p>
<p>Adverse effects on cultural heritage and the natural environment can result from urban intensification. Effective requirements and tailored provisions are required to safeguard and respect the important and identified values of these matters.</p> <p>The AUP(OP) identifies a range of geographical areas and/issues that relate to these matters and the values. Historical and special character areas include areas or places of special architectural or built character, or notable function that have a collective importance, make an important contribution and interest to Auckland and its population. The effective management of the scale of change, the protection of existing and identification of acceptable activities and requirements in relation to proposed development are all key issues that provisions that area needed in these areas to recognise and safeguard their values.</p> <p>In relation to the natural environment Auckland's geology, topography, climate and coastal geography presents key considerations for development and further intensification. To this the AUP(OP) includes both general provision and specific area based matters which recognise and seek to protect the values associated with riparian, lakeside, coastal protection areas, significant ecological areas, outstanding natural features and landscapes, high natural character areas, areas of historic ecological character (Waitakere Ranges Heritage Area) and special character and areas subject to natural hazards. This includes both looking at the management and operation of development but also notably the appropriate scale, form and mass of development to protect these specific values.</p> <p>The AUP also recognises and includes provisions to provide for the relationship of Māori and their culture in particular regard to water in accordance with Section 6 of the RMA.</p> <p>A key issue and risk with implementing the identified intensification instruments of the RMA, is anticipated increase density may cause adverse exacerbated effects on environmental values and cultural heritage in relation to development abutting waterbodies.</p>	
<p><b>Issue 5</b></p>	<p><b>Resilience to the effects of climate change.</b></p>
<p>The effects of climate change create significant risks, uncertainties and challenges for Auckland. How land use and development is managed now and in the future in response to climate change will determine the resilience of Auckland's economy, environment, and communities. The need to address climate change is recognised in the NPSUD and the RMA:</p> <p style="padding-left: 40px;">Objective 8 of the NPSUD seeks to ensure that urban environments respond as follows:</p> <p style="padding-left: 80px;"><i>Objective 8: New Zealand's urban environments:</i></p> <p style="padding-left: 120px;"><i>(a) support reductions in greenhouse gas emissions; and</i></p> <p style="padding-left: 120px;"><i>(b) are resilient to the current and future effects of climate change.</i></p> <p>Section 7(i) of the Act also requires particular regard be had to the effects of climate change.</p> <p>There are potential effects emerging as a result of intensifying urban areas that contribute to climate change factors. It is recognised that mandatory intensification provisions to be incorporated into the AUP(OP) have the recognised benefits of supporting compact urban form and focusing development along rapid transport routes. This in turn will support a</p>	



compact urban form in the RPS B2.2.1(d) by enabling improved and more effective public transport which provides a positive response to climate change.

However, intensifying areas with more buildings, hard and impervious surfaces can result in increased heat island effects and contribute negatively to climate change.

Redevelopment of sites can result in removal of mature trees which further exacerbates the urban heat island effect and lowers resilience to climate change. Enabling site specific responses can improve the performance of the urban area to positively respond to climate change and its associated effects.

Therefore, a key issue and opportunity in implementing the RMA, within the scope of PPC78 is to include provisions which accommodate and harness this growth in ways that are resilient to climate change.

### **3.3 The scale and significance of this issue.**

113. Section 32(1)(c) of the RMA states that the level of detail contained in a section 32 evaluation report is required to correspond to the scale and significance of the effects that are anticipated from the implementation of the proposal.
114. For the purposes of section 32(1)(c):
- (a) Scale refers to the scale or reach of the issue (for example, geographical area), the anticipated size or magnitude of the expected effects from the proposal, or both; and
  - (b) Significance relates to the importance or impact of the issue (on the environment and/or on the community) that the proposal is intended to respond to, or the significance of the response itself (on the environment and community) i.e., whether it is at a regional or local.
115. The scale and significance of the relevant chapters of the AUP(OP) must be determined to guide the level of the analysis required for the Section 32 assessment.
116. The residential zone chapters that are the focus of this evaluation are the SHZ, MHS, MHU and THAB.
117. These are distributed across the region. They represent areas of considerable investment and changes to the zones will have flow on effects for housing supply and affordability. Changes proposed are largely consequential and relate to maintaining an appropriate regulatory framework in addition to the more substantial shifts required under the Act to provide for MDRS, buildings of at least 6 storeys in walkable catchments and increased heights and densities in appropriate areas.
118. In the case of the SHZ within the urban area (i.e. not in settlements with limited servicing), this is replaced by the LDRZ, that in part implements the MDRS, except where those outcomes would be inconsistent with the values of certain Qualifying Matters that are relevant to the subject land. In this instance, it is considered necessary to modify the intensification outcomes provided for by MDRS to reduce the scale and intensity of development on sites.

119. The business zones that are the focus of this evaluation are: the Business – Metropolitan Centre Zone; Business – Neighbourhood Centre Zone; Business – Local Centre Zone; Business – Mixed Use Zone; Business – Town Centre Zone; and Business – Business Park zone these are in discrete areas across the region. They also represent areas of considerable investment and changes to the zones will have flow on effects for housing supply and affordability, as well as the supply of floor area for commercial activities and employment.
120. Similarly changes proposed are largely consequential and relate to maintaining an appropriate regulatory framework in addition to the more substantial shifts required under the Act to provide for buildings of at least 6 storeys in walkable catchments.
121. The evaluation has focused on those provisions that will result in change to the management of residential and business zoned land. Broadly the changes proposed are generally in line with the approaches already contained within the AUP(OP). Where there is a change, it is generally in response to the legislative requirement of the RMA and proposed modifications to the chapter provisions are refining and managing effects at the policy level through standards and assessment matters. The modifications respond to the issues and identified outcomes relating to urban design, landscape, and development quality.
122. This section 32 does not take into account the changes that relate to the spatial application of zones, any change to a precinct or the impact of a qualifying matter to a site. The effect of these changes will vary from site to site and the development and re-development that will be provided for.

## **4 Development and evaluation of Options**

### **4.3 Description of options**

123. In the development of the preferred approach set out in the PPC78, a number of options were identified. This followed a review of the AUP(OP), and identification of the changes required in order to achieve the requirements of the Act namely to give effect to Policy 3(c) (enabling buildings of at least 6 storeys in walkable catchments) and Policy 3(b) and 3(d) (increase heights and densities in appropriate locations) of the NPSUD, and how the MDRS could be implemented.
124. The broad options are:
- (1) Amend to remove conflicts and retain status quo i.e., rely on the existing zones and provisions within residential and business zones that are not in conflict with the MDRS and Policy 3(b), (c) and (d).
  - (2) Retain the existing SHZ and MHS zones and make consequential changes to the activities to reflect their locations in smaller settlements but retain standards to achieve a quality built environment and facilitate good design outcomes.
  - (3) Amend the existing zones where incorporating MDRS and Policy 3(b), (c) and (d) is required and make consequential changes to these existing zone

activities and standards to achieve a quality built environment and facilitate good design outcomes.

- (4) (The preferred option) Amend the existing zones to incorporate MDRS and Policy 3(b), 3(c) and 3(d), rationalising the extent of the SHZ and MHS and make consequential changes for activities and standards to achieve a quality-built environment and facilitate good design outcomes.

125. The options of 'Do nothing' (relying on the AUP(OP) with no amendments) and 'Non-regulatory methods' have not been considered in the development of PPC78. Due to the mandatory requirements to incorporate the MDRS and to give effect to Policies 3(b), (c) and (d) of the NPSUD an assessment of these options was considered to be immaterial.

126. An analysis of the identified options is provided in Table 6 below. Option 4 has been chosen as the preferred option as it will provide for MDRS, enable buildings of at least 6 storeys in walkable catchments, increase height and density in appropriate locations (including the Metropolitan Zone) where necessary, achieve a quality built environment and enable the recognition of qualifying matters through zones.

Table 6: Options Analysis

**Overarching issue: Give effect to mandatory intensification requirements of at least 6 storeys in walkable catchments and Medium Density Residential Standards in the relevant residential zones without compromising a quality built environment and the relevant Qualifying Matters in the: Residential – Single House Zone, Residential – Mixed Housing Suburban Zone, Residential – Mixed Housing Urban Zone, Residential – Terrace Housing and Apartment Buildings Zone, Business – Metropolitan Centre Zone; Business – Neighbourhood Centre Zone, Business – Local Centre Zone, Business – Town Centre Zone, Business – Mixed Use Zone and Business – Business Park Zone.**

Options	Appropriateness	Effectiveness	Efficiency	Benefits	Costs	Risks
1. Amend to remove conflicts and retain status quo i.e. rely on the existing zones and provisions within residential and business zones and E38 Subdivision Chapter not in conflict with the MDRS and Policy 3(b), 3(c) and 3(d) of the NPSUD.	Not the most appropriate option as inconsistent with RPS objectives for quality built environment. Retaining the Residential – Single House zone and Residential – Mixed Housing Suburban zone would no longer be appropriate.	Enables intensification and gives effect to the requirements of the MDRS and Policy 3(b), 3(c) and 3(d). The purpose of the Residential – Single House zone and Residential – Mixed Housing Suburban zone would be compromised or become redundant.	A low/no cost option but not efficient as the issue is not addressed. More intensive zones such as Residential – Mixed Housing Urban and Residential – Terrace Housing and Apartment Buildings zone could be developed at lower intensities as a permitted activity, reducing land use efficiency.	Maintains a quality built environment (existing design outcomes).  Achieves enablement of intensification objectives.	Low cost changes.  More intensive zones such as Residential – Mixed Housing Urban and Residential – Terrace Housing and Apartment Buildings zone could be developed at lower intensities as a permitted activity, reducing land use intensity and incurring costs for servicing land at a higher level of service.	May not deliver levels of development intensity in key locations and therefore does not address the issue of housing affordability and limited housing choice.
2. Amend the existing subdivision chapter and zones to incorporate MDRS, and Policy 3(b), 3(c) and 3(d), rationalising the Residential – Single House zone and	More appropriate than option 1 because it enables changes to the Residential – Single House zone and Residential – Mixed Housing Suburban zone to ensure they	Does successfully achieve intensification but compromises quality built environment	A lower cost option but not efficient as only part of the issue is addressed (intensification within walkable catchments is enabled but without limited controls, the	Maintains a quality built environment (existing design outcomes).  Achieves enablement of intensification objectives.	High likelihood of poor and inconsistent design outcomes such as: Limited privacy, outlook to the side Low level of on-site amenity for residents	Poor design outcomes Compromised quality of the built environment

Options	Appropriateness	Effectiveness	Efficiency	Benefits	Costs	Risks
Residential – Mixed Housing Suburban zone <b>but</b> do not make consequential changes to the activities and standards to achieve a quality built environment and facilitate good design outcomes.	remain consistent with their purpose. Does not achieve other objectives of the AUP(OP) to achieve a quality built environment (and is likely to lead to poor design outcomes)		quality built environment is compromised)		Building dominance and shading to the street or adjoining sites	
3. Amend the existing subdivision chapter and zones to incorporate MDRS, and Policy 3(b), 3(c) and 3(d) and make consequential changes to the existing zone activities and standards to achieve a quality built environment and facilitate good design outcomes.	More appropriate option because it addresses the issue and achieves the objective of intensification within walkable catchments (enabling buildings of 6 storeys or more) while also achieving a quality built environment and good design outcomes. However maintaining the same residential zone hierarchy is not necessary as the outcomes of Residential – Single House zone and Residential – Mixed Housing Suburban zone are	Successfully achieves intensification without compromising a quality built environment. Benefits outweigh the costs.	A higher cost option but much more efficient than other options as the issues are addressed and objectives are achieved.  Less certainty for plan users because zone integrity and purpose does not represent the development provided for.	Gives effect to policy 3(b), 3(c) and 3(d) of NPSUD 2020. Development capacity within walkable catchments is increased which ultimately improves housing choice and affordability. The benefits of intensification are realised. More consistent, good design outcomes which: achieves high-quality built environment, in keeping with the planned built character of the area	Higher costs for applicants to design buildings to comply with standards and/or apply for resource consent (to achieve good design outcomes), including compliance costs.  Reduce potential yield for developers due to compliance with certain standards.	Standards to achieve quality built environment may be perceived as being contrary to the intent of the NPS UD 2020  Potential for significant opposition from development community through the plan change process.

Options	Appropriateness	Effectiveness	Efficiency	Benefits	Costs	Risks
	incompatible with the quantum of change enabled			<p>achieves a good level of on-site amenity for residents manages dominance and shading effects on the street manages privacy, building dominance and shading effects on adjoining sites, including buildings less than six storeys</p> <p>Resource consent for non-compliance with standards retains the ability to assess the proposal on a case-by-case basis.</p>		
4. Amend the existing subdivision chapter and zones to incorporate MDRS and , Policy 3(b), 3(c) and 3(d), rationalising the Residential – Single House zone and Residential – Mixed Housing Suburban zone and make consequential changes for	Most appropriate option as it addresses the issue in the context of the required intensification while achieving a quality built environment and good design outcomes.	Can achieve higher levels of intensification without compromising a quality built environment.	Clarity for plan users because provisions for development within each zone and the amenity expectations are clear and able to be well-understood.	<p>More consistent, good design outcomes which: achieves high-quality built environment, in keeping with the planned built character of the area:</p> <ul style="list-style-type: none"> <li>• achieves a good level of on-site</li> </ul>	<p>Higher costs for applicants to design buildings to comply with standards and/or apply for resource consent (to achieve good design outcomes), including compliance costs.</p> <p>Reduce potential yield for developers due to compliance</p>	<p>Standards to achieve quality built environment may be perceived as being contrary to the intent of the NPS UD 2020</p> <p>Potential for significant opposition from development community through</p>

Options	Appropriateness	Effectiveness	Efficiency	Benefits	Costs	Risks
<p>activities and standards to achieve a quality-built environment and facilitate good design outcomes.</p>				<p>amenity for residents;</p> <ul style="list-style-type: none"> <li>• manages amenity, dominance and shading effects on the street; and</li> <li>• manages amenity, privacy, building dominance and shading effects on adjoining sites, including buildings less than six storeys.</li> </ul> <p>Resource consent for non-compliance with standards retains the ability to assess the proposal on a case-by-case basis.</p>	<p>with certain standards.</p>	<p>the plan change process.</p>

## 5 Evaluation of objectives and provisions

### 5.3 Evaluation of objectives

127. Section 32(1)(a) of the RMA requires this evaluation report to examine the extent to which the objectives of the proposal are the most appropriate way to achieve the purpose of the Act.
128. The following provides an evaluation of whether the objectives achieve the purpose of the Act and whether there are other reasonably practicable options for achieving the objectives. The latter assessment is based on the options presented in Section 4 of this report and on the following principles:
- Relevance - How effective provisions are in achieving the objective(s).
  - Feasibility - Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.
  - Acceptability - Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.
129. The objectives for the Residential zones (LDRZ, MHU and THAB) are evaluated together. The objectives are grouped according to the predominant issue they seek to address (detailed in section 2 of this report). While it is acknowledged that many of the objectives address multiple issues, for this section the evaluation is against the most relevant issue. The policy cascades (Attachment 2) for the THAB, MHU and LDRZ demonstrate the complex relationships between objectives, policies and provisions.
130. The objectives for the Business Zones (Metropolitan Centre, Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park zones) are evaluated together in a single table. The objectives for Chapter E38 – Subdivision are also evaluated within a single table.
131. In the following table objectives labelled with an asterisk (\*) and *italics* are incorporated from Schedule 3A, RMA as per s80H of the RMA. Although the objectives do not require evaluation, they are included in this table to assist in understanding the context and purpose of the objectives and provisions proposed to address the relevant issue.



Table 7: Planned Urban Character

<p><b>Objective(s)</b></p>	<p><b>Terraced Housing and Apartment Buildings Zone</b></p> <p>H6.2(1) Land adjacent to centres and near the public transport network is efficiently used to provide high-density urban living that increases housing capacity and choice and access to centres and public transport.</p> <p>H6.2(1A) <u>Development of at least six storeys is enabled within walkable catchments, with seven or more storey buildings in identified areas, while also achieving a high-quality built environment.</u></p> <p>H6.2(2) Development <u>outside the walkable catchments</u> is in keeping with the areas <u>changing</u> planned urban built character of predominantly five, six or seven storey buildings <u>where specified</u> in identified areas, in a variety of forms.</p> <p><b>Mixed Housing Urban</b></p> <p><i>*H5.2(B1) <u>A relevant residential zone provides for a variety of housing types and sizes that respond to –</u></i></p> <p><i>(a) <u>Housing needs and demand; and</u></i></p> <p><i>(b) <u>The neighbourhood’s planned urban built character, including 3-storey buildings.</u></i></p> <p><del>H5.2(1) Land near the Business – Metropolitan Centre Zone and the Business – Town Centre Zone, high density residential areas and close to the public transport network is efficiently used for higher density residential living and to provide urban living that increases housing capacity and choice and access to public transport.</del></p> <p><b>Low Density Residential</b></p> <p>H3A.2(1) Development <u>maintains and is in keeping with the identified qualifying matters’ values within the area and their lower intensity residential development, relative to development enabled by the MDRS, being limited to suburban built character of predominantly one to two storeys buildings.</u></p>
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	<p><u>H3A.2(4) More intensive residential development including Medium Density Residential development is enabled only to the extent necessary, ensuring that it does not detract from identified qualifying matters' values accommodated by the zone's purpose.</u></p>			
<p><b>RMA evaluation</b></p>	<p>The above objectives set out the planned urban built character for the residential zones, particularly identifying the anticipated heights of each zone which set the direction for distinct urban forms and reinforce the hierarchy of centres and corridors:</p> <ul style="list-style-type: none"> <li>• in the MHU and THAB, the objectives seek to achieve a compact urban form,</li> <li>• in LDRZ objectives seek an urban form that responds to the qualities and characteristics of associated qualifying matters which render intensification inappropriate.</li> </ul> <p>Achieving a quality compact urban form promotes efficient use of land and achieves integrated development for residential, commercial and community activities:</p> <ul style="list-style-type: none"> <li>• Reduced reliance on private vehicles for transport and increased access to commercial and social services enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety (s5(2)(a)).</li> <li>• It also achieves environmental outcomes which contribute to safeguarding the life supporting capacity of air, water, soil and ecosystems (s5(2)(b)).</li> </ul> <p>An urban form that responds to a qualifying matter enables people and communities to provide for their social, cultural, and economic wellbeing (s5(2)) while recognising and providing for matters of national importance such as outstanding natural features and landscapes, significant indigenous vegetation and habitats of indigenous fauna, the relationship of Māori and their culture and traditions, historic heritage, and significant risks from natural hazards (s6).</p> <p>Height is a crucial component to achieving distinct urban forms. It also contributes to the management of the character and amenity of residential areas as a means to avoid, remedy or mitigate adverse effects of development on the environment (s5(2)(c)).</p> <p>It is necessary to have some regulatory control, compared to other methods, to provide direction and certainty in achieving distinct urban form.</p> <p>Overall, the objectives are considered to be the most appropriate means to achieve sustainable management of natural and physical resources and therefore achieve the purpose of the Act.</p>			
<p><b>Options</b></p>	<p><b>Relevance</b></p>	<p><b>Feasibility</b></p>	<p><b>Acceptability</b></p>	<p><b>Recommendation</b></p>

				Discard or evaluate further.
Option 1: Amend to remove conflicts with MDRS and Policy 3 and retain status quo	This option would only partially achieve the objective. While it would achieve the objective as it relates to height and density, it would significantly compromise the ability to achieve a quality compact urban environment and would fail to recognise and provide for qualifying matters.	This option would result in inconsistent development outcomes within the MHU and THAB zones and would fail to recognise and provide for qualifying matters.  It would therefore not satisfy council's responsibilities under the RMA (s5, s6, s7 and s31). This option would not give effect to the RPS.  High risk and uncertainty of not achieving the objective.	This option is likely to have a degree of social acceptability due to perceptions that less regulation will generate more freedom and less cost. There will also be a degree of social unacceptability, as a result of poor development outcomes that fail to reflect planned urban character anticipated with the MHU, THAB and LDRZ and jeopardise the values associated with qualifying matters.  This option could result in significant adverse environmental effects as there would be insufficient control of development in terms of both density and built form standards in the MHU and THAB zones and in terms of responding to the characteristics of qualifying matters in the LDRZ.  It would not provide for the social, economic, cultural or environment well-being of the community.	<b>Discard</b>  This option would not completely achieve the objective and would not give effect to the RPS or the RMA.
Option 2: Amend to incorporate MDRS and 6 storey buildings, with <b>no</b> consequential changes	This option would partially achieve the objective as it relates to height but would not achieve broader quality built environment outcomes anticipated under the RPS and would compromise natural and built environment outcomes where qualifying matters apply.	While the option would achieve higher density in key locations, it compromises quality built environment outcomes, including poor outcomes for qualifying matters. It would therefore not satisfy council's responsibilities under the RMA (s5, s6 and s7) and does not give effect to the RPS.  High/Moderate risk and uncertainty of not achieving the objective.	This option is likely to have a degree of social acceptability due to perceptions that less regulation will generate more freedom and less cost. There will also be a degree of social unacceptability, resulting from the compromise to values associated with qualifying matters, or in some cases potential for increased risk from natural hazards.  This option could result in significant adverse environmental effects as there would be insufficient control of development in terms of density standards and no control of development in terms of built form standards. This would generate inconsistent development outcomes that fail to reflect planned urban character. There is the potential for significant adverse effects also as it	<b>Discard</b>  This option would not completely achieve the objective and would not give effect to the RPS or the RMA.

			<p>relates to the protection and management of qualifying matters.</p> <p>While there may be perceived social and economic benefits, these are minor, and the overall adverse environmental effects will not support the long-term social, cultural, or environmental well-being of the community.</p>	
<p>Option 3: Amend to incorporate MDRS and 6 storey buildings <b>with</b> consequential changes</p>	<p>This option achieves the objectives of intensification and the high-quality urban environment outcomes, including protection and recognition of qualifying matters.</p>	<p>This option both achieves at least six storeys within walkable catchments and provides greater direction around quality built environment outcomes, including good outcomes for values associated with qualifying matters.</p> <p>Satisfies councils responsibilities under the RMA (s5, s6 and s7) and gives effect to the RPS.</p> <p>Low risk and high certainty of achieving the objective.</p>	<p>This option will generate a degree of social unacceptability due to potential increases in design costs.</p> <p>This option would manage potential adverse effects to the built environment through the control of appropriate density and built form standards.</p> <p>It would provide for the long-term social, economic, cultural or environment well-being of the community.</p>	<p><b>Evaluate further</b></p>

Table 8: Amenity, health and safety

<p><b>Objective(s)</b></p>	<p><b>Terraced Housing and Apartment Buildings Zone</b></p> <p><i>*H6.2(A1) A well-functioning urban environment that enables all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.</i></p> <p>H6.2(3) Development provides <u>high-quality amenity</u>:</p>
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(a) on-site ~~residential amenity~~ for residents;

(b) to adjoining sites; and

(c) to the street.

H6.2(4) Non-residential activities provide for the community's social, economic and cultural well-being being compatible with the scale and intensity of development anticipated by the zone so as to contribute to the amenity of the neighbourhood.

**Mixed Housing Urban Zone**

*\*H6.2(A1) A well-functioning urban environment that enables all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.*

H5.2(3) Development provides high-quality amenity:

(a) on-site ~~residential amenity~~ for residents;

(b) to adjoining sites; and

(c) to the street.

H5.2(4) Non-residential activities provide for the community's social, economic and cultural well-being being compatible with the scale and intensity of development anticipated by the zone so as to contribute to the amenity of the neighbourhood.

**Low Density Residential Zone**

H3A.2(2) Development provides high-quality amenity:

(a) on-site for residents;

(b) to adjoining sites; and

(c) to the street.

	<p>H3A.2(3) Community activities provide for the community’s social, economic and cultural well-being, while being in keeping with the scale and intensity of development anticipated by the zone, and in response to the identified qualifying matters values so as to contribute to the amenity of the neighbourhood.</p> <p>H3A.2(6) Development maintains and is in keeping with the amenity values of established residential neighbourhoods including those based on special character values.</p>			
<b>RMA evaluation</b>	<p>These objectives seek to achieve high quality amenity, both at a site specific level and to the broader streetscape. In particular, this relates to ensuring dwellings and residential sites are functional, minimising visual dominance effects to adjoining sites and street / private accessways, maintaining adequate daylight and sunlight access and providing for privacy, safety, and outlook. It also provides for non-residential and community activities that support compact urban form, while ensuring development is in keeping with surrounding amenity values. In requiring development to achieve high quality amenity the objectives achieve s5(2)(b)(a) and (c).</p> <p>It is necessary to provide a level of regulatory control, compared to other methods, in order to provide guidance and certainty around achieving high-quality amenity in residential zones.</p> <p>Overall, the objectives are considered to be the most appropriate means of achieving sustainable management of natural and physical resources and therefore achieve the purpose of the Act.</p>			
<b>Options</b>	<b>Relevance</b>	<b>Feasibility</b>	<b>Acceptability</b>	<b>Recommendation</b> Discard or evaluate further.
Option 1: Amend to remove conflicts with MDRS and Policy 3 and retain status quo	<p>This option does not achieve the objective as it does not allow for a level of direction or control that is appropriate to the anticipated increase in height and density. The lack of control over built form and insufficient control over density standards will significantly compromise quality</p>	<p>This option would result in a high degree of inconsistent and poor development outcomes both in high density zones and for values associated with qualifying matters.</p> <p>It would therefore not satisfy council’s responsibilities under the RMA (s5, s6 and s7) and does not give effect to the RPS.</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>This option would not be socially acceptable due to the highly compromised built environment and adverse effects on values associated with qualifying matters.</p> <p>This option could result in significant adverse environmental effects as there would be insufficient control of development in terms of density standards and no control of development in terms of built form standards.</p> <p>It would not provide for the social, economic, cultural or environment well-being of the community.</p>	<p><b>Discard</b></p> <p>This option would not completely achieve the objective and would not give effect to the RPS or the RMA.</p>

	built environment outcomes.			
Option 2: Amend to incorporate MDRS and 6 storey buildings, with <b>no</b> consequential changes	This option does not achieve the objective as without consequential changes there is a compromised ability to achieve “high quality” outcomes appropriate to higher density development and fails to promote development that responds to the characteristics of qualifying matters.	This option compromises quality built environment outcomes. It limits council’s ability to achieve responsibilities under the RMA (s5, s6 and s7) and does not give effect to the RPS.  High risk and uncertainty of not achieving the objective.	This option will generate a degree of social acceptability due to lessor design and consenting costs. However, it may also be socially unacceptable due to the compromised outcomes to the built environment and to the values associated with qualifying matters.  This option could result in significant adverse environmental effects due to insufficient control of higher density development and qualifying matters and not providing any control of development in terms of built form standards.  It would not provide for the social, economic, cultural or environment well-being of the community.	<b>Discard</b>  This option would not achieve the objective and would not give effect to the RPS or the RMA.
Option 3: Amend to incorporate MDRS and 6 storey buildings <b>with</b> consequential changes	This is the most appropriate option as it sets a level of direction and control that is appropriate to higher density development and identified qualifying matters, thereby achieving a high-quality built environment.	This option provides direction and clarity for plan users as to the anticipated high-quality built environment outcomes that are sought to be achieved and the qualifying matter values that are to be protected and managed.  Council is able to meet responsibilities under the RMA (s5, s6 and s7) and give effect to the RPS.  Low risk and high certainty of achieving the objective.	This option is likely to be more socially acceptable due to the high quality built environment outcomes being achieved. The incorporation of additional regulation is likely to result in higher design and development costs which may be unacceptable to some.  Potential adverse environmental effects could be appropriately avoided and mitigated through clear direction and control of density and built form standards.  It would provide for the social, economic, cultural or environment well-being of the community.	<b>Evaluate further</b>

Table 9: Infrastructure efficiency

<p><b>Objective(s)</b></p>	<p><b>Terraced Housing and Apartment Buildings Zone</b>  <u>H6.2(7) Development is enabled where it can be serviced by the water supply, wastewater and stormwater networks to manage adverse effects.</u></p> <p><u>H6.2(8) Enable safer pedestrian movement within the immediate locality of higher density developments to ensure ease of pedestrian movement to rapid transport stops.</u></p> <p><b>Mixed Housing Urban Zone</b>  <u>H3.2(7) Development is enabled where it can be serviced by the water supply, wastewater and stormwater networks to manage adverse effects.</u></p> <p><u>H3.2(8) Enable safer street environment for pedestrians.</u></p> <p><u>H3.2(10) Intensification is avoided in areas with significant transport infrastructure constraints.</u></p> <p><b>Low Density Residential Zone</b>  H3A.2(10) Development is enabled where it can be serviced by the water supply, wastewater and stormwater networks to manage adverse effects.  H3A(11) Intensification is avoided in areas with significant public transport infrastructure constraints.</p>
<p><b>RMA evaluation</b></p>	<p>These objectives seek to ensure development is appropriate to the level of planned or existing infrastructure, particularly infrastructure relating to water supply, wastewater, stormwater, public transport and pedestrian movement.</p> <p>These objectives enable people and communities to provide for their wellbeing (including health and safety) while safeguarding the life-supporting capacity of air, soil, water and ecosystems (s5(2)) through:</p> <ul style="list-style-type: none"> <li>• ensuring there is sufficient capacity to accommodate additional growth, particularly in areas of constrained infrastructure; and</li> <li>• ensuring safe pedestrian movement to frequent transport stops to support.</li> </ul> <p>It is necessary to provide some regulatory control, compared to other methods, in order to provide certainty on the ability to manage adverse environmental effects.</p>



	Overall, the objectives are considered to be the most appropriate means of achieving sustainable management of natural and physical resources and therefore achieving the purpose of the Act.			
Options	Relevance	Feasibility	Acceptability	Recommendation
				Discard or evaluate further.
Option 1: Amend to remove conflicts with MDRS and Policy 3 and retain status quo	This option would not achieve the objectives. Schedule 3A only relates to standards controlling density and the AUP(OP) does not currently provide a framework for managing development in areas of constrained infrastructure or for ensuring safe pedestrian movement. Accordingly, there would be insufficient control to adequately avoid, remedy or mitigate potential adverse effects on water quality and ecology, traffic and on the health and safety of communities.	This option would result in poor outcomes for the natural and built (street) environment. Insufficient control would result adverse effects on traffic, water quality and ecology and on the health and safety of communities.  It would not satisfy council's responsibilities under the RMA (s5, s6 and s7) and would not give effect to the RPS.  High risk and uncertainty of not achieving the objective.	This option is unlikely to be socially acceptable given the poor outcomes for the cultural, social and ecosystem values associated with the supply and quality of water, adverse effects on traffic congestion (and inconsistencies with compact urban form), and poor outcomes of the safety of pedestrians.  This option could result in significant adverse environmental effects due to limited control over development in areas of constrained infrastructure.  It would not provide for the long-term social, economic, cultural or environment well-being of the community.	<b>Discard</b>  This option would not achieve the objectives.
Option 2: Amend to incorporate MDRS and 6 storey buildings, with <b>no</b> consequential changes	This option would have a similar outcome to option 1. Option 2 would not achieve the objectives as a lack of control of development in areas of constrained infrastructure would not adequately avoid, remedy or mitigate potential adverse effects on traffic, water quality and ecology	This option would result in poor outcomes for the natural and built environment. Insufficient control would result adverse effects on traffic congestion, water quality and ecology and on the health and safety of communities.	This option is unlikely to be socially acceptable given the poor outcomes for the cultural, social and ecosystem values associated with the supply and quality of water, adverse effects on traffic congestion (and inconsistencies with compact urban form) and poor outcomes of the safety of pedestrians.	<b>Discard</b>  This option would not achieve the objectives.

	and on the health and safety of communities.	It would not satisfy council's responsibilities under the RMA (s5, s6 and s7) and would not give effect to the RPS.  High risk and uncertainty of not achieving the objective.	This option could result in significant adverse environmental effects due to limited control over development in areas of constrained infrastructure.  It would not provide for the long-term social, economic, cultural or environment well-being of the community.	
Option 3: Amend to incorporate MDRS and 6 storey buildings <b>with</b> consequential changes	This is the preferred option as it would achieve the objectives. Consequential changes would enable appropriate controls to manage the effects of development in areas of constrained infrastructure.	This option would result in good outcomes for the natural and built environment as it provides a framework to enable a level of development suitable to infrastructure capacity and requires a level of assessment (appropriate to the level of development) on the safety of pedestrians to rapid transport stops.  This would satisfy council's responsibilities under the RMA (s5, s6 and s7) and gives effect to the RPS. Low risk and high certainty of achieving the objective.	This option is likely to be socially acceptable as it protects the cultural, social and ecosystem values associated with the supply and quality of water, appropriately manages traffic effects, ensures consistency with compact urban form and provides a framework to assess and ensure pedestrian safety.  This option provides a framework to manage potential adverse effects on the environment through an appropriate level of regulatory control.	<b>Evaluate further</b>

Table 10: Recognising and providing for values associated with cultural heritage and the natural environment

<p><b>Objective(s)</b></p>	<p><b>Terraced Housing and Apartment Buildings Zone</b></p> <p>H6.2(6) Development does not adversely affect the environmental values of adjoining water bodies including riparian, lakeside and coastal protection areas and does not increase the impact from their potential natural hazard risks.</p> <p>H6.2(9) Development is enabled on sites subject to significant ecological areas where it provides for the protection and management of the significant ecological values.</p> <p><b>Mixed Housing Urban Zone</b></p> <p>H5.2(5) Development does not adversely affect the environmental values of adjoining water bodies including riparian lakeside and coastal protection areas and does not increase the impact from natural hazard risks.</p> <p>H5.2(9) Development is enabled on sites subject to significant ecological areas where it provides for the protection and management of the significant ecological values.</p> <p><b>Low Density Residential Zone</b></p> <p>H3A.2(5) Development does not adversely affect the qualifying matter values of adjoining water bodies including riparian, lakeside, and coastal protection areas nor increase the impact from natural hazard risks.</p> <p>H3A.2(6) Development maintains and is in keeping with the amenity values of established residential neighbourhoods including those based on special character values.</p> <p>H3A.2(7) Development provides for the protection and enhances the values of the scheduled site or place of significance and the relationship of Mana Whenua with their taonga, commensurate with the scale of the proposal.</p> <p>H3A.2(8) Development provides for the protection and management of significant ecological areas, outstanding natural features and landscapes and areas of high natural character and historic heritage.</p> <p>H3A.2(9) Development provides for the protection and management significant risks from natural hazards in the coastal environment and from flooding.</p>
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<p><b>RMA evaluation</b></p>	<p>These objectives seek to manage the effects of development on waterbodies, significant ecological areas, outstanding natural features and landscapes, high natural character, cultural values, historic heritage, special character and on the ability to exacerbate the risk of natural hazards.</p> <p>These objectives enable people and communities to provide for their economic, social and cultural wellbeing (including health and safety) (s5(2)) while preserving and protecting natural character of waterbodies (including the coastal environment), protecting significant and outstanding natural features, landscapes and ecology, providing for the relationship of Māori and either culture and traditions with sites of significance, protecting historic heritage, managing significant risk from natural hazards (s6) and maintaining and enhancing particular amenity values associated with special character areas (s7).</p> <p>It is necessary to provide some regulatory control, compared to other methods, in order to provide certainty on the ability to manage adverse effects on waterbodies, significant natural values, cultural and heritage values and on the ability to exacerbate the risk of natural hazards.</p> <p>Overall, the objectives are considered to be the most appropriate means of achieving sustainable management of natural and physical resources and therefore achieving the purpose of the Act.</p>			
<p><b>Options</b></p>	<p><b>Relevance</b></p>	<p><b>Feasibility</b></p>	<p><b>Acceptability</b></p>	<p><b>Recommendation</b> Discard or evaluate further.</p>
<p>Option 1: Amend to remove conflicts with MDRS and Policy 3 and retain status quo</p>	<p>This option would not achieve the objectives. Schedule 3A only relates to standards controlling density and any operative standard controlling effects of development on the identified qualifying matters would require deletion. Accordingly, there would be insufficient control to adequately avoid, remedy or mitigate adverse effects on values associated with cultural and historic heritage, special character and the natural environment</p>	<p>This option would result in poor outcomes for the values associated with identified qualifying matters due to insufficient control over the density, bulk, mass, scale and location of development in relation to those qualifying matters.</p> <p>It would not satisfy council's responsibilities under the RMA (s5, s6 and s7) and would not give effect to the RPS.</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>This option is unlikely to be socially acceptable given the poor outcomes for the cultural, social and ecosystem values associated with the identified qualifying matters.</p> <p>This option could result in significant adverse environmental effects due to limited control over development in relation to the identified qualifying matters.</p> <p>It would not provide for the long-term social, economic, cultural or environment well-being of the community.</p>	<p><b>Discard</b></p> <p>This option would not achieve the objectives.</p>

<p>Option 2: Amend to incorporate MDRS and 6 storey buildings, with <b>no</b> consequential changes</p>	<p>This option would have a similar outcome to option 1. Option 2 would not achieve the objectives as a lack of control of development would not provide the ability to avoid, remedy or mitigate adverse effects on the values associated with the identified qualifying matters.</p>	<p>This option would result in poor outcomes for the values associated with identified qualifying matters due to insufficient control over the density, bulk, mass, scale and location of development in relation to those qualifying matters.</p> <p>It would not satisfy council's responsibilities under the RMA (s5, s6 and s7) and would not give effect to the RPS.</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>This option is unlikely to be socially acceptable given the poor outcomes for the cultural, social and ecosystem values associated with the identified qualifying matters.</p> <p>This option could result in significant adverse environmental effects due to limited control over development in relation to the identified qualifying matters.</p> <p>It would not provide for the long-term social, economic, cultural or environment well-being of the community.</p>	<p><b>Discard</b></p> <p>This option would not achieve the objectives.</p>
<p>Option 3: Amend to incorporate MDRS and 6 storey buildings <b>with</b> consequential changes</p>	<p>This is the preferred option as it would achieve the objectives. Consequential changes would enable appropriate controls to manage the effects of development on waterbodies, water quality, flooding and significant ecological areas.</p>	<p>This option would result in good outcomes for the values associated with identified qualifying matters as it provides a framework to manage potential adverse effects of development in relation to those matters.</p>	<p>This option is likely to be socially acceptable as it continues to protect the cultural, social and ecosystem values associated with the identified qualifying matters.</p> <p>This option provides a framework to manage potential adverse effects through an appropriate level of regulatory control.</p>	<p><b>Evaluate further</b></p>

Table 11: Climate change resilience

<p><b>Objective(s)</b></p>	<p><b>Terraced Housing and Apartment Buildings Zone</b> H6.2(5) <u>Development contributes to a high-quality built environment that builds resilience to climate change.</u></p> <p><b>Mixed Housing Urban Zone</b> H5.2(6) <u>Development contributes to a high-quality built environment that builds resilience to climate change</u></p>
<p><b>RMA evaluation</b></p>	<p>This objective requires development to include design solutions for a sustainable response to climate change issues such as carbon emissions, water quality and the urban heat island effect. In promoting climate resilience at the design phase, this</p>

	<p>enables people to continue providing for their social, cultural and economic wellbeing while sustaining natural and physical resources to meet the needs of future generations and avoiding, remedying and mitigating adverse effects of urban development on the natural environment (s5(2)).</p> <p>It is necessary to have some regulatory control, rather than other methods, to provide direction, guidance and certainty around achieving a high-quality climate resilient built environment.</p> <p>Overall, the objectives are considered to be the most appropriate way of achieving sustainable management of resources and therefore the purpose of the Act.</p>			
Options	Relevance	Feasibility	Acceptability	Recommendation Discard or evaluate further.
Option 1: Amend to remove conflicts with MDRS and Policy 3 and retain status quo	This option does not achieve the objective as the AUP(OP) does not provide an appropriate framework.	<p>This option would result in poor natural and built environmental outcomes due to lack of direction around building resilience to climate change effects.</p> <p>It would not satisfy council's responsibilities under the RMA (s5 and s7) and does not give effect to the RPS.</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>This option is likely to be socially acceptable as less regulation may be perceived as providing greater flexibility and freedom.</p> <p>However, this option will further exacerbate the inequitable distribution of canopy cover over Auckland (Auckland Council, <i>Auckland's Urban Ngahere (Forest) Strategy</i>) and will reduce the ability of development to build resilience to climate change.</p> <p>This option will not provide for the long-term social, cultural, economic or environmental wellbeing of the community.</p>	<p><b>Discard</b></p> <p>This option does not achieve the objective and does not give effect to the RPS.</p>
Option 2: Amend to incorporate MDRS and 6 storey buildings with <b>no</b> consequential changes	This option would not achieve the objective due to no control or direction as to how development can build resilience to climate change.	<p>This option would result in poor natural and built environmental outcomes due to lack of direction around building resilience to climate change effects.</p> <p>It would not satisfy council's responsibilities</p>	As with option 1, this option may be perceived to be socially unacceptable due to potential costs, but the significant adverse environmental effects outweigh the perceived social and economic benefits.	<p><b>Discard</b></p> <p>This option will not achieve the objective and will not give effect to the RPS or RMA.</p>

		under the RMA (s5 and s7) and does not give effect to the RPS.  High risk and uncertainty of not achieving the objective.	This option will not provide for the long-term social, cultural, economic or environmental wellbeing of the community.	
Option 3: Amend to incorporate MDRS and 6 storey buildings <b>with</b> consequential changes	This option would achieve the objective as it would enable an appropriate level of direction and control to build resilience.	This option is most likely to result in high-quality outcomes for both the natural and built environment by providing an appropriate framework to build resilience.	This option is likely to face a degree of social unacceptability due to a potential increase in design cost.  This option will provide direction to build resilience to climate change effects and contribute to high-quality built environment outcomes.	<b>Evaluate further</b> This option will achieve the objective and give effect to the RPS and RMA.

Table 12: Business Zones – Planned urban Character, Amenity and Qualifying Matters

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
<b>Objectives(s)</b>	H10.2(1) A strong network of centres that are attractive environments and attract ongoing investment, promote commercial activity, and provide employment, housing and goods and services, all at a variety of scales.  H10.2(2) Development is of a form, scale and design quality so that centres are reinforced as focal points for the community.	H11.2(1) A strong network of centres that are attractive environments and attract ongoing investment, promote commercial activity, and provide employment, housing and goods and services, all at a variety of scales.  H11.2(2) Development is of a form, scale and design quality so that centres are reinforced as focal points for the community.	H12.2(1) A strong network of centres that are attractive environments and attract ongoing investment, promote commercial activity, and provide employment, housing and goods and services, all at a variety of scales.  H12.2(2) Development is of a form, scale and design quality so that centres are reinforced as focal points for the community.

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
	<p>H10.2(3) Development positively contributes towards planned future form and quality, creating a <u>well-functioning urban environment and a sense of place.</u></p> <p>H10.2(4) Business activity is distributed in locations, and is of a scale and form, that:</p> <ul style="list-style-type: none"> <li>a) provides for the community's social and economic needs;</li> <li>b) improves community access to goods, services, community facilities and opportunities for social interaction; <del>and</del></li> <li>c) manages adverse effects on the environment, including effects on infrastructure and residential amenity-; <u>and</u></li> <li>d) <u>accommodates qualifying matters.</u></li> </ul> <p>H10.2(5) A network of centres that provides:</p> <ul style="list-style-type: none"> <li>a) a framework and context to the functioning of the urban area and its transport network, recognising: <ul style="list-style-type: none"> <li>i. the regional role and function of the city centre, metropolitan centres and town centres as commercial, cultural and social focal</li> </ul> </li> </ul>	<p>H11.2(3) Development positively contributes towards planned future form and quality, creating a <u>well-functioning urban environment and a sense of place.</u></p> <p>H11.2(4) Business activity is distributed in locations, and is of a scale and form, that:</p> <ul style="list-style-type: none"> <li>a) provides for the community's social and economic needs;</li> <li>b) improves community access to goods, services, community facilities and opportunities for social interaction; <del>and</del></li> <li>c) manages adverse effects on the environment, including effects on infrastructure and residential amenity-; <u>and</u></li> <li>d) <u>accommodates qualifying matters.</u></li> </ul> <p>H11.2(5) A network of centres that provides:</p> <ul style="list-style-type: none"> <li>a) a framework and context to the functioning of the urban area and its transport network, recognising: <ul style="list-style-type: none"> <li>i. the regional role and function of the city centre, metropolitan centres and town centres as commercial, cultural and social focal points for the region, sub-regions and local areas; and</li> </ul> </li> </ul>	<p>H12.2(3) Development positively contributes towards planned future form and quality, creating a <u>well-functioning urban environment and a sense of place.</u></p> <p>H12.2(4) Business activity is distributed in locations, and is of a scale and form, that:</p> <ul style="list-style-type: none"> <li>a) provides for the community's social and economic needs;</li> <li>b) improves community access to goods, services, community facilities and opportunities for social interaction; <del>and</del></li> <li>c) manages adverse effects on the environment, including effects on infrastructure and residential amenity-; <u>and</u></li> <li>d) <u>accommodates qualifying matters.</u></li> </ul> <p>H12.2(5) A network of centres that provides:</p> <ul style="list-style-type: none"> <li>a) a framework and context to the functioning of the urban area and its transport network, recognising: <ul style="list-style-type: none"> <li>i. the regional role and function of the city centre, metropolitan centres and town centres as commercial, cultural and social focal points for the region, sub-regions and local areas; and</li> </ul> </li> </ul>



Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
	<p>points for the region, sub-regions and local areas; and</p> <p>II. local centres and neighbourhood centres in their role to provide for a range of convenience activities to support and serve as focal points for their local communities.</p> <p>b) a clear framework within which public and private investment can be prioritised and made; and</p> <p>c) a basis for regeneration and intensification initiatives.</p> <p>H10.2(6) Town centres are the focus of commercial, community and civic activities for the surrounding area and which provide for residential intensification.</p> <p>H10.2(7) The scale and intensity of development in town centres is increased while ensuring development is in keeping with the planning and design outcomes identified in this Plan for the relevant centre.</p> <p>H10.2(8) Town centres are an attractive place to live, work and visit with vibrant</p>	<p>II. local centres and neighbourhood centres in their role to provide for a range of convenience activities to support and serve as focal points for their local communities.</p> <p>b) a clear framework within which public and private investment can be prioritised and made; and</p> <p>c) a basis for regeneration and intensification initiatives.</p> <p>H11.2(6) Local centres enable commercial activity which primarily services local convenience needs and provides residential living opportunities.</p> <p>H11.2(7) The scale and intensity of development within local centres is in keeping with the planning outcomes identified in this Plan for the surrounding environment.</p> <p>H11.2(8) Local centres are an attractive place to live, work and visit.</p> <p>H11.2(9) <u>Building height of at least six storeys is enabled within walkable catchments unless qualifying matters apply that reduce height</u></p>	<p>II. local centres and neighbourhood centres in their role to provide for a range of convenience activities to support and serve as focal points for their local communities.</p> <p>b) a clear framework within which public and private investment can be prioritised and made; and</p> <p>c) a basis for regeneration and intensification initiatives.</p> <p>H12.2(6) Commercial activities within residential areas, limited to a range and scale that meets the local convenience needs of residents as well as passers-by, are provided in neighbourhood centres.</p> <p>H12.2(7) Neighbourhood centres are developed to a scale and intensity in keeping with the planning outcomes identified in this Plan for the surrounding environment.</p> <p>H12.2(8) <u>Building height of at least six storeys is enabled within walkable catchments unless qualifying matters apply that reduce height</u></p>

<b>Business Zones</b>	<b>Town Centre Zone</b>	<b>Local Centre Zone</b>	<b>Neighbourhood Centre Zone</b>
	<p>and vital commercial, entertainment and retail areas.</p> <p>H10.2(9) Key Retail Frontage streets are a focus for pedestrian activity, with General Commercial Frontage streets supporting this role.</p> <p>H10.2(10) <u>Building height of at least six storeys is enabled within walkable catchments unless qualifying matters apply that reduce height</u></p>		
<b>Zones continued</b>	<b>Metropolitan Centre</b>	<b>Business Park</b>	<b>Mixed Use Zone</b>
<b>Objectives continued</b>	<p>H9.2(1) A strong network of centres that are attractive environments and attract ongoing investment, promote commercial activity, and provide employment, housing and goods and services, all at a variety of scales.</p> <p>H9.2(2) Development is of a form, scale and design quality so that centres are reinforced as focal points for the community.</p> <p>H9.2(3) Development positively contributes towards planned future form and quality, creating a <u>well-functioning urban environment and a</u> sense of place.</p> <p>H9.2(4) Business activity is distributed in locations, and is of a scale and form, that:</p>	<p>H15.2(1) A strong network of centres that are attractive environments and attract ongoing investment, promote commercial activity, and provide employment, housing and goods and services, all at a variety of scales.</p> <p>H15.2(2) Development is of a form, scale and design quality so that centres are reinforced as focal points for the community.</p> <p>H15.2(3) Development positively contributes towards planned future form and quality, creating a <u>well-functioning urban environment and a</u> sense of place.</p> <p>H15.2(4) Business activity is distributed in locations, and is of a scale and form, that:</p>	<p>H13.2(1) A strong network of centres that are attractive environments and attract ongoing investment, promote commercial activity, and provide employment, housing and goods and services, all at a variety of scales.</p> <p>H13.2(2) Development is of a form, scale and design quality so that centres are reinforced as focal points for the community.</p> <p>H13.2(3) Development positively contributes towards planned future form and quality, creating a <u>well-functioning urban environment and a</u> sense of place.</p>

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
	<p>(a) provides for the community's social and economic needs;</p> <p>(b) improves community access to goods, services, community facilities and opportunities for social interaction; <del>and</del></p> <p>(c) manages adverse effects on the environment, including effects on infrastructure and residential amenity-; <u>and</u></p> <p>(d) <u>accommodates qualifying matters.</u></p> <p>H9.2(5)A network of centres that provides:</p> <p>(a) a framework and context to the functioning of the urban area and its transport network, recognising:</p> <p>(i) the regional role and function of the city centre, metropolitan centres and town centres as commercial, cultural and social focal points for the region, sub-regions and local areas; and</p> <p>(ii) local centres and neighbourhood centres in their role to provide for a range of convenience activities to support and serve as focal points for their local communities.</p> <p>(b) a clear framework within which public and private investment can be prioritised and made; and</p>	<p>(a) provides for the community's social and economic needs;</p> <p>(b) improves community access to goods, services, community facilities and opportunities for social interaction; <del>and</del></p> <p>(c) manages adverse effects on the environment, including effects on infrastructure and residential amenity-; <u>and</u></p> <p>(d) <u>accommodates qualifying matters.</u></p> <p>H15.2(5) A network of centres that provides:</p> <p>(a) a framework and context to the functioning of the urban area and its transport network, recognising:</p> <p>(i) the regional role and function of the city centre, metropolitan centres and town centres as commercial, cultural and social focal points for the region, sub-regions and local areas; and</p> <p>(ii) local centres and neighbourhood centres in their role to provide for a range of convenience activities to support and serve as focal points for their local communities.</p> <p>(b) a clear framework within which public and private investment can be prioritised and made; and</p>	<p>H13.2(4) Business activity is distributed in locations, and is of a scale and form, that:</p> <p>a) provides for the community's social and economic needs;</p> <p>b) improves community access to goods, services, community facilities and opportunities for social interaction; <del>and</del></p> <p>c) manages adverse effects on the environment, including effects on infrastructure and residential amenity-; <u>and</u></p> <p>d) <u>accommodates qualifying matters.</u></p> <p>H12.2(5) A network of centres that provides:</p> <p>a) a framework and context to the functioning of the urban area and its transport network, recognising:</p> <p>I. the regional role and function of the city centre, metropolitan centres and town centres as commercial, cultural and social focal points for the region, sub-regions and local areas; and</p> <p>II. local centres and neighbourhood centres in their role to provide for a range of convenience activities to support and serve as focal</p>

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
	<p>(c) a basis for regeneration and intensification initiatives.</p> <p>H9.2(6) Metropolitan centres are reinforced and developed for commercial, community and civic activities and provide for residential intensification.</p> <p>H9.2(7) Metropolitan centres are an attractive place to live, work and visit with vibrant and vital commercial, entertainment and retail areas.</p> <p>H9.2(8) Key Retail Frontage streets are a focus for pedestrian activity, with identified General Commercial Frontage streets supporting this role.</p> <p>H9.2(9) <u>Metropolitan centres enable building heights and density of urban form to act as focal points for community interaction, commercial growth and development.</u></p>	<p>(c) a basis for regeneration and intensification initiatives.</p> <p>H15.2(6) Existing business parks are efficiently and effectively developed.</p> <p>H15.2(7) New business parks for office-based employment are enabled where they:</p> <ul style="list-style-type: none"> <li>(a) are comprehensively planned;</li> <li>(b) achieve high amenity;</li> <li>(c) avoid adverse effects on the function and amenity of the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and neighbouring zones; and</li> <li>(d) are easily accessible to public transport.</li> </ul> <p>H15.2(8) Retail activities which support intensive employment activities are enabled.</p> <p>H15.2(9) <u>Building height of at least of six storeys is enabled within walkable catchments unless qualifying matters apply that reduce height</u></p>	<p>points for their local communities.</p> <ul style="list-style-type: none"> <li>b) a clear framework within which public and private investment can be prioritised and made; and</li> <li>c) a basis for regeneration and intensification initiatives.</li> </ul> <p>H13.2(6) Moderate to high intensity residential activities and employment opportunities are provided for, in areas in close proximity to, or which can support the City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and the public transport network.</p> <p>H13.2(7) Activities within the zone do not compromise the function, role and amenity of the City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone.</p> <p>H13.2(8) A mix of compatible residential and non-residential activities is encouraged.</p> <p>H13.2(9) Business – Mixed Use Zone zoned areas have a high level of amenity.</p>

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
			H13.2(10) <u>Building height of at least six storeys is enabled within walkable catchments unless qualifying matters apply that reduce height</u>
<b>RMA evaluation</b>	<p>The above objectives set out the anticipated development, activities and function of a hierarchy of centres which are contained within these business zones. The objectives for the zones reinforce these centres as locations and focal points for investment, commercial activity and services together with opportunities to provide housing. Generally, a moderate to high level of intensity and density of development is sought in these locations which provide key function and focal points for the communities living within the area and adjacent residential zones.</p> <p>The objectives have been subject to limited amendment in the PPC78 introducing an objective for development at least 6 storeys to be enabled within walkable catchment areas of the zone, and minor amendments to recognise and provide for qualifying matters and to align with changes to residential chapters to ensure consistent transitions between zones. This reinforces that development should provide well-functioning urban environments and its scale, form and distribution accommodates qualifying matters as they may exist within or adjacent to the zone.</p> <p>Overall, the objectives are considered to be the most appropriate means to achieve sustainable management of natural and physical resources and therefore achieve the purpose of the Act. This objectives in focusing development and investment into these connected centres has a key role in promoting and delivering a compact urban form providing services and facilities to residents while continuing to achieve high-quality built environment outcomes.</p> <ul style="list-style-type: none"> <li>• In promoting and providing for development in these centres for a range of employment, commerce, social and residential uses the objectives directly provide for the social, cultural and economic wellbeing of persons and communities. (s5(2))</li> <li>• In enabling and focusing development into these typically well connected centres, persons are provided with more sustainable and increased access to commercial, cultural, and social services ensuring development is delivered in a way which makes efficient use and best protects natural and physical resources (s5(2)(a)).</li> </ul> <p>The inclusion of controls to respond to a qualifying matter as identified through the amended objectives recognises and supports matters of national importance (s6).</p>		
<b>Options</b>	<b>Relevance</b>	<b>Feasibility</b>	<b>Acceptability</b>

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
<p>Option 1: Amend to remove conflicts with MDRS and Policy 3 and retain status quo</p>	<p>This option will not achieve the objectives, except as it relates to Metropolitan Centre which already provides for heights of 27m. However, there would be a lack of clear direction regarding the scale and intensity of development sought within the walkable catchments.</p> <p>Remaining controls would not be sufficient to enable and manage development and would generate poor built environment outcomes and adverse effects on the amenity of these locations.</p>	<p>This option would result in inconsistent development outcomes within the zones and would fail to recognise and provide for qualifying matters.</p> <p>It would therefore not satisfy council's responsibilities under the RMA (s5, s6 and s7). This option would not give effect to the RPS.</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>Whilst fewer regulations are likely to result in cheaper design and consenting costs. This option is unlikely to be socially acceptable due to the compromised built environment outcomes being delivered in these important centres which are focal points for communities.</p> <p>It would not provide for the long-term social, economic, cultural or environment well-being of the community.</p>
<p>Option 2: Amend to incorporate 6 storey buildings with <b>no</b> consequential changes</p>	<p>This option would partially achieve the objective as it relates to height of development sought in these walkable catchments of centres.</p> <p>However, it would not ensure broader quality built environment outcomes are achieved and deliver a framework of provisions that recognises and enables this change. This would also not provide recognition and protection of environmental matters where qualifying matters apply.</p>	<p>While the option would enable the height of development in walkable catchments, without consequential changes it compromises quality built environment outcomes, including poor outcomes for identified qualifying matters.</p> <p>It would therefore not satisfy council's responsibilities under the RMA (s5, s6 and s7).</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>This option is unlikely to be socially acceptable due to adverse environmental effects from lack of direction and inconsistent development outcomes that fail to reflect planned respective characters of these locations.</p> <p>While there may be perceived social and economic benefits from reduced controls, these are relatively minor, and the overall adverse environmental effects will not support the long-term social, cultural or environmental well-being of the community.</p>
<p>Option 3: Amend to incorporate 6 storey buildings <b>with</b> consequential changes</p>	<p>This option achieves the objectives of intensification with consequential amendments to ensure high-quality urban environment and amenity outcomes, successful transition into other zones and protection and recognition of qualifying matters.</p>	<p>This option achieves at least six storeys within walkable catchments within these zones along with a clear and consistent framework to deliver quality built environment outcomes and protection of values associated with relevant qualifying matters.</p>	<p>This option will be socially acceptable as it manages development through an appropriate level of control.</p> <p>This option would adequately manage adverse effects on the built environment and relevant qualifying matters.</p>

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone
		Satisfies councils responsibilities under the RMA (s5, s6 and s7) and gives effect to the RPS.	It would provide for the long-term social, economic, cultural or environment well-being of the community.

Table 13: Subdivision

<b>Objective(s)</b>	<p>E38.2(1) Land is subdivided to achieve the objectives of the residential zones, business zones, open space zones, special purpose zones, coastal zones, relevant overlays and Auckland-wide provisions.</p> <p>E38.2(2) Land is subdivided in a manner that provides for the long-term needs of the community and minimises adverse effects of future development on the environment.</p> <p>E38.2(3) Land is vested to provide for esplanades reserves, roads, stormwater, infrastructure and other purposes.</p> <p>E38.2(4) Infrastructure supporting subdivision and development is planned and provided for in an integrated and comprehensive manner and provided for to be in place at the time of the subdivision or development.</p> <p>E38.2(5) Infrastructure is appropriately protected from incompatible subdivision, use and development, and reverse sensitivity effects.</p> <p>E38.2(6) Subdivision has a layout which is safe, efficient, convenient and accessible.</p> <p>E38.2(7) Subdivision manages adverse effects on historic heritage or Māori cultural heritage.</p> <p>E38.2(8) Subdivision maintains or enhances the natural features and landscapes that contribute to the character and amenity values of the areas.</p> <p>E38.2(9) Subdivision to protect indigenous vegetation or wetlands is provided for in the residential zones.</p> <p>E38.2(10) Subdivision:</p> <ul style="list-style-type: none"> <li>(a) within urban and serviced areas, does not increase the risks of adverse effects to people, property, infrastructure and the environment from natural hazards;</li> <li>(b) avoids, where possible, and otherwise mitigates, adverse effects associated with subdivision for infrastructure or existing urban land uses; and</li> <li>(c) maintains the function of flood plains and overland flow paths to safely convey flood waters, while taking into account the likely long term effects of climate change.</li> <li>(d) <u>is provided for where the sites can be serviced by the water supply, wastewater and stormwater networks.</u></li> <li>(e) <u>avoids the creation of vacant sites not complying with the minimum site size in areas where transport qualifying matters apply.</u></li> </ul>
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	E38.2(11) <u>Provide for subdivision which enables the level of development anticipated by the RMA, except in circumstances where one or more qualifying matters are relevant.</u>			
<b>RMA evaluation</b>	<p>The objectives seek to ensure subdivision:</p> <ul style="list-style-type: none"> <li>• takes into account the longevity of development, thereby providing for wellbeing people and communities, supporting the efficient use and development of natural and physical resources (s7) and specifically addresses health and safety (s5(2)) and</li> <li>• of land addresses matters of national importance (s6), which thereby enable development to provide for the matters listed in s5(2)(a) – (c);</li> <li>• is appropriate to the values associated with qualifying matters (s6 and s7).</li> </ul> <p>It is necessary to have some regulatory control, rather than other methods, to provide direction, guidance and certainty around achieving a high-quality climate resilient built environment.</p> <p>Overall, the objectives are considered to be the most appropriate way of achieving sustainable management of resources and therefore the purpose of the Act.</p>			
<b>Options</b>	<b>Relevance</b>	<b>Feasibility</b>	<b>Acceptability</b>	<b>Recommendation</b> Discard or evaluate further.
Option 1: Amend to remove conflicts with MDRS and Policy 3 and retain status quo	This option would not achieve the objective due to lack of control over development that does not comply with MDRS and no ability to ensure development responds to specific characteristics of a site such as qualifying matters.	<p>This option would result in inconsistent development outcomes and fail to recognise and provide for qualifying matters.</p> <p>It would therefore not satisfy council's responsibilities under the RMA (s5, s6, s7 and s31). This option would not give effect to the RPS.</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>This option is likely to have a degree of social acceptability due to perceptions that less regulation will generate more freedom and less cost. There will also be a degree of social unacceptability, as a result of poor development outcomes that fail to address values associated with qualifying matters.</p> <p>This option could result in adverse environmental effects as there would be insufficient control of development in terms achieving planned urban character and in</p>	<b>Discard</b>  This option would not achieve the objective and would not give effect to the RPS or the RMA.



			<p>terms of responding to the characteristics of qualifying matters.</p> <p>It would not provide for the social, economic, cultural or environment well-being of the community.</p>	
<p>Option 2: Amend to incorporate MDRS and Policy 3, with <b>no</b> consequential changes</p>	<p>This option would not achieve the objective, particularly as it relates to recognising and providing for specific characteristics of a site such as qualifying matters.</p>	<p>This option would fail to recognise and provide for qualifying matters.</p> <p>It would therefore not satisfy council's responsibilities under the RMA (s5, s6, s7 and s31). This option would not give effect to the RPS.</p> <p>High risk and uncertainty of not achieving the objective.</p>	<p>This option is likely to have a degree of social acceptability due to perceptions that less regulation will generate more freedom and less cost. There will also be a degree of social unacceptability, as a result of poor development outcomes that fail to address values associated with qualifying matters.</p> <p>This option could result in adverse environmental effects as there would be insufficient control of development in terms of responding to the characteristics of qualifying matters.</p>	<p><b>Discard</b></p> <p>This option would not achieve the objective and would not give effect to the RPS or the RMA.</p>
<p>Option 3: Amend to incorporate MDRS and Policy 3 <b>with</b> consequential changes</p>	<p>This option achieves the objectives by enabling a suitable level of control that supports achieving planned urban character and recognises and provides for qualifying matter values.</p>	<p>This option would ensure good development outcomes consistent with the planned urban character and quality built environment. Including good outcomes for qualifying matter values.</p>	<p>This option is likely to have a degree of social unacceptability due to increased regulation.</p> <p>This option would manage potential adverse effects to the built environment through sufficient control to ensure development outcomes consistent with anticipated character in relevant zones.</p> <p>It would provide for the long-term social, economic, cultural or environment well-being of the community.</p>	<p><b>Evaluate further</b></p>

## 5.4 Evaluation of Provisions

132. Section 32(1)(b) of the RMA requires this evaluation report to examine the extent to which the provisions in the proposal are the most appropriate way to achieve objectives by:
- Identifying other reasonably practicable options for achieving the objectives.
  - Assessing the efficiency and effectiveness of the provisions in achieving the objectives including the benefits and costs of the environmental, economic, social and cultural effects of the provisions and the risk of acting or not acting; and
  - Summarising the reasons for deciding on the provisions.
133. In this case as the proposal relates to amending a plan which already exists this evaluation is limited to the amended provisions.
134. The following tables provide the evaluation of amended provisions in response to objectives for the relevant zones. This includes an evaluation of amended provisions within the:
- LDRZ, MHU and THAB zones; and
  - Metropolitan Centre, Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park Business zones.
135. Noting there are overlaps, the tables are grouped according to the issue the relevant provisions seek to address. The provisions from each zone are evaluated as a package in addressing the relevant objectives. The residential zones are evaluated separately where there some distinct differences in the intent of some provisions. The relevant Business zones are evaluated together given there are only a small number of amendments proposed which are similar in nature.

Table 14: Planned Urban Character

Related Policies (Additions <u>underlined</u> and deletions <del>strikethrough</del> )	Related Standards	Related Matters of Discretion and Assessment Criteria
<b>H6 Residential – Terraced Housing and Apartment Zone (THAB)</b>		
<p><u>H6.3(A1) Enable a variety of housing typologies with a mix of densities within the zone including three-storey attached and detached dwellings, and low-rise apartments.</u></p> <p><u>H6.3(E1) Provide for developments not meeting permitted activity status, while encouraging high-quality developments.</u></p> <p>H6.3(1) Enable a variety of housing types at high densities including terrace housing and <u>low to mid-rise and higher rise apartments within walkable catchments</u> and integrated residential development such as retirement villages.</p> <p>H6.3(2) Require the height, bulk, form and appearance of <u>multi-unit development</u> <del>and the provision of setbacks and landscaped areas</del> to achieve a <u>high-quality built environment</u>:  <u>(a) with a high-density urban built character of predominantly five, six or seven storey buildings in identified areas;</u></p> <p>H6.3(4) In identified locations adjacent to centres, enable greater building height <del>through the</del> <u>of five storey's outside walkable catchments, at least six storeys within walkable catchments and the application of the Height Variation Control where additional development potential is enabled and which:</u></p>	<p>H6.6.5. Building Height</p> <p>H6.6.6. Height in relation to boundary</p> <p>H6.6.11 Building coverage</p>	<p><u>Matters of Discretion (H6.8.1)</u></p> <p>H6.8.1(1)(b)(i) Any other development</p> <p>H6.8.1(2)(a)(i)(b) for developments containing four or more dwellings</p> <p>H6.8.1(3)(a)(i) for integrated residential development</p> <p>H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p> <p><u>Assessment Criteria</u></p> <p>H6.8.2(1)(b)(i) Any other development</p> <p>H6.8.2(2)(a), H6.8.2(2)(aa), H6.8.2(2)(b), H6.8.2(2)(c), H6.8.2(2)(e) For developments containing four or more dwellings</p> <p>H6.8.2(3)(a), H6.8.2(3)(b), H6.8.2(3)(c), H6.8.2(3)(e) For integrated residential developments</p> <p>H6.8.2(5) for building height</p> <p>H6.8.2(6) for height in relation to boundary infringements</p> <p>H6.8.2(9) for yards</p> <p>H6.8.2(11) for building coverage</p>

<p>(a) provides an appropriate transition in building scale from the adjoining higher density business zone to neighbouring <del>lower intensity</del> residential zones, and;</p> <p>(b) supports public transport <u>networks</u>, social infrastructure and the vitality of the adjoining centre.</p>		
<p>Environmental</p>	<p>Context: The policies, standards and assessment criteria work as a package to ensure that development occurs at the densities anticipated in the zone and is managed to deliver a high quality built environment. These density characteristics notably vary between the scale planned for within and outside the walkable catchments in the THAB zone, introduced by this plan change.</p> <p>A detailed analysis of each proposed standard is provided in the PPC78 Technical Background Report in Attachment 1 Part 1. Overall, the final proposed standards are considered to be the most appropriate in terms of environmental outcomes and the related proposed matters of discretion and assessment criteria assist plan users in achieving the anticipated outcomes.</p> <p>Benefits:</p> <ul style="list-style-type: none"> <li>• Achieves 21m within a walkable catchment;</li> <li>• Amendments to height in relation to boundary improve ability to enable anticipated heights (compared to the operative provisions);</li> <li>• Clear transition in scale and built form between different centres and corridors reinforces hierarchies to support compact urban form;</li> <li>• Bulk and mass are appropriate to manage shadowing and dominance, particularly at the rear of the site;</li> <li>• Bulk and mass are encouraged to locate at the front of the site which assists in activating the street frontage;</li> <li>• Infringements for taller buildings are enabled where appropriate and where design provides high-quality outcomes</li> </ul> <p>Costs:</p> <p>The increase in height and overall bulk and mass will increase shadowing and dominance effects than currently generated under the AUP(OP), particularly within the walkable catchments. However, the amended and additional standards and assessment criteria will cumulatively assist in managing this limited change and the environmental effects associated with it such that overall, high-quality built environment outcomes are achieved.</p>	

Economic	Benefits: The changes within the THAB zone to permit MDRS development and further enable development within the defined walkable catchment areas are anticipated to have a positive economic effect, accommodating growth and stimulating in the resulting development's construction and long operation wider economic benefits.
	Costs: The cumulative consent requirements on development could lead to a more expensive design and costs for developers, which could inhibit delivery and/or be passed onto the buyer. However, reduced consenting and processing costs as a result of the notification provisions (discussed in section 2.7.4 above) will assist in balancing any increase in design costs such that the overall there is a neutral impact.
Social	Benefits: <ul style="list-style-type: none"> <li>• The provision of additional development potential enabled through these provisions has an important role in ensuring adequate supply and a range of quality housing is provided to address current and future identified needs.</li> <li>• Intensification in key locations enables increased access to employment and services will better enable people and communities to provide for their social wellbeing.</li> </ul>
	Costs: Increased scale and density of development enabled will lead to change in the environment experienced by residents and the community. Some may perceive this change to be a negative impact.
Cultural	Benefits: N/A
	Costs: N/A
Options less or not as appropriate to achieve the objective (see table 6 for further detail)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> The operative plan for the THAB zone includes policy support to achieve building heights of five, six and seven storeys presently but height and height in relation to boundary standards that relate to five storeys. The operative framework does not provide for walkable catchments and does not sufficiently reinforce hierarchies of centres and corridors.</p> <p>Simply deleting conflicting provisions including height controls without making consequential changes would lead to an incompatible framework to enable development of the scale sought in the zone and would not achieve a high-quality built environment due to the likelihood of inconsistent design outcomes. Accordingly, Option 1 is not considered to be the most appropriate option.</p> <p><u>Option 2 – Incorporate MDRS and 6 storeys within walkable catchments with no consequential amendments:</u> Incorporating MDRS would provide additional density standard support for heights of at least 6 storeys within walkable catchments. However, a decision not to include consequential amendments is likely to result in inconsistent design outcomes across the zone (within and outside of walkable catchments) and would lead to a conflicting policy framework to manage development in the zone and limit the ability to achieve a high-quality built environment. Accordingly, Option 2 is not considered to be the most appropriate option.</p>
Opportunities for Economic Growth and Employment	The THAB zone given its extent and development capacity enabled in particular by the 6 storey height within walkable catchments including increase in height controls, will have a directly beneficial role in encouraging highest density residential development in the locations which are typically most accessible to public transport business and employment centres.

Risk of Acting or Not Acting	The risk of not acting is considered significant in terms of having a plan context for the THAB zone that does not enable the identified intensification requirements of the RMA (MDRS and policy 3(c)). Therefore there is a requirement to implement these intensification provisions whilst ensuring that consequential amendments are made so that the package of provisions in the AUP(OP) will deliver a high quality built environment.	
Efficiency and Effectiveness	<p>The provisions provide a clear and efficient way to achieve objectives H6.2(1), H6.2(1A) and enabling the highest density living and development in walkable catchments. The provisions in response to MDRS and policy 3 of the NPSUD, along with the consequential amendments, provide a plan context for the whole zone, including areas outside of walkable catchments in response to objective H6.2(2) which promotes high density development whilst ensuring good quality design.</p> <p>The proposed policies provide an effective framework to achieve the objectives by establishing clear standards and criteria for development. In particular, increased height, bulk and mass are enabled for four or more dwellings (and most other development) as a restricted discretionary activity. This informs and provides guidance to the community and developers as to the development that is expected within the zone.</p>	
<b>H5 Residential – Mixed Use Housing Zone</b>		
<u>H5.3(A1) Enable a variety of housing typologies with a mix of densities within the zone, including three-storey attached and detached dwellings, and low-rise apartments.</u>	<u>Standards</u> H5.6.5. Building Height  H5.6.6. Height in relation to boundary  H5.6.10 Building Coverage	<u>Matters of Discretion (H5.8.1)</u> H5.8.1(1)(b)(i) Any other development  H5.8.1(2)(i)(b) for four or more dwellings per site  H5.8.1(3)(a)(i)(A) for integrated residential development  H5.8.1(4) for buildings that do not comply with the standard(s) specified in Table H5.4.1  <u>Assessment Criteria</u> H5.8.2(1)(b)(i) Any other development  H5.8.2(2)(a), H5.8.2(2)(aa), H6.8.2(2)(ab)(ii), H6.8.2(2)(fa), H6.8.2(2)(fd) For developments containing four or more dwellings  H5.8.2(3)(a), H5.8.2(3)(ac) For integrated residential developments  H5.8.2(4) for building height H5.8.2(6) for height in relation to boundary infringements H6.8.2(9) for yards H6.8.2(11) for building coverage

Environmental	<p>Benefits: The following is a high-level summary of the findings outlined in the PPC78 Technical Background Report in Attachment 1 Part 1.</p> <ul style="list-style-type: none"> <li>• The overall character envisaged in the AUP(OP) for the MHU zone is largely retained, whilst acknowledging that amendments may enable additional intensity of development on a limited number of sites.</li> <li>• Amendments to height in relation to boundary improve ability to enable anticipated heights (compared to the operative provisions);</li> <li>• Maintaining the operative planned urban character assists in reinforcing hierarchies between centres, corridors and less accessible areas;</li> <li>• Bulk and mass are appropriate to manage shadowing and dominance effects to a level acceptable in this zone;</li> </ul>
	<p>Costs:</p> <ul style="list-style-type: none"> <li>• The increase in building coverage (from 45% to 50%) aligns with Schedule 3A of the RMA and is unlikely to result in a discernible increase in bulk and mass;</li> <li>• Overall, the operative character is retained and there will be negligible environmental costs as a result.</li> </ul>
Economic	<p>Benefits: The changes within the MHU zone chapter are considered to have a limited but certainly not significant negative economic impact. Reductions in consenting and processing costs will assist in balancing increases in design costs.</p>
	<p>Costs: No significant economic costs from the proposed changes are noted.</p>
Social	<p>Benefits: The provisions maintain the MHU as an important zone for the provision of quality housing to address the current and future identified needs of Aucklanders in this sector. The provisions recognise the planned character for the zone and provide a package of standards and assessment criteria to ensure that the appearance and form of this new development is managed and achieves quality outcomes.</p>
	<p>Costs: N/A</p>
Cultural	<p>Benefits: N/A</p>
	<p>Costs: N/A</p>
Efficiency and Effectiveness	<p>The framework provided aligns with Schedule 3A of the RMA and is a clear and efficient way to achieve the planned urban character set out in objectives H5.2(A2) and H5.2(1).</p> <p>The rules enable MDRS residential development as a permitted activity provided the identified standards are complied with. Development outside these parameters will require resource consent typically as a restricted discretionary activity. The package of policies, standards and assessment criteria ensure that the effects of such development on urban character and its appearance are robustly assessed.</p>

	The proposed policies provide an effective framework to achieve the objectives by establishing clear policy, standards and criteria for development. This informs and provides guidance to the community and developers as to the development that is expected within the MHU zone.	
<b>H3A Residential – Low Density Residential Zone</b>		
<p>H3A.3(1) Require development to be in keeping with neighbourhood's identified values and their lower intensity residential development being limited to predominantly one to two storey dwellings.</p> <p>H3A.3(2) Require development to:</p> <p>(a) be of a height, bulk and form that maintains and is in keeping with the character and amenity values of the established residential neighbourhood; or</p> <p>(b) be of a height and bulk and have sufficient setbacks and landscaped areas to maintain an existing suburban built character or achieve the planned suburban built character of predominantly one to two storey dwellings within a generally spacious setting.</p> <p>H3A.3(7) Require more intensive residential development including Medium Density Residential development to be enabled only to the extent necessary, ensuring that it does not detract from the identified qualifying matters' values.</p> <p>H3A.3(8) Require development to be in keeping with neighbourhood's identified special character values and their lower intensity levels of residential development.</p> <p>H3A.3(9) Require buildings to be located on a site and to be of a scale that ensures the protection of significant ecological areas, outstanding natural landscapes, and outstanding natural features and high natural character.</p> <p>H3A.3(10) Require development to be at a scale that is in keeping with the identified cultural values to avoid adverse effects on the relationship of Māori and their</p>	<p><u>Standards</u></p> <p>H3A.6.6 Building height</p> <p>H3A.6.7 Height in relation to boundary</p> <p>H3A.6.10 Building Coverage</p>	<p><u>Matters of Discretion</u></p> <p>H3A.8.1(1)(a)(i) for healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H3A.8.1(2) for buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3)(a)(i) for two or more dwellings on a site</p> <p><u>Assessment Criteria</u></p> <p>H3A.8.2(1)(a) for healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H3A.8.2(2) for building height</p> <p>H3A.8.2(3) for height in relation to boundary infringements</p> <p>H3A.8.2(6) for building coverage</p> <p>H3A.8.2(9)(a), H3A.8.2(9)(b) for two or more dwellings on a site</p>



culture and traditions with their ancestral lands, water, sites wāhi tapu, and other taonga.		
Environmental	<p>Benefits:</p> <ul style="list-style-type: none"> <li>Proposed height, bulk and mass provide for a lower intensity development which is appropriate to manage adverse effects on the values associated with relevant qualifying matters;</li> <li>Tailored height in relation to boundary and building coverage standards to High Natural Character Overlays, Waitakere Ranges Heritage Area Overlay, and Special Character Area Overlay further protect those significant or special values from adverse effects of development.</li> </ul> <p>Costs:</p> <ul style="list-style-type: none"> <li>Proposed standards to provide for MDRS where appropriate may result in more intensive development on some sites. However, the proposed package of policies, matters of control and discretion and assessment criteria will ensure an appropriate level of assessment in these instances.</li> <li>Overall, the effect of the proposed standards which support the retained low intensity character for the zone, means that any adverse effects on the values of relevant qualifying matters, are likely to be negligible.</li> </ul>	
Economic	<p>Benefits: The proposed standards are unlikely to result in significant economic benefits given that development and re-development of sites are restricted in response to environmental or infrastructure constraints.</p> <p>Costs: No significant economic costs from the proposed changes are noted, recognising that the proposed standards generally align with AUP(OP) regional planning provisions for relevant overlays which already limited development potential.</p>	
Social	<p>Benefits: Providing a lower intensity planned urban character appropriately maintains and enhances qualifying matter values which assists in supporting social wellbeing of people and communities through reinforcing sense of place and providing for health and safety (in relation to environmental or infrastructure constraints).</p> <p>Costs: Any negative impacts of the proposed amendments are considered negligible.</p>	
Cultural	<p>Benefits: The provisions will maintain and enhance those qualifying matter values associated with cultural values.</p> <p>Costs: N/A</p>	
Options less or not as	<p><u>Option 1 – Delete conflicts and retain status quo:</u> This option could result in adverse effects as there would be insufficient control of development effects which inhibit the protection and management of the values associated with the qualifying matters identified in the zone.</p>	

appropriate to achieve the objective (see table 6 for further detail on options)	<u>Option 2 – Incorporate MDRS with no consequential amendments:</u> This would generate inconsistent development outcomes and application to proposals within the zone that would fail to reflect the planned low density urban character. This option is considered to lead to significant adverse effects in terms of the protection and management of values attached to the relevant qualifying matters.	
Opportunities for Economic Growth and Employment	The effect of the provisions and amendments is considered negligible.	
Risk of Acting or Not Acting	There is a high risk associated with not acting. Higher intensity development has the potential to generate significant adverse effects on values associated with relevant qualifying matters which would risk Council not meeting obligations and duties under the RMA (particularly s5, s6, s7 and s31).	
Efficiency and Effectiveness	<p>The retained and proposed policies are clear and directive, providing a framework which realises the identified objective of controlling the intensity of development where identified qualifying matters need to be supported by lower intensity residential development as provided for through the LDRZ. MDRS has been enabled to the extent necessary to not detract from identified qualifying matters values and retains a development intensity of predominantly one to two storey buildings (H3A.2(2)). The amended standards and assessment criteria within the zone provide clear direction and control over the form and shape of low density development which determines the quality of built environment provided in the zone.</p> <p>The provisions in the consequential updates to the assessment criteria provide an effective framework to manage development including those infringing relevant standards to ensure that the overall planned character of the zone is maintained.</p>	
<b>E38 Subdivision – Urban</b>		
<p>E38.3(13) Require subdivision (<u>except for subdivision around MDRS complaint development</u>) to deliver sites that are of an appropriate size and shape for development intended by the zone by:</p> <p>(a) providing a range of site sizes and densities; and</p> <p>(b) providing for higher residential densities in locations where they are supportive of pedestrians, cyclists, public transport and the viability and vibrancy of centres.</p>	<p><u>Standards</u></p> <p><i>E38.8.1A Standards – residential controlled activities</i></p> <p><i>E38.8.2.3 Vacant sites subdivisions involving parent sites of less than 1 hectare</i></p> <p><i>E38.8.3.1 Vacant sites subdivision involving parent sites of 1 hectare or greater</i></p>	<p><u>Matters of control (E38.11.1)</u> E38.11.1(2) matters of control for all controlled activities in Table E38.4.2</p> <p><u>Assessment criteria (E38.11.2)</u> E38.11.2(2) assessment criteria for all controlled activities in Table E38.4.2</p> <p><u>E38.12.1 Matters of discretion</u> <u>E38.12.2 Assessment criteria (restricted discretionary activities)</u></p>

<p><u>E38.3(32) Provide for subdivision as a controlled activity in zones where the Medium Density Residential Standards apply except where:</u></p> <p><u>(b) sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision;</u></p> <p><u>(d) where the proposed subdivision does not comply with any relevant subdivision standards.</u></p>		
<p>Environmental</p>	<p>Benefits:</p> <ul style="list-style-type: none"> <li>• The proposed subdivision provisions provide for subdivision which enables the level of development anticipated in the relevant residential zones, except where any relevant qualifying matters apply.</li> <li>• The standards which a controlled activity MDRS subdivision must comply ensures support for the intensification requirements of the MDRS.</li> <li>• The operative framework continues to manage development that does meet controlled activity standards to ensure planned urban character is achievable.</li> </ul> <p>Costs:</p> <ul style="list-style-type: none"> <li>• No environmental costs are anticipated as the standards provide for MDRS which ensuring relevant legal and physical services are provided.</li> </ul>	
<p>Economic</p>	<p>Benefits: The changes proposed are anticipated to have a positive economic effect, accommodating growth, providing for more development opportunities and ensuring more certainty in consenting outcomes (i.e. controlled activity and notification requirements). There is also the benefit of more efficient land use and ensuring subdivision is consistent with the level of development enabled by the underlying zones.</p> <p>Costs: No significant economic costs from the proposed changes are noted, recognising that the proposed standards generally align with those currently in the AUP(OP). Currently in the AUP, a controlled or restricted discretionary subdivision activity is required to comply with all relevant standards in Chapter E38 or will otherwise be classed as a discretionary activity. A similar approach is being proposed here.</p>	
<p>Social</p>	<p>Benefits: Providing for subdivision which is consistent with the level of development anticipated in the underlying zones will not unnecessarily restrict the ability to subdivide when the underlying relevant residential zones are more enabling of development.</p> <p>Costs: Any negative impacts of the proposed amendments are considered negligible.</p>	
<p>Cultural</p>	<p>Benefits: The provisions do not affect any qualifying matter values associated with cultural values.</p>	

	Costs: N/A
Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> This option is not feasible given that the subdivision chapter applies to all residential zones in the region. It may result in deletion of rules and standards which are required for non-MDRS zones.</p> <p><u>Option 2 – Incorporate MDRS with no consequential amendments:</u> Currently, the AUP(OP) only provides for the simplest types of subdivision as controlled activities. Without consequential amendments, there would be adverse environmental effects as development outcomes could not be managed, development may detract from identified qualifying matters values and existing provisions which support the intensification requirements of the MDRS could not be provided for.</p>
Risk of Acting or Not Acting	There is a high risk associated with not acting. There are likely to be litigation and other costs associated with pursuing an option not provided for in the RMA.
Efficiency and Effectiveness	The purpose of the provisions is to implement the MDRS, to accommodate qualifying matters and to manage effects of non-compliant subdivision. The provisions provide a clear and efficient way to respond to the requirements of the MDRS. It ensures the existing provisions which support the intensification directions of the MDRS are maintained, while new provisions are provided as necessary to incorporate Schedule 3A, RMA.

Table 15: Amenity, health and safety

Relevant Policies to Objectives (Additions <u>underlined</u> and deletions <del>strikethrough</del> )	Relevant Standards	Matters of Discretion and Assessment Criteria
H6 Residential – Terraced Housing and Apartment Zone (THAB)		
<p>H6.3(2) <del>H6.3(2) Require the height, bulk, form and appearance of multi-unit development and the provision of setbacks and landscaped areas to achieve a high-quality built environment:</del></p> <p style="padding-left: 40px;"><del>(b) through building and site design which locates bulk and mass towards the street and provides for setbacks, outlook spaces, private and communal outdoor spaces and landscaped areas.</del></p> <p>H6.3 (A4) <u>Require development to achieve a built form that contributes to high-quality built environment outcomes by:</u></p> <p style="padding-left: 40px;"><u>(a) maintaining privacy, outlook, daylight and sunlight access to provide for the health and safety of residents on-site</u></p>	<p>H6.6.5 Building Height</p> <p>H6.6.6. Height in relation to boundary</p> <p>H6.6.8 Height in relation to boundary adjoining lower intensity zones</p> <p>H6.6.9. Yards</p> <p>H6.6.10 Maximum impervious area</p> <p>H6.6.11 Building coverage</p> <p>H.6.6.12. Landscaped area</p> <p>H6.6.13. Outlook space</p> <p>H6.6.14. Daylight</p> <p>H6.6.15 Outdoor living space</p> <p>H6.6.16. Front, side and rear fences and walls</p> <p>H6.6.17. Minimum dwelling size</p>	<p><u>Matters of Discretion (H6.8.1)</u></p> <p>H6.8.1(1)(b) Any other development</p> <p>H6.8.1(2)(a), H6.8.1(2)(c) for developments containing four or more dwelling</p> <p>H6.8.1(3)(a) for integrated residential development</p> <p>H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1.</p> <p><u>Assessment Criteria (H6.8.2)</u></p>

<p><u>(b) providing a level of privacy for the safety of residents' on-site and for people on the street</u>  <u>(c) minimising visual dominance effects on adjoining sites</u>  <u>(d) minimising visual dominance effects of carparking and garage doors</u>  <u>(g) designing practical, sufficient space for residential waste management</u>  <u>(h) designing practical, sufficient space for internal storage and living areas.</u></p> <p>H6.3(7) <u>Encourage</u> <u>Require</u> accommodation to have useable and accessible outdoor living space.</p> <p>H6.3(9) Provide for non-residential activities that:  (a) support the social and economic well-being of the community  (b) are in keeping with the scale and intensity of development anticipated within the zone  (c) avoid, remedy or mitigate adverse effects on residential amenity  (d) will not detract from the vitality of the Business – City Centre Zone, Business Metropolitan Centre Zone and Business – Town Centre Zone.</p> <p>H6.3(10) Recognise the functional and operational requirements of activities and development.</p>	<p>H6.6.19. Windows to street and private vehicle and pedestrian accessways  H6.6.21. Setbacks from private pedestrian and vehicle accessways  H.6.6.22 On-site waste management</p>	<p>H6.8.2(1)(a), H6.8.2(1)(b), H6.8.2(1)(c), H6.8.2(1)(d), H6.8.2(1)(e) Any other development  H6.8.2(2)(a), H6.8.2(2)(aa), H6.8.2(2)(ab), H6.8.2(2)(ac), H6.8.2(2)(ad), H6.8.2(2)(ae), H6.8.2(2)(c), H6.8.2(2)(da), H6.8.2(2)(h), H6.8.2(2)(ia), H6.8.2(2)(k), H6.8.2(2)(l) for developments containing four or more dwelling  H6.8.2(3)(a), H6.8.2(3)(c), H6.8.2(3)(da), H6.8.2(3)(h), H6.8.2(3)(ia), H6.8.2(3)(k) for integrated residential development  H6.8.2(5) for building height  H6.8.2(6) for height in relation to boundary infringements  H6.8.2(9) for yards  H6.8.2(10) for maximum impervious area  H6.8.2(11) for building coverage  H6.8.2(12) for landscape area  H6.8.2(13) for outlook space  H6.8.2(14) for daylight  H6.8.2(15) for outdoor living space  H6.8.2(16) for front, side and rear fences and walls  H6.8.2(17) for minimum dwelling size  H6.8.2(18) for windows to street and private ways  H6.8.2(20) for safety and privacy buffer from private pedestrian and vehicle accessways  H6.8.2(21) for residential waste management  <u>Special information requirements</u>  H6.9.(1) Landscape Plans for all other developments as required by H6.6.11  H6.9(4) Residential waste management</p>
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H5 Residential – Mixed Use Housing Zone		
<p><u>H5.3(6A) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</u></p> <p>(a) <u>maintaining privacy, outlook, daylight and sunlight access to provide for the health and safety of residents on-site;</u></p> <p>(b) <u>providing a level of privacy for the safety of residents' on-site and for people on the street;</u></p> <p>(c) <u>minimising visual dominance effects to adjoining sites;</u></p> <p>(d) <u>minimising visual dominance effects of carparking and garage doors to streets and private accessways;</u></p> <p>(g) <u>designing practical, sufficient space for residential waste management; and</u></p> <p>(h) <u>designing practical, sufficient space for internal storage and living areas.</u></p> <p>H5.3(8) Provide for non-residential activities that:</p> <p>(a) support the social and economic well-being of the community;</p> <p>(b) are in keeping with the scale and intensity of development anticipated within the zone;</p> <p>(c) avoid, remedy or mitigate adverse effects on residential amenity; and</p> <p>(d) will not detract from the vitality of the Business – City Centre Zone, Business – Metro Centre Zone and Business – Town Centre Zone.</p> <p>H5.3(9) Enable more efficient use of larger sites by providing for integrated residential development.</p> <p>H5.3(10) Recognise the functional and operational requirements of activities and development</p>	<p><b>Standards</b></p> <p>H5.6.A4 Number of dwellings per site</p> <p>H5.6.4. Building height</p> <p>H5.6.5. Height in relation to boundary</p> <p>H5.6.8. Yards</p> <p>H5.6.9 Maximum impervious area</p> <p>H5.6.10 Building coverage</p> <p>H5.6.11. Landscaped area</p> <p>H5.6.12. Outlook space</p> <p>H5.6.13. Daylight</p> <p>H5.6.14. Outdoor living space (per unit)</p> <p>H5.6.15. Front, side and rear fences and walls</p> <p>H5.6.16. Minimum dwelling size</p> <p>H5.6.17. Rainwater tanks</p> <p>H6.6.18 Windows to street and private vehicle and pedestrian accessways</p> <p>H5.6.20. Safety and privacy buffer from private pedestrian and vehicle accesses</p> <p>H.5.6.21 Residential waste management</p>	<p><b>Matters of Discretion (H5.8.1)</b></p> <p>H5.8.1(1)(b) Any other development</p> <p>H6.8.1(2)(a), H6.8.1(2)(j) for four or more dwellings per site</p> <p>H6.8.1(3)(a), H6.8.1(3)(b), H6.8.1(3)(c) for integrated residential development</p> <p>H5.8.1(4) for buildings that do not comply with the relevant standard(s) specified Table H5.4.1.</p> <p><b>Assessment Criteria (H5.8.2)</b></p> <p>H5.8.2(1)(b), H5.8.2(1)(c), H5.8.2(1)(d), H6.8.2(1)(e) Any other development</p> <p>H5.8.2(2)(a), H5.8.2(2)(aa), H5.8.2(2)(ab), H5.8.2(2)(ca), H5.8.2(2)(da), H5.8.2(2)(ea), H5.8.2(2)(fa), H5.8.2(2)(fb), H5.8.2(2)(fc), H5.8.2(2)(fd), H5.8.2(2)(fe), H5.8.2(2)(ga), H5.8.3(2)(gb) for four or more dwellings on a site</p> <p>H5.8.2(3)(a), H5.8.2(3)(aa), H5.8.2(3)(ab), H5.8.2(3)(ac), H6.8.2(3)(o) for integrated residential development</p> <p>H5.8.2(4) for building height</p> <p>H5.8.2(6) for height in relation to boundary infringements</p> <p>H5.8.2(9) for yards</p> <p>H5.8.2(10) for maximum impervious area</p> <p>H5.8.2(11) for building coverage</p> <p>H5.8.2(12) for landscape area</p> <p>H6.8.2(13) for outlook space</p> <p>H6.8.2(14) for daylight</p> <p>H5.8.2(15) for outdoor living space</p> <p>H5.8.2(15A) for windows to street and private vehicle accessways</p>

		<p>H5.8.2(16) for front, side and rear fences and walls  H5.8.2(17) for minimum dwelling size  H5.8.2(19) for safety and privacy buffer from private pedestrian and vehicle accessways  H5.8.2(21) for residential waste management  <u>Special information requirements</u>  H5.9.(1) Landscape Plans for all other developments as required by H5.6.11  H5.9(4) Residential waste management</p>
Environmental	<p>Benefits:</p> <p>The standards are considered to enable and balance the identified intensification provisions of Policy 3 of the NPSUD while ensuring a high quality of amenity relative to the higher density character is provided to for residents, neighbours, and the community. The provisions ensure that in providing for increased density and quality amenity, development also ensures the health and safety of people and communities is not compromised.</p> <p>The following is a high-level summary of the findings outlined in the PPC78 Technical Background Report in Attachment 1 Part 1.</p> <ul style="list-style-type: none"> <li>• The proposed standards (particularly height, height in relation to boundary, outlook space, outdoor living space, daylight, front, rear and side fences and walls) allows effective management of the potential increase in adverse effects on privacy, shadowing and visual dominance as a result of increased density throughout the zone (through incorporating MDRS) and increased height, bulk and mass (for four or more dwellings and other development) – both onsite, to adjoining sites and the street;</li> <li>• Clear delineation of circulation space to improve privacy and safety of residents in multi-unit developments;</li> <li>• Increased passive surveillance to the street and shared accessways to improve safety on the street;</li> <li>• Ensuring adequate daylight and internal storage, circulation and storage space for health and safety of residents on-site;</li> <li>• Maintaining privacy, shadowing and visual dominance effects through management of boundary fences and walls;</li> <li>• Maintaining amenity and safety values through adequate management of the storage and collection of waste;</li> <li>• Ensuring outdoor living areas remain functional despite enabling increased bulk and mass;</li> <li>• Increased quality of landscaped areas to contribute to overall improved amenity outcomes both on and off-site;</li> <li>• Improved safety of pedestrian access to public transport where necessary.</li> </ul>	

	<p>Costs: The increase in scale, height and bulk has the potential to increase adverse effects on amenity, health and safety values including but not limited to dominance, shadowing, daylight, privacy, passive surveillance, and outlook. The proposed package of provisions (including new, amended and retained provisions) is considered sufficient to ensure the high density character delivers quality built environment outcomes such that overall environmental costs are minimised.</p> <p>The reduction in landscaped area for such development is only deemed appropriate in the context of an amended landscaped area definition and application of the new proposed deep soil and canopy tree standard. These provisions are to ensure that the reduced landscaped area is of a higher quality than what is currently achieved under the operative provisions.</p>
Economic	<p>Benefits: Improved amenity, and health and safety outcomes contribute to the vitality of neighbourhoods and centres which can correlate with increased investment and economic benefits. Particularly in THAB walkable catchments, encouraging bulk and mass towards the street assists in activating street frontages which is a key indicator of vitality.</p> <p>Costs: The proposed package of provisions is likely to generate more expensive design and development costs, which could inhibit delivery and/or be passed onto the buyer. However, the environmental and social benefits are considered to outweigh the economic costs and overall the costs are likely to be balanced given the following:</p> <ul style="list-style-type: none"> <li>• many of these standards are already applicable under the AUP(OP) and the PPC78 would not introduce a new cost or introduce a requirement that would deter the development sector in its ability to bring forward the density envisaged and additional development sought in the zone</li> <li>• amendments to certain standards to be more enabling (such as height in THAB, height in relation to boundary and landscaped area minimum requirements) assists in balancing the overall increase in requirements.</li> <li>• reductions in consenting and processing costs (including the preclusion from notification where compliance is achieved) assist in balancing increases in design costs, by providing greater certainty.</li> </ul> <p>The proposed policy, matters of discretion and assessment criteria relating to pedestrian safety requires development to address pedestrian safety to public transport where an assessment identifies risk or a gap in provision. This approach is considered more efficient than relying on development contributions to deliver such projects. Development contributions are collected for growth-related projects identified in the Regional Land Transport Plan (RLTP) that Auckland Council and Auckland Transport deliver across the Auckland region. Transport projects funded by development contributions are therefore not intended to mitigate the effects of any single development proposal, but are rather identified to support growth in areas where there are wider benefits.</p>



Social	<p>Benefits: The package of provisions will ensure residents, neighbours and communities will benefit through the development of high-quality living environments. The proposed standards alongside amended matters of discretion and assessment criteria seek to provide clarity to plan users on the anticipated outcomes and flexibility in design while still managing amenity and dominance effects on-site, to adjacent sites and the street and providing for health and safety of people and communities.</p> <p>The pedestrian safety provisions will improve the quality of the network and increase access for all communities where necessary, and particularly in those areas subject to intensification.</p> <p>Costs: The new proposed assessment criteria and amended and new standards may be perceived to constrain personal expression through built form however this is considered unlikely. In the THAB zone, residents and neighbours are likely to experience a change in amenity and character from increased density and intensity (particularly in walkable catchments), however the proposed provisions will assist in ensuring critical amenity, health and safety values are provided for. While the planned urban character in the MHU zone will not change dramatically, a degree of change in intensity and therefore amenity is likely and the proposed provisions ensure effects on amenity, health and safety values are appropriately managed.</p>
Cultural	<p>Benefits: N/A</p> <p>Costs: N/A</p>
Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> As outlined in Section 3 of this report and in the Technical background report (Attachment 1 Part 1), the s35 monitoring report identified inconsistencies in the AUP(OP) in achieving high-quality amenity and gaps in the framework for addressing health and safety. Accordingly, Option 1 is not considered to be the most appropriate option to address effects in terms of the quality and amenity of the living and built environment provided to Aucklanders from development in the THAB zone.</p> <p><u>Option 2 – Incorporate MDRS with no consequential amendments:</u> Incorporating MDRS and associated density standards would provide some additional policy support to address a level of amenity and health and safety. However, it is considered that the decision not to include consequential amendments is likely to result in poor living conditions and development outcomes, including poor accessibility to public transport, particularly due to the anticipated increase in development in general.</p>
Opportunities for Economic Growth and Employment	<p>The package of provisions has an important role in ensuring developments provide a high standard of living that is desirable, attractive and accessible (walkable) to people and communities, thereby supporting Auckland's growing population and employment needs.</p>
Risk of Acting or Not Acting	<p>The risk of acting through implementing the package of provisions is considered to be low based on the information available. The risk of not acting is high in terms of resulting through in poor design solutions which compromise amenity, health and safety and result in overall poor living environments.</p>
Efficiency and Effectiveness	<p>The proposed policies provide clear direction on the amenity, health and safety objectives are to be achieved within the relevant zones. The extent and application of these provisions to a development in the zone is dependent on the type and scale of activity proposed which ensures an appropriate level of control relative to anticipated effects.</p>

The provisions including the zone standards listed above, are anticipated to cumulatively achieve a level of amenity, health and safety which is commensurate to a quality built environment.		
<b>H3A Residential – Low Density Residential Zone</b>		
<p>H3A.3(2) Require development to:</p> <p>(a) be of a height, bulk and form that maintains and is in keeping with the character and amenity values of the established residential neighbourhood; or</p> <p>(b) be of a height and bulk and have sufficient setbacks and landscaped areas to maintain an existing suburban built character or achieve the planned suburban built character of predominantly one to two storey dwellings within a generally spacious setting.</p> <p>H3A.3(3) Require the height, bulk and location of development to maintain a reasonable level of sunlight access and privacy and to minimise visual dominance effects to the adjoining sites.</p> <p>H3A.3(4) Encourage accommodation to have useable and accessible outdoor living space.</p> <p>H3A.3(6) Provide for community activities that:</p> <p>(a) support the social and economic well-being of the community;</p> <p>(b) are in keeping with the scale and intensity of development anticipated within the zone;</p>	<p><u>Standards</u></p> <p>H3A.6.6 Building height</p> <p>H3A.6.7 Height in relation to boundary</p> <p>H3A.6.8 Yards</p> <p>H3A.6.11 Landscaped area</p> <p>H3A.6.12 Front, side and rear fences and walls</p> <p>H3A.6.13 Outdoor living space</p> <p>H3A.6.14 Outlook space</p> <p>Hs3A.6.15 Windows to street</p>	<p><u>Matters of Discretion</u></p> <p>H3A.8.1(1) for healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H3A.8.1(2) for buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3)(a) for two or more dwellings on a site</p> <p><u>Assessment Criteria</u></p> <p>H3A.8.2(1) healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H3A.8.2(2) for building height</p> <p>H3A.8.2(3) for height in relation to boundary infringements</p> <p>H3A.8.2(4) for yards</p> <p>H3A.8.2(7) for landscape area</p> <p>H3A.8.2(8) for front, side and rear fences and walls</p> <p>H3A.8.2(9)(a), H3A.8.2(9)(b), H3A.8.2(9)(c), H3A.8.2(9)(d), H3A.8.2(9)(e) for two or more dwellings on a site</p>

<p>(c) avoid, remedy or mitigate adverse effects on residential amenity; and (d) will not detract from the vitality of the Business – City Centre Zone, Business – Metro Centre Zone and the Business – Town Centre Zone.</p> <p>H3A.3(14) Restrict development in areas identified on the planning maps as subject to coastal inundation, coastal erosion and flooding.</p> <p>H3A.3(20) Encourage development to achieve attractive and safe streets and public open spaces, including by providing for passive surveillance, including: (a) optimising front yard landscaping; and (b) minimising visual dominance of garage doors also contributes to achieving attractive and safe streets and public open spaces.</p> <p>H3A.3(21) Enable housing to be designed to meet the day-to-day needs of residents.</p>		
<p>Environmental</p>	<p>Benefits: The proposed package of amendments ensures amenity, health and safety outcomes appropriate to lower density development.</p> <ul style="list-style-type: none"> <li>• Height, bulk and mass are limited which reduces the risk of, and manages potential adverse effects of development on privacy, shadowing and visual dominance onsite, to adjoining sites and the street.</li> <li>• Limiting height, bulk and mass minimises adverse effects on, and protects the integrity of the values associated with relevant qualifying matters</li> <li>• Passive surveillance to the street is provided for to improve safety;</li> <li>• Adequate daylight and internal storage, circulation and storage space for health and safety of residents on-site;</li> </ul>	

	<ul style="list-style-type: none"> <li>• Maintaining privacy, shadowing and visual dominance effects for residents and shadowing and visual dominance effects on qualifying matters, through management of boundary fences and walls;</li> <li>• Ensuring functional outdoor living areas</li> </ul>
	Costs: It is considered there will be minimal environmental costs as the proposed package of provisions only enables development to the extent it is able to be accommodated without compromising the values associated with relevant qualifying matters.
Economic	Benefits: While improved amenity, and health and safety outcomes contribute to the vitality of neighbourhoods, overall, there are likely to be minimal economic benefits in the LDRZ due to the lower intensity of development anticipated.
	Costs: The specific provisions set out to manage the characteristics of development which effect on-site, adjacent sites and street amenity are proportional and are not considered to place unnecessary regulatory costs or deter the markets in its ability to bring forward the lower density development anticipated in the zone.
Social	Benefits: The provisions provide for a level of amenity, health and safety that is appropriate to a lower density character while also recognising the values and constraints associated with qualifying matters which contributes to sense of place, thereby ensuring on-going social values attributed to areas subject to qualifying matters.
	Costs: Any negative impacts of the proposed amendments are considered negligible.
Cultural	Benefits: Providing for amenity, health and safety appropriate to a lower density zone assists in maintaining and enhancing values associated with qualifying matters, including relevant cultural values.
	Costs: N/A
Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> This option could result in adverse environmental effects as there would be insufficient control of development in terms of provisions to ensure a quality level of amenity, health and safety is provided from development.</p> <p><u>Option 2 – Incorporate MDRS with no consequential amendments:</u> This option would not fulfil the identified objective as without consequential changes there is a compromised ability to achieve “quality” outcomes and promote development that responds to the characteristics of qualifying matters that apply to the zone.</p>
Opportunities for Economic Growth and Employment	The effect of the provisions and amendments is considered negligible.

Risk of Acting or Not Acting	The risk of acting as put forward in the package of provisions based on the information given the change in scale enabled within the now LDRZ is considered to be low. The risk of not acting is considered high given the poor quality outcomes for qualifying matters and poor living conditions for residents and communities within those areas.	
Efficiency and Effectiveness	The cascade of policies, standards, matters of discretion and assessment criteria provide clear direction on how the objectives are anticipated to be achieved. The clarity of direction, particularly for specified qualifying matters, will ensure the provisions are effective in achieving a level of amenity, health and safety for a lower density development that is appropriate to protect the values of relevant qualifying matters.	
<b>E38 Subdivision - Urban</b>		
<p><u>E38.3(32) Provide for subdivision as a controlled activity in zones where the Medium Density Residential Standards apply except where:</u></p> <p>(a) <u>.....:</u>  (b) <u>sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision;</u>  (c) <u>.....or</u>  (d) <u>where the proposed subdivision does not comply with any relevant subdivision standards.</u></p>	<p>E38.8.1A Standards – residential controlled activities</p> <p>E38.8.2.3 Vacant sites subdivisions involving parent sites of less than 1 hectare</p> <p>E38.8.3.1 Vacant sites subdivision involving parent sites of 1 hectare or greater</p>	<p><u>Matters of control (E38.11.1)</u>  E38.11.1(2) matters of control for all controlled activities in Table E38.4.2</p> <p><u>Assessment criteria (E38.11.2)</u>  E38.11.2(2) assessment criteria for all controlled activities in Table E38.4.2</p>
Environmental	<p>Benefits:</p> <ul style="list-style-type: none"> <li>• ensures MDRS subdivision can provide for basic access and servicing to ensure functional and operational sites which support development.</li> <li>• Promotes more efficient land use and ensuring subdivision is consistent with the level of development enabled by the underlying zones.</li> </ul> <p>Costs:</p> <ul style="list-style-type: none"> <li>• Enabling subdivision for MDRS will generate an increase in subdivision and intensification, however this is balanced through ensuring subdivision provides functional, operational sites to support high-quality built environment outcomes.</li> </ul>	

Economic	Benefits: The changes proposed are anticipated to have a positive economic effect, accommodating growth, providing for more development opportunities and ensuring more certainty in consenting outcomes (i.e. controlled activity and notification requirements).
	Costs: No significant economic costs from the proposed changes are noted, recognising that the proposed standards generally align with those currently in the AUP(OP).
Social	Benefits: Sites are able to provide for basic access and servicing to ensure people and communities can continue to provide for their own wellbeing.
	Costs: Any negative impacts of the proposed amendments are considered negligible.
Cultural	Benefits: N/A.
	Costs: N/A
Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> This option is not feasible given that the subdivision chapter applies to all residential zones in the region. It may result in deletion of rules and standards which are required for non-MDRS zones.</p> <p><u>Option 2 – Incorporate MDRS with no consequential amendments:</u> Currently, the AUP(OP) only provides for the simplest types of subdivision as controlled activities. Without consequential amendments, there would be adverse environmental effects as development outcomes could not be adequately managed.</p>
Risk of Acting or Not Acting	There is a high risk associated with not acting. There are likely to be litigation and other costs associated with pursuing an option not provided for in the RMA.
Efficiency and Effectiveness	The purpose of the provisions is to implement the MDRS and to accommodate qualifying matters. The provisions provide a clear and efficient way to respond to the requirements of the MDRS. It ensures the existing provisions which support the intensification directions of the MDRS are maintained, while new provisions are provided as necessary to incorporate Schedule 3A, RMA.

Table 16: Infrastructure efficiency

Relevant Policies to Objectives (Additions <u>underlined</u> and deletions <del>strikethrough</del> )	Relevant Standards (New or modified standards <i>italics</i> )	Matters of Discretion and Assessment Criteria
H6 Residential – Terraced Housing and Apartment Zone (THAB)		
H6.3(12) <u>Require dwellings to be provided with access to safe and reliable drinking water and wastewater services.</u>	H6.6.4B <i>Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</i>	<u>Matters of discretion (H6.8.1)</u> H6.8.1(1)(a), H6.8.1(1)(c) Any other development

<p><u>H6.3(13) Require developments of new dwellings in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints, to be provided with appropriate infrastructure.</u></p> <p><u>H6.3(14) Require development to contribute to safety improvements of the immediate urban road environment to achieve pedestrian connectivity to public transport.</u></p>	<p>H6.6.4C Dwellings within the Infrastructure – Stormwater Disposal Constraints Control</p>	<p>H6.8.1(2)(c), H6.8.1(2)(d) For developments containing four or more dwellings</p> <p>H6.8.1(3)(c), H6.8.1(3)(d) For integrated residential development</p> <p>H6.8.1(4) for buildings that do not comply with <u>the Standard(s) specified for the activity to comply with in Table H6.4.1</u></p> <p>H6.8.1(6) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.</p> <p>H6.8.1(7) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p> <p><u>Assessment Criteria (H6.8.2)</u>  H6.8.2(1)(a), H6.8.2(1)(f) Any other development  H6.8.2(2)(a), H6.8.2(2)(ic), H6.8.2(2)(id), H6.8.2(2)(ie), H6.8.2(2)(m) for developments containing four or more dwellings  H6.8.2(3)(a), H6.8.2(3)(ic), H6.8.2(3)(id), H6.8.2(3)(j), H6.8.2(3)(l) for integrated residential development</p> <p>H6.8.2(22) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater</p>
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		<p>network Control or the Infrastructure – Water and Wastewater Constraints Control</p> <p>H6.8.2(23) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control</p>
H5 Residential – Mixed Housing Urban Zone		
<p><u>H5.3(12) Require dwellings to be provided with access to safe and reliable drinking water, wastewater and stormwater disposal services.</u></p> <p><u>H5.3(13) Require development of new dwellings in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints, are provided with appropriate infrastructure.</u></p> <p><u>H5.3(14) Require development of four or more dwellings to contribute to safe urban road environment for pedestrians through improvements to the adjacent road network</u></p> <p><u>H5.3(16) Avoid developments of more than one dwelling per site in areas identified on the planning maps as subject to significant transport infrastructure constraints.</u></p>	<p>H5.6.3B Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps.</p> <p>H5.6.3C Dwellings within the Infrastructure – Stormwater Disposal Constraints Control</p>	<p><u>Matters of discretion (H5.8.1)</u>  H5.8.1(1)(a), H5.8.1(1)(c) Any other development  H5.8.1(2)(j), H5.8.1(2)(k) for four or more dwellings per site  H5.8.1(3)(k), H6.8.1(3)(l) for integrated residential development  H5.8.1(4) for buildings that do not comply with <u>the Standard(s) specified in Table H6.4.1</u>  H5.8.1(6) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.</p> <p>H5.8.1(7) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control.</p> <p><u>Assessment Criteria (H6.8.2)</u>  H5.8.2(1)(a), H5.8.2(1)(f) Any other development  H5.8.2(2)(a), H5.8.2(2)(gd), H5.8.2(2)(ge), H5.8.2(2)(n), H5.8.2(2)(o) For four or more dwellings on site</p>



		<p>H5.8.2(3)(a), H5.8.2(3)(ib), H5.8.2(3)(id), H6.8.2(3)(q), H6.8.2(3)(r) For integrated residential development</p> <p>H5.8.2(21) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater network Control or the Infrastructure – Water and Wastewater Constraints Control</p> <p>H5.8.2(22) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control</p>
<p><b>H3A Residential – Low Density Residential Zone</b></p>		
<p><u>H3A.3(12) Require dwellings to be provided with access to safe and reliable drinking water, wastewater and stormwater disposal services.</u></p> <p><u>H3A.3(13) Require development of new dwellings in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints, to be provided with appropriate infrastructure.</u></p>	<p>H3A.6.4 Dwellings within the infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H3A3.6.5 Dwellings within the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints</p>	<p><u>Matters of discretion</u></p> <p>H3A.8.1(2) for buildings that do not comply with relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3)(b) for two or more dwelling on a site</p> <p>H3A.8.1(4) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure Water and Wastewater Constraints Control.</p> <p>H3A.8.1(5) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p> <p><u>Assessment criteria</u></p> <p>H3A.8.2(9)(f) for two or more dwellings on a site</p> <p>H3A.8.2(10) for developments containing more than one dwelling per site in areas identified in planning maps as being subject to the</p>

		<p>Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.  H3A.8.2(11) for more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p>
<p>E38 Subdivision – Urban</p>		
<p><u>E38.2 (31) Avoid subdivision in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints unless proposed subdivisions can be serviced by infrastructure and there is sufficient capacity.</u></p> <p><u>E38.2 (32) Avoid vacant site subdivision that does not comply with the minimum site size in areas identified on the planning maps as subject to transport infrastructure constraints.</u></p>	<p>E38.8.2.7 Subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control.</p> <p>E38.8.2.8 Subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and/or Wastewater Constraints Control.</p> <p>E38.8.2.9 Subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Beachlands Transport Constraints Control.</p>	<p><u>Matters of discretion</u></p> <p>E38.12.1(12) for subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control</p> <p>E38.12.1(13) for subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and/or Wastewater Constraints Control</p> <p><u>Assessment Criteria</u></p> <p>E38.12.2(10) for subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control</p> <p>E38.12.2(11) for subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and/or Wastewater Constraints Control</p>

Environmental	<p>Context: Detailed analysis of the proposed standards is provided in the relevant qualifying matter s32 reports. The following is a high-level analysis as it relates to quality built environment outcomes.</p> <p>Benefits:</p> <ul style="list-style-type: none"> <li>• limiting risk of significant adverse effects on the environment as a result of over-development in areas of low water-related infrastructure capacity.</li> <li>• Enables flexibility through design solutions.</li> <li>• Limiting risk of significant adverse effects on traffic congestion and inconsistencies with compact urban form as a result of over-development in areas of low access to frequent public transport stops.</li> <li>• Ensures adequate infrastructure to support safe pedestrian movement to frequent transport stops.</li> </ul> <p>Cost: It is considered there will be negligible environmental cost as the proposed provisions ensure potential risks from increased development are adequately managed.</p>
Economic	<p>Benefits: The proposed provisions provide for long-term economic benefits through ensuring development is only enabled where adequate infrastructure can be provided.</p> <p>Costs: The control placed on development regarding the three waters infrastructure may lead to increased costs for developers and constraining the level of the development within the THAB, MHU and LDRZ. However, overall, this short-term economic cost is outweighed by the potential significant environmental, social and cultural effects of increased density on Auckland's water bodies, significant ecological areas and water infrastructure. In addition, without the introduced provisions, it is likely long-term economic costs would arise through attempting to provide water infrastructure for higher density development which is already built.</p> <p>There will be some economic cost as a result of restraining development in those MHU and LDRZ identified as being subject to significant transport constraints. However, overall, the benefits of limiting traffic effects and inconsistencies with compact urban form are deemed to outweigh this cost.</p>
Social	<p>Benefits: The proposed provisions ensure adequate capacity and efficiency of infrastructure to support high quality health and safety outcomes.</p> <p>Costs: There are expected to be negligible social costs as the provisions reduce significant risk to the environment and health and safety of people and communities.</p>
Cultural	<p>Benefits: N/A</p> <p>Costs: N/A</p>

Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> The existing AUP(OP) framework does not include a sufficient framework with respect to providing for adequate infrastructure to support the anticipated increase in density. Accordingly, Option 1 is not considered the most appropriate option as it would not achieve the objectives.</p> <p><u>Option 2 – Incorporate MDRS and Policy 3(c) with no consequential amendments:</u> This option would not adequately respond to the impacts of increased intensification in areas subject to infrastructure constraints. Therefore, Option 2 is not considered the most appropriate option as it would not achieve the objectives.</p>
Opportunities for Economic Growth and Employment	The nature of the introduced provisions is likely to generate some increased employment and have an effect on economic growth in terms of providing for relevant infrastructure in response to the anticipated density increase.
Risk of Acting or Not Acting	The risk of acting in the form of implementing the proposed provisions is considered low given the requirement to align with the objective direction on ensuring adequate infrastructure. The risk of not acting is considered high in terms of the potential for over-intensification of urban areas with limited capacity or efficiency of infrastructure and potential significant adverse effects the environment and the health and safety of people and communities.
Efficiency and Effectiveness	<p>The proposed provisions are effective as they recognise the need to provide for critical infrastructure to support increased level of development within Auckland’s urban environment. The proposed framework of provisions is effective as it provides a strong policy direction in terms of ensuring adequate infrastructure to support increased level of development within Auckland’s urban environment.</p> <p>The provisions are efficient in achieving the proposed objectives. The short-term costs associated with providing for infrastructure and costs of restrained development are reasonable and proportionate to the potential longer term environmental, social and cultural effects that may be generated from an increase in development across the THAB, MHU and LDRZ. The provisions are considered to achieve an overall benefit to the wider community by ensuring the health and wellbeing of residents is not impacted by development.</p>

Table 17: Recognising and providing for values associated with special character, cultural values, historic heritage and the natural environment

Relevant Policies to Objectives (Additions <u>underlined</u> and deletions <del>strikethrough</del> )	Relevant Standards	Matters of Discretion and Assessment Criteria
<b>H6 Residential – Terraced Housing and Apartment Zone (THAB)</b>		
<p><u>H6.3 (B1) Apply the MDRS across all relevant residential zones in the district plan except in circumstances where a qualifying matter is relevant (including matters of significance such as historic heritage and the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga).</u></p> <p><u>H6.3 (A4) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</u>  <u>(f) minimising the maximum impervious area on a site in order to manage the amount of stormwater runoff generated by a development and ensure that adverse effects on water quality, quantity and amenity values are avoided or mitigated;</u></p> <p><u>H6.3(11) Require buildings to be set back from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.</u></p> <p><u>H6.3(15) Require buildings on sites subject to significant ecological areas to be of a scale that protects and maintains the significant ecological values of those areas.</u></p>	<p>H6.6.9 Yards  H6.6.10 Maximum impervious area  H6.6.11 Building coverage</p>	<p><u>Matters of Control (H6.7.1)</u>  H6.7.1(1) For one dwelling per site subject to a Significant Ecological Area Overlay</p> <p><u>Assessment criteria (H6.7.2)</u>  H6.7.2(1) For one dwelling per site subject to a Significant Ecological Area Overlay</p> <p><u>Matters of Discretion (H6.8.1)</u>  H6.8.1(4) For buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p> <p><u>Assessment Criteria (H6.8.2)</u>  H6.8.2(2)(da), H6.8.2(2)(ib), H6.8.2(2)(if) for developments containing four or more dwellings  H6.8.2(3)(da), H6.8(3)(ib), H6.8(3)(ie) for integrated residential development  H6.8.2(9) for yards  H6.8.2(10) for maximum impervious areas  H6.8.2(11) for building coverage</p>
<b>H5 Residential – Mixed Housing Urban Zone (MHU)</b>		
<p><u>H5.3 (B1) Apply the MDRS across all relevant residential zones in the district plan except in circumstances where a qualifying matter is relevant (including matters of significance such as historic heritage and the relationship of Māori and their culture and</u></p>	<p>H5.6.4 Building height  H5.6.8 Yards  H5.6.9 Maximum impervious area  H5.6.10 Building coverage</p>	<p><u>Matters of Control (H5.7.1)</u>  H5.7.1(1) For one dwelling per site located in a Significant Ecological Area Overlay.</p> <p><u>Assessment Criteria (H6.7.2)</u></p>

<p><u>traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga).</u></p> <p><u>H5.3(6A) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</u>  <u>(f) minimising the maximum impervious area on a site to reduce the amount of stormwater runoff generated by a development and ensure that adverse effects on water quality, quantity and amenity values are avoided or mitigated;</u></p> <p><u>H5.3(11) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.</u></p> <p><u>H5.3(15) Require buildings on sites subject to significant ecological areas to be of a scale that protects and maintains the significant ecological values of those areas.</u></p> <p><u>H5.3 (17) Building height is restricted to respond to the relationship of Māori and their culture and traditions with their ancestral lands, water, sites wāhi tapu, and other taonga, where located adjacent to Pukekiwiriki Pā Historic Reserve, Red Hill.</u></p>		<p>H5.7.2(1) For one or more dwellings per site located within a Significant Ecological Area Overlay</p> <p><u>Matters of Discretion (H5.8.1)</u>  H5.8.1(4) For buildings that do not comply with the standard(s) specified in Table H6.4.1</p> <p><u>Assessment Criteria (H6.8.2)</u>  H5.8.2(2)(fd), H5.8.2(2)(fe), H6.8.2(2)(gb), H6.8.2(2)(gc) for developments containing four or more dwellings  H5.8.2(3)(ac), H6.8(3)(ja) for integrated residential development  H5.8.2(4) for building height  H5.8.2(9) For yards  H5.8.2(10) For maximum impervious areas  H5.8.2(11) for building coverage</p>
<p><b>H3A Residential – Low Density Residential Zone</b></p>		
<p><u>H3A.3(5) Restrict the maximum impervious area on a site in order to manage the amount of stormwater runoff generated by a development and ensure that adverse effects on water quality, quantity and amenity values are avoided or mitigated.</u></p> <p><u>H3A.3(8) Require development to be in keeping with neighbourhood’s identified special character values and their lower intensity levels of residential development.</u></p> <p><u>H3A.3(9) Require buildings to be located on a site and of a scale that ensures the protection of significant ecological areas.</u></p>	<p>H3A.6.C6 Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay.</p> <p>H3A.6.6 Building height  H3A.6.7 Height in relation to boundary  H3A.6.8 Yards  H3A.6.9 Maximum impervious area</p>	<p><u>Matters of discretion</u>  H3A.8.1(2) for buildings that do not comply with relevant Standards specified in Table H3A.4.1  H3A.8.1(3)(b) for two or more dwelling on a site</p> <p><u>Assessment criteria</u>  H3A.8.2(2) for building height  H3A.8.2(3) for height in relation to boundary  H3A.8.2(4) for yards  H3A.8.2(5) for maximum impervious areas</p>

<p><u>outstanding natural landscapes, outstanding natural features and high natural character.</u></p> <p><u>H3A.3(10) Require development to be at a scale that is in keeping with the identified cultural values to avoid adverse effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites wāhi tapu, and other taonga.</u></p> <p><u>H3A.3(11) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.</u></p> <p><u>H3A.3(15) Restrict more than one dwelling per site in areas identified on the planning maps as subject to the High Natural Character Overlay or the Waitakere Ranges Heritage Area Overlay.</u></p> <p><u>H3A.3(16) Require development to be in keeping with the values associated with the Waitakere Ranges Heritage Area.</u></p> <p><u>H3A.3(19) Apply the MDRS across all relevant residential zones in the district plan except in circumstances where a qualifying matter is relevant (including matters of significance such as historic heritage and the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga).</u></p>	<p>H3A.6.10 Building coverage H3A.6.11 Landscaped area</p>	<p>H3A.8.2(6) for building coverage H3A.8.2(7) for landscaped area H3A.8.2(9)(a), H3A.8.2(9)(f) for two or more dwellings on a site</p>
<p>E38 Subdivision - Urban</p>		
<p><u>E38.3(33) Provide for subdivision as a controlled activity in zones where the Medium Density Residential Standards apply except where:</u></p> <p>(a) <u>there is significant risk from natural hazards;</u>  (b) .....;  (c) <u>where a qualifying matter is relevant; or</u></p>	<p>E38.8.1A. Standards – residential controlled activities</p> <p>E38.8.1A.1. Subdivision in accordance with an approved land use resource consent</p>	<p><u>Matters of control (E38.11.1)</u>  E38.11.1(2) matters of control for all controlled activities in Table E38.4.2</p> <p><u>Assessment criteria (E38.11.2)</u>  E38.11.2(2) assessment criteria for all controlled activities in Table E38.4.2</p>

<p>(d) <u>where the proposed subdivision does not comply with any relevant subdivision standards.</u></p> <p><u>E38.3(34) Subdivision is enabled as required by the RMA except to the extent necessary to accommodate one or more qualifying matters.</u></p> <p><u>E38.3(35) Require subdivision around MDRS development to not compromise any identified qualifying matters located on the site.</u></p>	<p>E38.8.1A.2. Subdivision around existing buildings and development</p>	
<p>Environmental</p>	<p>Benefits: It is recognised that the varying level of intensification enabled by the THAB, MHU zones and LDRZ and supported by Chapter E38: Subdivision - Urban, has the potential to generate environmental effects on water bodies, natural hazards and significant ecological values, cultural values, heritage and special character values and values associated with natural features and landscapes. As such, the proposed package of provisions provides the necessary direction for ensuring development responds appropriately to these qualifying matters where applicable and effectively avoids or manages adverse effects on relevant values.</p>	<p>Costs: There are expected to be negligible environmental costs as the proposed provisions ensure subdivision and the bulk, scale, mass, appearance and location of development supports the integrity of the relevant qualifying matters.</p>
<p>Economic</p>	<p>Benefits: Protecting, maintaining and enhancing values associated with relevant qualifying matters may generate some economic benefit through enhancing desirability of those areas subject to qualifying matters.</p>	<p>Costs: The proposed standards constrain the level of the subdivision and development within the THAB, MHU and LDRZ where qualifying matters apply will may generate some economic cost. However, overall, this cost is outweighed by the potential significant environmental, social and cultural costs of increased density on relevant qualifying matters.</p>
<p>Social</p>	<p>Benefits: The introduced provisions will ensure the values of relevant qualifying matters are protected which will reinforce the sense of place and relationships between those qualifying matters and communities and individuals thereby contributing to social wellbeing.</p>	<p>Costs: There are expected to be negligible social costs as the provisions are in direct response to protecting and managing effects of development on the values associated with qualifying matters.</p>
<p>Cultural</p>	<p>Benefits: The introduced provisions will ensure the values of relevant qualifying matters are protected as so tangata whenua can continue to provide for their cultural wellbeing.</p>	



	<p>Costs: There are expected to be negligible cultural costs as the provisions are in direct response to protecting the value of relevant qualifying matters and ensuring the health and wellbeing of residents.</p>
Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> Given the level of intensity enabled by the THAB and MHU zones and the anticipated increase in the LDRZ, it is considered that the current framework would be insufficient in managing the potential effects of increased density on relevant qualifying matters. Option 1 is therefore not in alignment with the objectives and is not considered to be the most appropriate approach for managing the values of qualifying matters within Auckland’s urban environment.</p> <p><u>Option 2 – Incorporate MDRS with no consequential amendments:</u> This option would not adequately respond to the impacts of intensification on identified qualifying matters due to reliance on MDRS and no control over built form. As such, a decision not to include consequential amendments is likely to result in inadequate protection of the values of relevant qualifying matters. Accordingly, Option 2 is not considered to be the most appropriate option.</p>
Opportunities for Economic Growth and Employment	<p>The nature of the introduced provisions is likely to generate some employment and have an effect on economic growth in terms of providing design solutions where possible to ensure subdivision and development is responsive to qualifying matters.</p>
Risk of Acting or Not Acting	<p>The risk of acting in the form of implementing the proposed provisions is considered low given the requirement to align with the objective direction on protecting and providing for the values of the identified qualifying matters. The risk of not acting is considered high in terms of the significant adverse effects on relevant values as a result of increased intensification.</p>
Efficiency and Effectiveness	<p>The proposed provisions are effective as they recognise the need to protect the values of qualifying matters as a result of providing for an increased level of development within Auckland’s urban environment. The proposed framework of provisions provides a strong policy direction in terms of addressing effects of development on the values of relevant qualifying matters.</p> <p>The provisions are efficient in achieving the proposed objectives. The short-term costs associated with design solutions are reasonable and proportionate to the potential longer term environmental, social and cultural effects that may be generated from an increase in subdivision and development across the THAB, MHU and LDRZ. The provisions are considered to achieve an overall benefit to the wider community by ensuring the innate values of identified qualify matters are recognised, provided for and protected.</p>

Table 18: Resilience to climate change

Relevant Policies to Objectives (Additions <u>underlined</u> and deletions <del>strikethrough</del> )	Relevant Standards	Matters of Discretion and Assessment Criteria
<b>H6 Residential – Terraced Housing and Apartment Zone (THAB)</b>		
<p>H6.3(A4) Require development to achieve a built form that contributes to high-quality built environment outcomes by: (g) requiring development to reduce the urban heat island effects of development and respond to climate change, by providing deep soil areas that enable the growth of canopy trees.</p>	<p>H6.6.20 Deep soil area and canopy tree</p> <p>New definition – Deep soil area</p> <p>New definition – Canopy tree</p>	<p><u>Matters of Discretion (H6.8.1)</u> H6.8.1(2)(ia)(b) For developments containing four or more dwellings</p> <p>H6.8.1(4) For buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p> <p><u>Assessment Criteria (H6.8.2)</u> H6.8.2(2)(aa)(vi), H6.8.2(2)(da), H6.8.2(2)(if) for developments containing four or more dwellings</p> <p>H8.2(3)(da), H8.2(3)(ie) for integrated development</p> <p>H6.8.2(19) For deep soil area and canopy trees</p> <p><u>Special information requirements</u> H6.9.(2) Deep Soil Area and Canopy Tree</p>
<b>H5 Residential – Mixed Use Housing Zone</b>		
<p>H5.3(6A) Require development to achieve a built form that contributes to high-quality built environment outcomes by: (g) requiring development to reduce the urban heat island effects of development and respond to climate change, by providing deep soil areas that enable the growth of canopy trees</p>	<p>H5.6.18 Deep soil area and tree canopy</p>	<p><u>Matters of Discretion (H5.8.1)</u> H5.8.1(2)(2)(ia)(b) For developments containing four or more dwellings H5.8.1(4) For buildings that do not comply with the standard(s) specified with in Table H5.4.1</p> <p><u>Assessment Criteria (H5.8.2)</u> H5.8.2(2)(aa)(vii), H5.8.2(2)(fd), H5.8.2(2)(fe) For developments containing four or more dwellings H5.8.2(2)(ac) for integrated development H6.8.2(18) for deep soil area and canopy</p>

		Special information requirements H5.9.(3) Deep Soil Area and Canopy Tree
Environmental	<p>Benefits: The following is a high-level summary of the findings outlined in the PPC78 Technical Background Report in Attachment 1 Part 1.</p> <ul style="list-style-type: none"> <li>• encourage the retention of existing trees where possible;</li> <li>• enable sufficient depth and area of land be provided to support tree growth to maturity;</li> <li>• assist in maintaining and enhancing biodiversity values;</li> <li>• providing shade with anticipated increasing temperatures; and</li> <li>• provide areas for stormwater infiltration.</li> </ul> <p>The package of provisions (including policies, standards, definitions, and assessment criteria) are considered pivotal in achieving sustainable development through mitigating potential adverse environmental effects associated with intensification and building resilience to climate change.</p>	
	<p>Costs: The increase in development and hard surfaces will generate adverse environmental effects, particularly in terms of tree removal and stormwater run-off. These costs are anticipated to be balance through the proposed provisions which will assist in building resilience to climate change effects, thereby providing long-term environmental benefits.</p>	
Economic	<p>Benefits: The assessment criteria for the standard allows for comparable alternatives to deep soil area and canopy cover on sites which are subject to development constraints. This ensures developers have greater flexibility and are not subject to unnecessary development or regulatory costs. The provisions therefore allow for intensification but in a way which ensures climate resilience whilst intensification within the urban environment is enabled.</p>	
	<p>Costs: Due to the ability to overlap the proposed deep soil area with meeting other standards such as landscaped area and communal outdoor living spaces, there is no adverse impact on overall yield. In addition, the standard allows for flexibility in layout on larger sites in respect to the criteria for deep soil area.</p>	
Social	<p>Benefits: The proposed provisions will generate immediate benefits for both communities and individuals. The requirement to provide for deep soil area and canopy cover will reduce individual energy use and cost and will have a positive impact on the health and wellbeing of urban residents.</p>	
	<p>Costs: The requirement placed on individuals to retain or provide for new tree growth may be perceived to constrain personal expression, however, this is considered unlikely.</p>	
Cultural	<p>Benefits: N/A</p>	

	Costs: N/A
Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> The existing operative framework does not include provisions with respect to retaining or providing for new urban tree growth and building resilience to climate change. Given the level of intensification enabled by the THAB and MHU zones and the reduction of landscaped area by incorporating MDRS, it is considered that the current framework would be insufficient in managing climate change effects resulting from the increased scale of development. Option 1 is therefore not in alignment with Objective H6.2(5), the RPS and NPSUD direction. As such, it is not considered to be the most appropriate approach for managing climate change effects within Auckland’s urban environment.</p> <p><u>Option 2 – Incorporate MDRS with no consequential amendments:</u> MDRS does not provide a framework to address climate change. As such, this option would not achieve the Objective H6.2(5).</p>
Opportunities for Economic Growth and Employment	The nature of the proposed standard is unlikely to generate increased employment or have an effect on economic growth. However, there may be some potential through associated maintenance required for the upkeep of urban trees.
Risk of Acting or Not Acting	The risk of acting in the form of implementing the proposed provisions is considered low given the requirement to align with the RPS and NPSUD direction on responding to climate change. The risk of not acting is considered high in terms of the potential for increased intensification of urban areas without the appropriate mitigation measures for addressing effects associated with climate change.
Efficiency and Effectiveness	<p>The proposed provisions are effective as they recognise the need to address effects associated with climate change as a result of permitting an increased level of development within Auckland’s urban environment. The proposed additions in the form of an objective, policy and standard provide a strong policy direction in terms of addressing effects associated with climate change and building resilience to those effects.</p> <p>The provisions are efficient in achieving the proposed Objective H6.2(5). The costs associated with retaining or providing for new tree growth are considered reasonable and proportionate to the potential climate change effects that may be generated from an increase in development across the THAB and MHU zones. The provisions are considered to achieve an overall benefit to the wider community by ensuring the health and wellbeing of urban residents is not impacted by climate change.</p>

Table 19: Business Zones – Planned urban character, special character, cultural values, historic heritage and the natural environment

Relevant Policies to Objectives (Additions <u>underlined</u> and deletions <del>strikethrough</del> )	Relevant Standards	Matters of Discretion and Assessment Criteria
H9: Metropolitan Centre Zone; H10: Town Centre Zone; H11: Local Centre Zone; H12: Neighbourhood Centre Zone; H13: Mixed Use Zone; and H15 Business Park Zone.		
<p>(8) Require development adjacent to residential zones <del>and the Special Purpose—School Zone and Special Purpose—Māori Purpose Zone</del> to maintain the amenity values of those areas, having specific regard to dominance, overlooking and shadowing.</p> <p><u>(12A) Enable building height of at least six storeys within walkable catchments unless a qualifying matter applies that reduce height.</u></p> <p><u>(13) Enable greater building height than the standard height in locations identified within the Height Variation Control centres zones, Business—Mixed Use Zone, Business—General Business Zone and Business—Business Park Zone enable greater building height than the standard zone height, having regard to whether the greater height:</u></p> <p><u>(za) is commensurate with the level of commercial activities and community services;</u></p> <p>(a) is an efficient use of land;</p> <p>(a) supports public transport, community infrastructure and contributes to centre vitality and vibrancy;</p> <p>(b) considering the size and depth of the <u>zoned</u> area, can be accommodated without significant adverse effects on adjacent residential zones; and</p> <p>(c) is supported by the status of the centre in the centres hierarchy, or is adjacent to such a centre; <u>and</u></p> <p>(d) <u>support the role of centres.</u></p>	<p><u>Standards</u></p> <ul style="list-style-type: none"> <li>- Building Height</li> <li>- Height in relation to boundary</li> </ul>	

<p>(14) Reduce building height below the standard zone height in <del>locations identified</del> <u>locations within the Height Variation Control centre zones, Business — Mixed Use Zone, Business — General Business Zone and Business — Business Park Zone,</u> reduce building height below the standard zone height, where the standard zone height would have significant adverse effects on identified special character, identified landscape features, <del>or amenity,</del> <u>or qualifying matters.</u></p> <p>Metropolitan Centre only - H9.2(15A) <u>Enable greater building heights and density of urban form in metropolitan centres, than in town, local or neighbourhood centres, to reinforce their role as regional focal points.</u></p>		
<p>Environmental</p>	<p>Benefits:</p> <ul style="list-style-type: none"> <li>• Achieve 21m within a walkable catchment where there are no qualifying matters present;</li> <li>• Clear transition in scale and built form between different centres and corridors reinforces hierarchies to support compact urban form;</li> <li>• Infringements for taller buildings are enabled where appropriate and where design provides high-quality outcomes;</li> <li>• Height restrictions avoid and manage adverse effects on values of qualifying matters.</li> </ul> <p>Costs: The environmental costs of the proposed changes are limited. Whilst additional height may be enabled in specific walkable catchment locations this is unlikely to lead to significant adverse effects given the focus of the zone and activities. Amendments have been undertaken to ensure development transitions to the scale and densities of adjoining zones and accommodates qualifying matters.</p>	
<p>Economic</p>	<p>Benefits: The changes within the zones as identified in certain locations will enable a greater height and envelope which will provide opportunity to deliver additional development capacity. The centres that are within these zones have an important role in delivering the compact urban form and growth sought in these locations, providing employment, social and leisure facilities for the community.</p> <p>Costs: No significant economic costs from the proposed changes are noted.</p>	

Social	Benefits: The provisions maintain and further enable the zones as important growth locations and centres for persons to access facilities, employment, commerce and services. The provisions as amended continue to recognise and deliver the planned character for the area of the zones providing a package of policies and standards to manage the appearance and form of this new development, including as it relates to qualifying matters.
	Costs: There are expected to be negligible social costs as the given the extent of the effect of the amended provisions on the management of development within these zones.
Cultural	Benefits: N/A
	Costs: N/A
Options less or not as appropriate to achieve the objective (see table 6 for further detail on options)	<p><u>Option 1 – Delete conflicts and retain status quo:</u> This option could result in adverse effects as there would be insufficient control of development to ensure a quality built environment and ensure values of qualifying matters are protected.</p> <p><u>Option 2 – Incorporate Policy 3(c) with no consequential amendments:</u> This would generate inconsistent development outcomes and would fail to achieve objectives relating to accommodation of qualifying matters.</p>
Opportunities for Economic Growth and Employment	Providing opportunity for additional development potential within walkable catchments is likely to generate increased employment and have an effect on economic growth through construction and/or operation.
Risk of Acting or Not Acting	The risk of acting in the form of implementing the proposed provisions is considered low given the requirement to align with the objectives for the zone and NPS-UP direction on intensification. The risk of not acting is significant in terms of potential adverse effects on qualifying matters.
Efficiency and Effectiveness	The proposed provisions are effective as they recognise the need to address the intensification requirements of policy 3 of the NPS-UD and provide limited proposed additions and amendments to the objective, policy and standard to deliver this in a consolidated manner which considers firstly building height and the opportunities for greater scale in these locations. The provisions are also comprehensive including supporting changes which will effectively manage the transition of scale and management of effects on adjoining zones, and qualifying matters.
	The provisions are efficient in achieving the identified objectives including maintaining a well functioning urban environment.

## 6 Development of Plan Change

131. This section provides an overview of the process undertaken to develop the PPC78 provisions.

### 6.3 Methodology

132. PPC78 was developed through the Quality Built Environment workstream (formed by planners, urban designers, architects and specialists on specific topics). The key matters relevant to the scope and focus of the workstream were defined as follows:

- To apply the intensification provisions of NPSUD while achieving a quality built environment through the lens of the following outcomes:
  - Outcome 1: Enable at least six storeys on a typical site within walkable catchments
  - Outcome 2: Ensure good on-site amenity for residents
  - Outcome 3: Manage dominance and shading effects on the street
  - Outcome 4: Manage privacy, building dominance and shading effects on adjoining sites
  - Outcome 5: Respond to climate change.
- Implement the MDRS to relevant zones within and outside of Walkable Catchments
- Implement policy 3(b), 3(c) and 3(d) of the NPSUD and make consequential changes related to provisions related to this.
- Incorporate relevant key findings from the s35 Monitoring Report for Residential zones where these do not contradict the MDRS requirements.

134. An additional consideration for the workstream was to consider the implications of any proposed changes on development yield.

135. In order to rationalise the modelling approach and to evaluate the implications of the proposed standards in terms of achieving Policy 3 of the NPSUD, Council determined to identify a 'typical site' which would act as the baseline environment.



### 6.3.1 Identifying a 'typical site'

136. As set out in the Auckland Council Urban Design Research paper 2 (Attachment 1: Part 2, Appendix 5) a methodology was developed, and research undertaken to assist with the definition of a 'typical site' within the walkable catchments of Rapid Transit Network (RTN) stations in Auckland. Walkable catchments were chosen for this research given the AUP(OP) already gives effect to Policy 3(d) (being the proposed THAB outside walkable catchments as discussed in paragraph 32 above).
137. This research paper sets out in detail the objectives, methodology, assumptions and limitations, and findings of the report. Key summarised points of note before identifying the findings include:
- All 44 walkable catchments, including the eight Metropolitan Centres, were included in this research.
  - The research looked at establishing three key attributes, these being site width (at frontage), length (dividing width by area) and area.
  - Sites that were analysed were all sites that were zoned residential in the AUP(OP) (SH, MHS, MHU and THAB).
  - Sites were excluded for various stated reasons as set out in the research paper.
138. Key findings from the report (focused on mode reporting) were as follows:
- Site Width – Very dominant dimension grouping, with 82% of sites being between 15m and 20m wide at their road frontage
  - Area – More even spread, 38% of sites having an area of 600m<sup>2</sup> and 700m<sup>2</sup>, 22% less than 400m<sup>2</sup> and 24% 1000m<sup>2</sup> +.
  - Site Length – Between 40m and 50m site length most common at 42%, with 30-40m accounting for 25% of sites.
139. To assist with the modelling of the effects of the proposed standards, this data was used to identify the following metrics as a typical site:
- 18m wide
  - 44.5m long
  - Therefore, 801m<sup>2</sup> in area
140. The dimension for site width and length were identified as an approximate mid-point in the clearly most common average for these two dimensions. It was determined to utilise the width and length dimensions as the basis of the typical site, rather than the 600m<sup>2</sup> area, as the site area average presented too many variables in configuration

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<sup>2</sup> Auckland Council. *Width of an average of 'typical' residential site within walkable catchment in Auckland*. UDU Research, October 2021.

and site width and length. Additionally, the site areas presented much greater variety/spread and less concentration around a specific dimension in the findings than site length and width. Overall, the 600m<sup>2</sup> area did not assist in rationalising the modelling to test standards. Accordingly, the site area, was therefore calculated on the basis of multiplying the averaged site width and length dimensions.

141. In addition to the identification of a typical site, to add to the robustness of the testing carried out on provisions, a small site and large site dimension was identified as follows:

- Large site: 40m x 40m (site area 1600m<sup>2</sup>)
- Small site: 10m x 30m (site area 300m<sup>2</sup>)

### **6.3.2 Testing:**

142. The operative provisions for relevant zones to NPSUD Policy 3 were tested, to ascertain the ability to achieve at least six storeys and planned intensification levels beyond walkable catchments. Multiple models were generated to demonstrate effects from various typologies and different site configurations.

143. The following tests were applied to ascertain:

- The degree to which operative provisions achieved and enabled at least six storeys and planned character outside of walkable catchments in specific locations.
- What changes were necessary to achieve anticipated intensification and the effects of those changes on achieving quality built environment outcomes.
- What changes were necessary to achieve at least six storeys in walkable catchments and intensification levels while also achieving quality built environment outcomes.

144. Key findings from these tests demonstrated that:

- in the THAB and in certain locations within the identified business zones the operative provisions did not adequately provide for at least six storeys, with key constraints being the permitted height thresholds and / or height in relation to boundary controls; and
- applying the MDRS to development of at least six storey or of more than three dwellings, would not adequately achieve the objectives and policies of the RPS relating to quality built environment outcomes.

145. In addition, in walkable catchments testing was also carried out on the ability of the operative provisions in enabling the planned character of the wider THAB and MHU zone. For further information on this refer to the PPC78 Technical Background Report Attachment 1 Part 1: Section 17 and yield studies (for terraces at Attachment 1 Part 2: Appendix 3 and for apartments at Attachment 1 Part 1: Appendix 2).

### **6.3.3 Provision development and selection:**

146. Various options for potential standards to address the RPS quality built environment outcomes were identified using national and international case studies, evidence and research; data from consented developments under the AUP(OP); and relevant data from the s35 monitoring report.
147. The options were then modelled testing the effects of different typologies and site sizes (as described in paragraphs 117 and 118 above). Testing was also undertaken on how various options collectively impacted development yield in a relevant zone.
148. Options were then selected based on their ability to achieve quality built environment outcomes and overall implications on development yield.
149. The proposed testing also looked at the effect of proposed options and requirement for the incorporation of MDRS within the relevant residential zones.

### **6.3.4 Yield Study Results**

150. Section 17 of the PPC78 Technical Background Report (Attachment 1 Part 1) provides a more detailed summary of the yield study based on data from the following two reports produced for modelling results in MHU and THAB:
  - Terrace Housing Residential Development Study. produced by Tamaki Makaurau Design Ope, Plans & Places (refer Attachment 1: Part 2, Appendix 3).
    - For terrace housing: compares the effect on yield of the operative standards and proposed standards (for developments of dwellings which are restricted discretionary activities) in the MHU and THAB zone.
    - Compares these scenarios across 3 different site sizes (typical, large and small) and 3 different site access arrangements.
    - The study also models on a typical site the proposed standards for development of up to three dwellings as a permitted activity (incorporating MDRS and proposed built form standards).
  - Apartments - Residential Development Testing, produced by Jasmax (refer Attachment 1: Part 1, Appendix 2).
    - For apartment housing: compares the effect on yield of the operative standards for dwellings (restricted discretionary activity), proposed standards THAB zone outside walkable catchments (four or more dwellings as a restricted discretionary activity) and proposed standards THAB zone within walkable catchments (four or more dwellings as a restricted discretionary activity).
    - Compares these scenarios across 3 different site sizes (typical, large and small).
151. The below summary tables identify the yield effects of the proposed standards in the various scenarios.

## Terraced Housing

*Table 20: Summary comparison of yield arising from operative and proposed standards (RD 4+ Dwellings) modelling - MHU*

	VEHICLE AND PEDESTRIAN ACCESSWAY			V & P ACCESWAYS (GROUPED PARKING)			PEDESTRIAN ONLY ACCESS		
	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE
UNIT INCREASE	2 (50%)	0%	0%	0%	0%	1 (100%)	0%	0%	1 (100%)
GFA INCREASE	50%	0%	0%	21.4%	6.2%	150%	44.4%	0%	200%
OCCUPANCY INCREASE	53.3%	0%	0%	16.7%	7.5%	100%	43.4%	0%	166%

*Table 21: Summary comparison of yield arising from operative and proposed standards (RD 4+ Dwellings) THAB*

	VEHICLE AND PEDESTRIAN ACCESSWAY			V & P ACCESWAYS (GROUPED PARKING)			PEDESTRIAN ONLY ACCESS		
	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE
UNIT INCREASE	1 (20%)	0%	1 (50%)	0%	0%	1 (50%)	0%	0%	0%
GFA INCREASE	20%	0%	100%	20%	5.8%	100%	17.3%	0%	20%
OCCUPANCY INCREASE	21%	0%	100%	21%	4.6%	100%	17.3%	0%	33%

152. The results of the terraced housing yield testing demonstrate that in all the scenarios cumulatively, the proposed standards either retain or see an increase in the yield from the relevant operative position.
153. Due to the 3 storey height of terraces modelled, the yield outcomes from the amendments proposed in the THAB (mainly as a result of amendments to height and height in relation to boundary standards) cannot be fully realised for the terraced housing type. However the modelling undertaken on apartment development (summary below) demonstrates the additional yield achieved when these amendments to height and HIRB are utilised by a 6 storey apartment development.

## Apartment Development

Table 22: Comparison of Operative Standard to Proposed Standard modelling - THAB

	THAB			THAB WALKABLE CATCHMENT		
	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE
UNIT INCREASE	1 (9%)	1 (3%)	5 (22%)	8 (73%)	14 (41%)	4 (100%)
GFA INCREASE	16%	9%	5%	60%	29%	68%
OCCUPANCY INCREASE	0%	14%	20%	54%	38%	100%

154. The results of the apartment yield testing demonstrate that in each of the scenarios tested within the THAB, cumulatively the proposed standards see an increase in yield from the relevant operative position.
155. Within the THAB the effect of the proposed standards sees an increase in the yield output in comparison to the operative standards. THAB walkable catchment experiences the most significant increase in yield. This aligns with the identified intensification objectives and policy 3(c) of the NPS-UD. This increase in yield is largely driven by the amended height in relation to boundary and height standards.
156. The relative increases in intensification retain the effective transition of built form and scales between these areas of the wider zone, whilst also aligning with the zone descriptions within the AUP.

### Conclusion

157. The modelling demonstrates that in all cases within walkable catchments the cumulative effect of the proposed standards in comparison to the AUP(OP), leads to a relative increase in the development potential provided whilst achieving quality built environment outcomes.
158. In other locations the effect of the proposed provisions is at least to retain the high intensity character of the zones which are considered to already provide for the level of development anticipated under Policy 3(d).
159. Overall, the modelling demonstrates that the proposed standards are able to give effect to Policy 3(c) and 3(d).
160. These yield studies provide a comparison and understanding of the effect of the proposed changes on the development of a site where in both the operative and proposed scenario the zoning is the same. However, it is important to recognise that alongside these changes to zone provisions, geographic changes to the zoning of land within Auckland are also proposed. Notably the increase in MHU and THAB (including the introduction of walkable catchment) zoned land will in itself significantly increase the planned development capacity of Auckland, before considering the intensification amendments proposed to the zone chapters of the AUP within PPC78.

## 6.4 Information Used

160. The Council has commissioned technical advice and assistance, as well as relying on existing evidence and research to assist with setting the plan framework for the proposed chapter provisions. Key documents are listed in Table 23 below.

Table 23: List of relevant background assessments and reports.

Name of document, report, plan	How did it inform the development of the plan change
<p>Auckland Council. <i>S35 Monitoring Report, B2.3 Quality Built Environment of the Auckland Regional Policy Statement. July 2022</i></p> <p>(Attachment 1: Part 2, Appendix 6)</p>	<p>This report assessed the AUP(OP) provisions in achieving RPS quality built environment outcomes through a sample of schemes in the THAB, MHU, MHS and MUZ zones. The s35 monitoring report assessed a number of standards and issues, identifying the performance of the operative standards and provisions in delivering planned outcomes and giving effect to RPS QBE outcomes. The findings of the report including the recommendation and identification of areas where desired outcomes were not being achieved or matters addressed has been an important reference for the QBE workstream and the testing and development of proposed standards in giving effect to intensification provisions.</p>
<p>Auckland Council. <i>Width of an average of 'typical' residential site within walkable catchment in Auckland. UDU Research, October 2021.</i></p> <p>(Attachment 1: Part 2, Appendix 5)</p>	<p>As described in section 7.3 above, this report reviewed and presented information on site dimensions within Auckland to assist with the identification of key features of a typical site within a walkable catchment. This information assisted and formed part of the methodology for modelling of proposed provisions individually and collectively to ascertain environmental outcomes and development yield.</p>
<p>Following documents which formed part of the Auckland Unitary Plan Independent Hearings:</p> <ol style="list-style-type: none"> <li>1. <i>Statement of Evidence Nicholas Jon Roberts on Behalf of Auckland Council – Planning Residential Zones – 9 September 2015.</i></li> <li>2. <i>Statement of Rebuttal Evidence of Nicholas Jon Roberts on Behalf of Auckland Council – Planning Residential Zones – 6 October 2015</i></li> <li>3. <i>Statement of Evidence Graeme Robert McIndoe on Behalf of Auckland Council – Architecture and Urban Design – 9 September 2015.</i></li> <li>4. <i>Statement of Primary Evidence Trevor Stewart Mackie on Behalf of Auckland Council – Urban Design Planning Height Limits – 27 July 2015.</i></li> </ol>	<p>These statements and reports provide understanding and background to the technical consideration given to provisions within the AUP(OP) reviewed and amended as a result of giving effect and incorporating the MDRS and NPS-UD. These reports and evidence are listed as being of particular importance and are referenced within the '<i>Proposed plan change 78 – Intensification: Technical Background Report</i>' (Attachment 1 Part 1).</p>

Name of document, report, plan	How did it inform the development of the plan change
<p>5. <i>Statement of Primary Evidence Claudia Hellberg on Behalf of Auckland Council – Stormwater – 8 September 2015</i></p> <p>6. <i>Auckland Unitary Plan Independent Hearings Panel. (2016) Report to Auckland Council Hearing topics 059 – 063: Residential zones.</i></p>	
<p>Boffa Miskell. <i>6 Storey Apartment Buildings – Auckland Case Studies. 2022</i> (Attachment 1: Part 1, Appendix 1)</p>	<p>This document contains case studies in Auckland to gain an understanding of typical heights for six storey apartment buildings. This was utilised to inform drafting of height related provisions for the plan change.</p> <p>Relevant information in each case study that relates to building elements that comprise total building height are recorded and outlined.</p>
<p>Jasmax. <i>Building Height Memo. 2022</i> (Attachment 1: Part 2, Appendix 4)</p>	<p>The memo outlines the key design and market considerations and requirements which inform floor to floor dimension and overall building heights. This was utilised in developing the height standard.</p>
<p>Jasmax. <i>Apartments - Residential Development Testing Report. 2022</i> (Attachment 1: Part 1, Appendix 2)</p>	<p>To assess the implications on the development yield of the proposed standards whilst having regard to QBE outcomes, three dimensional design modelling has been undertaken and is presented in the testing report.</p> <p>The study compares the operative and proposed yield of apartment development within the THAB zone (inside and outside of walkable catchments) which is a typology of housing particularly anticipated in this zone given the planned character and heights enabled.</p> <p>The report also presents testing undertaken in relation to the proposed height, HIRB and outlook standard.</p>
<p>Tāmaki Makaurau Design Ope, Auckland Council. <i>Terrace Housing Study. 2022</i> (Attachment 1: Part 2, Appendix 3)</p>	<p>To assess the implications on the development yield of the proposed standards whilst having regard to QBE outcomes, three dimensional design modelling has been undertaken and is presented in this report. The study compares the operative and proposed yield of terraced housing development within the MHU and THAB zone. The report also presents testing undertaken to demonstrate the incorporation of MDRS as a permitted activity for dwellings of less than 3 on a typical site.</p>
<p>Tāmaki Makaurau Design Ope, Auckland Council. <i>Terrace Housing Study. 2022</i> (Attachment 1: Part 2, Appendix 3)</p>	<p>Documents which are referred to within the '<i>Proposed plan change 78 – Intensification: Technical Background Report</i>' and informed the</p>

Name of document, report, plan	How did it inform the development of the plan change
<p>MfE, <i>National Medium Density Design Guide</i> 2022.  <a href="https://environment.govt.nz/publications/national-medium-density-design-guide/">https://environment.govt.nz/publications/national-medium-density-design-guide/</a></p> <p>Auckland Council. <i>Te Tāruke-ā-Tāwhiri: Auckland Climate Plan</i>. 2020  <a href="https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/aucklands-climate-plan/Pages/default.aspx">https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/aucklands-climate-plan/Pages/default.aspx</a></p> <p>Auckland Council. <i>The Auckland Plan 2050</i>. 2020  <a href="https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/Pages/default.aspx">https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/Pages/default.aspx</a></p> <p>Auckland Council. <i>Auckland's Urban Ngahere (Forest) Strategy and Auckland Water Strategy</i>. 2019  <a href="https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/Documents/urban-ngahere-forest-strategy.pdf">https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/Documents/urban-ngahere-forest-strategy.pdf</a></p>	<p><i>development of proposed standards'</i> (Attachment 1 Part 1) forming key sources of information for the consideration and development of standards.</p>

## 7 Conclusion

161. As set out in the preceding sections of this report, the proposed package of provisions are considered to be the most effective and efficient option for achieving the overarching issue being: how to implement MDRS and give effect to Policy 3(b), 3(c) and 3(d) the NPSUD while achieving quality built environment outcomes as directed by Part 2.3 of the RPS, including addressing issues relating to:

- Achieving planned urban character
- Providing for the amenity, health and safety of residents on-site, and for people on adjoining sites and on the street;
- Ensuring infrastructure efficiency to support intensification;
- Ensuring subdivision and development recognise and provide for values associated with cultural and historic heritage, special character and the natural environment;
- Ensuring resilience to the effects of climate change.





**ATTACHMENT 1: PART 1**

**\_PPC78 Technical background report**

**\_APPENDIX 1: Boffa Miskell (2022). 6 Storey Apartment Buildings – Auckland Case Studies**

**\_APPENDIX 2: Jasmax (2022). Apartment – Residential Development Testing**

# Proposed Plan Change 78 – Intensification Technical Background Report

10 August 2022



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Appendix 2: Jasmax (2022). Apartment – Residential Development Testing; Auckland: Jasmax

Appendix 3: Auckland Council (2022). Terrace Housing- Residential Development Study; Tamaki Makaurau Design Ope, Plans & Places, Auckland Council

Appendix 4: Jasmax (2022). Building Height Memo; Auckland: Jasmax

Appendix 5: Auckland Council. Width of an average of 'typical' residential site within walkable catchment in Auckland; UDU Research, October 2021

Appendix 6: Auckland Council. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

## Acronyms

AUP(OP)	Auckland Unitary Plan (Operative in Part) November 2016
PAUP	Proposed Auckland Unitary Plan (notified 30 September 2013)
THAB	Residential – Terraced Housing and Apartment Buildings zone
MHU	Residential – Mixed Housing Urban zone
MHS	Residential – Mixed Housing Suburban zone
SHZ	Residential – Single House zone
LDRZ	Residential – Low Density Residential zone
MUZ	Business – Mixed Use zone
TCZ	Business – Town Centre zone
LCZ	Business – Local Centre zone
NCZ	Business – Neighbourhood Centre zone
IHP	Independent Hearings Panel (established to hear submissions on the PAUP and make recommendations to the Auckland Council)
HSAA	Resource Management – Housing Supply and Other Matters Amendment Act 2021
RMA	Resource Management Act
IPI	Intensification Planning Instrument as defined in ss80E of the RMA
QBE	Quality Built Environment
NPS-UD	National Policy Statement – Urban Development (Updated May 2022)





# 1.0 Introduction

This report has been prepared to support proposed changes to the Auckland Unitary Plan (Operative in Part) (AUP(OP)) as part of Proposed Plan Change 78 – Intensification. The report has been prepared by planners, urban designers, architects and issue specific specialists which form the Quality Built Environment workstream group (QBE Workstream).

The report focusses on the standards proposed to be changed in the specified residential and business zones as part of the Intensification Planning Instrument (IPI) process as required under the Resource Management Act 1991 (RMA) in response to national direction on urban development issued by central government<sup>1 2</sup>.

In general, the report does not consider qualifying matters and the provisions developed to recognise the values of those particular qualifying matters, these are addressed elsewhere in the section 32 documentation prepared in support of Plan Change 78.

The proposed provisions are addressed individually, setting out the context and rationale behind the proposed changes. The analysis for each provision generally follows the following framework:

- Summary of the changes to the respective standard and statutory background.
- Key issues discussion including detail on the following matters, depending on relevance:
  - Key evidence, background and decisions from the PAUP Independent Hearing Panel process.
  - Research on the application of the operative provisions.
  - Identification of current performance and consequential effects relevant to the standard.
  - Design principles and modelling outcomes associated with different options;

In accordance with the RMA the provisions relating Medium Density Residential Standards (MDRS) must be mandatorily implemented within the IPI. However, the following mandatory changes do not require assessment:

- Insertion of Schedule 3A density standard of the RMA, either as a new standard or via amendment of an existing operative standard.
- Retention of operative standards which accord with ss77G(7) *To avoid doubt, existing provisions in a district plan that allow the same or a greater level of development than the MDRS do not need to be amended or removed from the district plan.* This includes operative standards which are retained for restricted discretionary activities of 4+ residential units (dwellings), however where a standard is applied to permitted residential development as MDRS discussion will still be provided.

Following this standard review, an overview is provided on how the proposed standards as a whole (retained, new and amended), impact on overall yield and the ability to give effect to the MDRS and policy 3c and 3d of the NPS-UD. This includes reference to appended technical

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<sup>1</sup> National Policy Statement on Urban Development 2020

<sup>2</sup> Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021

reports which have modelled the operative and proposed standards effect on various relevant development scenarios.

Some key outcomes and directions from the QBE workstream in the development of the proposed provisions have influenced the overall structure of the proposed changes to the zone chapters. This includes, with relevance to standard provisions, directions to:

- Incorporate the Medium Density Residential Standards (MDRS) of Schedule 3A of the RMA for permitted residential activities in the relevant residential zones;
- Apply Schedule 3A density standards or amended equivalent density standards for other consented development and activities; and
- Introduce built form standards for permitted and consented activities (in addition to density standards).

Following investigation of various options (addressed in the Plan Change 78 s32 evaluation report), the QBE workstream concluded that these provisions, as an integrated package would provide the most effective and efficient means of giving effect to MDRS and NPS-UD policy 3b, 3c and 3d while continuing to achieve the QBE outcomes of the Auckland Unitary Plan Regional Policy Statement (RPS).

## 2.0 Height

### 2.1 Proposed Amendments and Statutory Context

The following table provides a summary of the operative and any key proposed amendments to the AUP(OP) height standard within the zones identified.

Zone	Summary of Key Operative AUP Height Standard	Summary of Proposed AUP(OP) Height Standard	Summary of IPI Status
Residential – Low Density Residential Operative Standard is current Residential Single House Zone.	8m + 1m for pitch roof form	No change	ss77 Qualifying Matter
Residential – Mixed Housing Urban Zone	11m + 1m for roof form (max. 50% of roof elevation with slope of 15-degrees or more)	No change	Schedule 3A Density Standard.
Residential – Terrace Housing and Apartment Buildings Zone	16m	<p><u>For up to 3 dwellings as MDRS permitted activity:</u></p> <p>11m (3 storeys) + 1m for roof form (max. 50% of roof elevation with slope of 15-degrees or more)</p> <p><u>Any other development:</u></p> <p>16m (5 storeys) outside walkable catchments</p> <p>21m (6 storeys) inside walkable catchments</p>	<p>Schedule 3A Density Standard</p> <p>More enabling than Schedule 3A Density Standard</p> <p>Giving effect to NPS-UD Policy 3c</p>
Business – Neighbourhood Centre zones	13m (11m occupiable limit and 2m for roof form) or HVC	<p>13m total (11m occupiable limit and 2m for roof form) or HVC</p> <p>21m (up to 6 storeys) where inside a walkable catchment</p>	<p>More enabling than Schedule 3A Density Standard</p> <p>Giving effect to NPS-UD Policy 3c</p>
Business – Local Centre zones	18m (16m occupiable limit and 2m for roof form) or HVC	<p>18m total (16m occupiable limit and 2m for roof form) or HVC</p> <p>21m (up to 6 storeys) where inside a walkable catchment</p>	<p>Gives effect to NPS-UD Policy 3d</p> <p>Giving effect to NPS-UD Policy 3c</p>
Business – Mixed Use zone	18m (16m occupiable limit and 2m for roof form) or HVC	<p>18m total (16m occupiable limit and 2m for roof form) or HVC</p> <p>21m (up to 6 storeys) where inside a walkable catchment</p>	<p>Gives effect to NPS-UD Policy 3d</p> <p>Giving effect to NPS-UD Policy 3c</p>

Zone	Summary of Key Operative AUP Height Standard	Summary of Proposed AUP(OP) Height Standard	Summary of IPI Status
Business – Town Centre zone	13m, 18m, 21, 27m or more  (2m less than total occupiable limit and 2m for roof form) or HVC	13m, 18m, 21, 27m or more (2m less than total occupiable and 2m for roof form)  21m (up to 6 storeys) where inside a walkable catchment (unless exceeded by HVC)	Gives effect to NPS-UD Policy 3d  Giving effect to NPS-UD Policy 3c

Height standards are a density standard as identified in Schedule 3A of the RMA and are currently an operative standard for the above zones within the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the incorporation of MDRS or giving effect to NPS-UD Policy 3.

The AUP(OP) includes standards for height within all the residential and business zones listed above, which are applied to a range of permitted and restricted discretionary activities. The current operative height standard in the THAB and business zones listed enables taller buildings than the Schedule 3A, density height standard. The operative MHU height standard aligns with the Schedule 3A standard.

Height standards are applied in the above AUP(OP) zones as one of the tools to give effect to Part B2.3 (a quality built environment) of the Regional Policy Statement (RPS). The purpose statement for the height standard varies between zones. However, a common strategic direction is to manage effects relating to urban character and amenity values, including visual dominance. Thus, the height standard gives effect to the RPS Objectives B2.3.1 (1)(a) and (c), and Policy B2.3.2 (1)(a).

In order to give effect to intensification instruments of the RMA while continuing to meet Part B2.3 of the RPS and deliver QBE outcomes, it is proposed to take different approaches to height in the relevant residential zones, and business zones:

- In the THAB zone, outside a walkable catchment, a 16m (5 storeys) height standard will continue to apply for certain permitted and restricted discretionary activities. Inside walkable catchments, a total building height of 21m (6 storeys) is enabled for certain permitted and restricted discretionary activities giving effect to policy NPS-UD policy 3c. The Schedule 3A 11m (3 storey) height density standard is introduced for development of up to 3 dwellings as a permitted activity across the zone.
- In the Business – Metropolitan Centre zone (MCZ)<sup>3</sup>, Business – Town Centre zone (TCZ), Business – Local Centre zone (LCZ), Business – Neighbourhood Centre zone (NCZ) and Business – Mixed Use zone (MUZ) (the Business zones), existing varying height controls are retained but where located within walkable catchments, a 21m (6 storeys) height standard is introduced for buildings unless a greater height is specified on the Height Variation Control map (lower heights may also be specified where a qualifying matter applies). Existing provisions are considered sufficient in giving effect to NPS-UD policy 3d.
- In the Residential – Low Density Residential zone (LDRZ), it is proposed to retain the operative height standard of the former Residential – Single House zone (SHZ) on the basis of the identified qualifying matter and safeguarding their values.

<sup>3</sup> The MCZ in the AUP(OP) generally gives effect to policy 3b of the NPS – UD with permitted building height standards being greater than six storeys, changes proposed have had limited consideration by the QBE Workstream and changes where required are addressed in the respective parts of the s32 evaluation.

## 2.2 Key Issues and Standard Development

### Relevant Background to AUP(OP) Height Standards

Detailed evidence was prepared in support of the height standards as proposed in the Proposed Auckland Unitary Plan (PAUP) with a range of heights specified in building height standards in the residential and business zones. In the PAUP, maximum building height was specified by way of both storeys and metres for certain permitted and restricted discretionary activities. Initially the THAB zone specified a maximum 4 storeys and 13.5m and the MUZ specified a maximum 4 storeys and 16.5m. The approach was put forward in the early stages of the PAUP and is discussed in a business zone setting as having the intention of avoiding reduced upper level floor to floor height in developments resulting in poor amenity<sup>4</sup>.

Through mediation, Auckland Council agreed with submissions to delete the reference to a maximum height in storeys and, in evidence, supported the removal of a minimum ground floor to floor height, as had been proposed. Through mediation, the total height controls of various zones were also generally increased to enable a greater number of storeys, while within the business zones total building height in metres was modified to be expressed and split in terms of the maximum occupiable building height and height for roof form<sup>5</sup>. By way of example,

- THAB zone: Total height was increased from 13.5m to 16m in order to accommodate five storeys and the Height Variation Controls were amended to permit 19.5m and 22.5m on identified sites to accommodate six and seven storeys respectively<sup>6</sup>.
- MUZ: Total height was increased from 16.5m to 18m, comprising 16m occupiable height and 2m for roof form, accommodating up to five storeys<sup>7</sup>.
- The introduction of the roof form allowance into the business zones was to *'allow flexibility in roof form design, rather than incentivise all buildings to a uniform height with flat roofs'*<sup>8</sup>.

This revised height approach and total heights in these zones, were subsequently recommended to be adopted by the IHP, later confirmed by Council. In commenting on the revised total heights, Graeme McIndoe, Council's expert urban designer for the IHP hearings on the residential zones, stated that they would *'help to avoid apartment developments with low floor to floor heights that would compromise internal amenity, and a squat appearance that may compromise the image and appeal of the neighbourhood'*<sup>9</sup>.

Mr McIndoe stated that four factors are relevant to calculating permitted height limits<sup>10</sup>:

- Accommodating floor to floor heights that provide for an acceptable level of residential amenity;
- Providing for roof pitch;
- Providing for ground floors to be built above outside ground level; and
- Accommodating some slope across the site.

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<sup>4</sup> para 10.15. Statement of Evidence of Trevor Mackie on behalf of Auckland Council – 27 July 2015

<sup>5</sup> para 10.15. Statement of Evidence of Trevor Mackie on behalf of Auckland Council – 27 July 2015

<sup>6</sup> para 6.4.7. Statement of Evidence of Graham McIndoe on behalf of Auckland Council – 9 September 2015

<sup>7</sup> para 7.17. Statement of Evidence of Trevor Mackie on behalf of Auckland Council – 27 July 2015

<sup>8</sup> para 10.15. Statement of Evidence of Trevor Mackie on behalf of Auckland Council – 27 July 2015

<sup>9</sup> para 6.4.7 and 6.4.8. Statement of Evidence of Graham McIndoe on behalf of Auckland Council – 9 September 2015

<sup>10</sup> para 6.4.3. Statement of Evidence of Graham McIndoe on behalf of Auckland Council – 9 September 2015

Mr McIndoe based his floor to floor calculations on 3.1m as a desirable minimum height to accommodate a floor to ceiling height of 2.7m, which he considered to be an appropriate benchmark for on-site residential amenity to cover a general range of apartment depths and forms<sup>11</sup>.

### **Current Performance**

The Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council<sup>12</sup> (s35 monitoring report) has been published. This includes analysis of a sample of 130 resource consents in the MHS, MHU and THAB zones (equating to approximately 2300 dwellings) and 33 resource consents in the Business – MUZ (equating to approximately 1,655 dwellings). These consents were issued between April 2018 – December 2020.

It found for the two combined residential zones that 3 per cent of developments in the sample period were one storey, 65 per cent were two storeys and 30 per cent were three storeys. Only 2 per cent of developments in these zones were between 4-6 storeys. This contrasts with the MUZ where 60 per cent of developments achieved 4-6 storeys (up to 18m).

Looking at the THAB zone in isolation, 25 per cent of developments were two storeys (8m), 60 per cent were three storeys (11m) and 10 per cent were between 4-6 storeys (up to 18m). In the MHU zone in isolation 60 per cent of developments were 2 storeys (8m), with 35 per cent, 3 storeys (11m). This demonstrates that development is in the main not maximising the existing height controls in place. There is likely to be a number of reasons for this. The s35 monitoring report identifies that the majority of developments in the residential zones being 2-3 storeys reflects the dominance of delivery of terrace housing and 'walk up' apartment building typologies rather than taller apartment buildings with lift access. In addition, the height trends observed through this analysis suggest that the relationship between site width and operative HIRB standards has a strong effect on the building height achieved.

### **Building height standard to enable 6 storeys in walkable catchments and give effect to NPS-UD, Policy 3c.**

In giving effect to policy 3c, the plan change introduces defined walkable catchments into the THAB and business zones. Within the THAB zone the AUP(OP) height standard is 16m. Height Variation Controls (HVC) also exist in the AUP(OP). These are applied in specific areas to enable height to be lesser or greater than the identified predominant zone height standard. HVC areas are mainly located in business zones but also apply to some THAB zoned areas as shown on the planning maps.

A 21m height standard is proposed within walkable catchments in order to enable buildings of at least six storeys, giving effect to NPS-UD policy 3c. This height standard of 21m enabling 6 storeys has been proposed following review of design and market considerations and consented case studies. Key information sources and references which are summarised in developing the proposed height control include:

- Building Height Memorandum:

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<sup>11</sup> para 6.3.1 – 6.3.3. Statement of Evidence of Graham McIndoe on behalf of Auckland Council – 9 September 2015

<sup>12</sup> Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

- Floor to floor heights and overall building heights to enable at least 6 storeys dated 27/05/22.
- 6 Storey Apartment Buildings – Auckland Case Studies, produced by Boffa Miskell.
- Apartments - Residential Development Testing report produced by Jasmax.

#### Building Height Memorandum, produced by Jasmax

In developing the height standard an understanding of the building height necessary to accommodate a six storey building with good quality amenity and living environments is required. The designers within the QBE workstream have provided a memorandum outlining the key design and market considerations and requirements which inform floor to floor dimension and therefore the overall building heights. Key points of this advice are summarised as follows:

- Building Regulations (G7 Natural Light): This regulation includes detail linking the size and aspect (number) provided by windows to the depth of rooms. Regulation encourages the maximisation of window head heights to provide a deeper internal dwelling depth allowance.
- Building Regulations (G6 Impact and Airborne Sound): In responding to this regulation a build up of 350mm or more would be expected for timber batten and cradle systems. For concrete construction methodologies a floor slab is typically 200mm, with beams up to 300mm often required under the floor slab (total primary structural build up of up to 500mm typical).
- Building Regulations (G4 Ventilation and G5 Internal Moisture): Ducts and intakes required in response to this regulation are likely to be between 250mm and 300mm within the ceiling space.
- Other potential service allowances: At ground floor within ceiling voids allowance is often made for additional services from mains switch boards, fibre and data boards. Where commercial uses are provided at ground level this may require additional space for acoustic or fire rating. A void of 1m would not be unexpected between the ground level ceiling and first floor level.
- Roof Form: Building typologies of at least six storeys will typically have a low slope roof of 2- 3 degrees. A parapet around the building facade and internal gutters is also likely. Whilst dependent on the size of the building an assumed 1.5-2m build up is considered reasonable to accommodate a roof slope.
- Topography: Most sites are not flat and experience some form of topography. It is prudent to assume at least a 1.5m fall on a standard 800m<sup>2</sup> site.

In evaluation of the above the QBE on the memorandum notes:

- Anything less than a 3m floor-to-floor induces additional cost for innovative construction methods and bespoke solutions in the design process and construction.
- In residential modelling work generally assume a 4m ground floor-to-floor height, additional levels at 3.2 floor-to-floor height as well as a 1.5m roof build up in order to ensure good design outcomes.
- A 3.1m floor-to-floor height is adequate if sufficient ground floor and basement allowance are made.
- Recommends a 22.5m height control for a 6 storey building, incorporating a 1.5m basement allowance.

#### Case Studies

In addition to the above analysis a study of selected examples of consented 6+ storey apartment buildings within Auckland has been undertaken. The examples provide the following information for each development:

- Consented height
- Number of storeys
- Ground floor-to-floor height
- Above ground floor to floor height
- Rooftop allowance
- Interfloor Structures

Of the examples assessed, the following was found:

- The ground floor-to-floor heights ranged from 3m to 5.1m (commercial use) and were on average 3.5m.
- The typical above ground floor-to-floor heights ranged from 3m to 3.575m and were on average 3.3m.
- The rooftop allowances ranged from 0.5m to 1.5m and were on average 0.9m.
- The interfloor structure which is part of the floor-to-floor height range from 0.5 to 0.7m and were on average 0.55m.
- The sloping ground level allowances ranged from 0m to 3m and were on average 1.1m.
- Some sites were essentially flat or have minimal slope, while sites with slopes across their depth of between 1.5m to 2.5m were not uncommon.

This evidence provides a useful additional reference point for considering what heights may be involved / required in a 6 storey building which achieves QBE outcomes.

Apartments - Residential Development Testing Report, produced by Jasmax

This technical report presents testing of different height standard options to enable a building of 6 storeys within walkable catchments. Chapter 3.1 and 3.2 outlines testing of apartment buildings within the THAB zone. Chapter 3.3 outlines testing of mixed use apartment buildings in business MUZ.

Within THAB walkable catchments the testing looked at the following four different height standards including 19m, 19m occupiable + 2m for roof form, 21m and 22.5m. The following section has been provided as an outcome from the testing of a 19m total height standard.

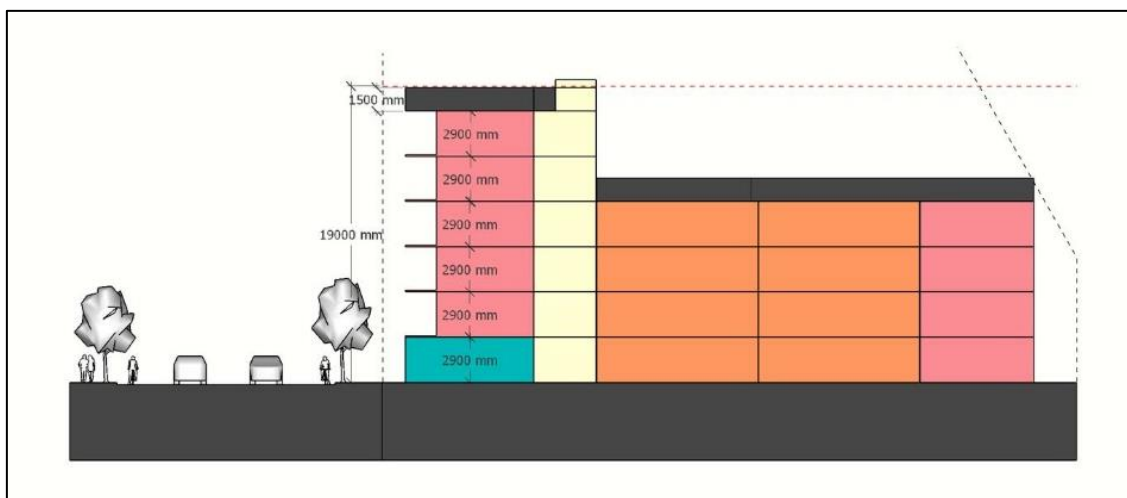




Figure 1: Diagrammatic section depicting possible floor to floor configurations for a building measuring 19m in height

As can be seen from Figure, a 19m total building height is capable of accommodating a 6-storey residential building. However, it is considered to be not sufficiently flexible to provide for all of the following, floor to floor heights of at least 3.1m, suitable ground floor heights, room for ground floor foundation structures and for development on sloping sites.

A 19m+2m roof allowance control was found to allow for a 3.1m floor to floor height, however if proposed, the occupiable limit would constrain the achievement of other positive outcomes including suitable ground floor level heights.

Figure 1 shows that for a 21m height there is flexibility to provide for 3.1m floor to floor heights on upper levels, a higher ground floor level, allowance for roof form, with some flexibility/allowance to respond to sloping sites within this overall height standard.

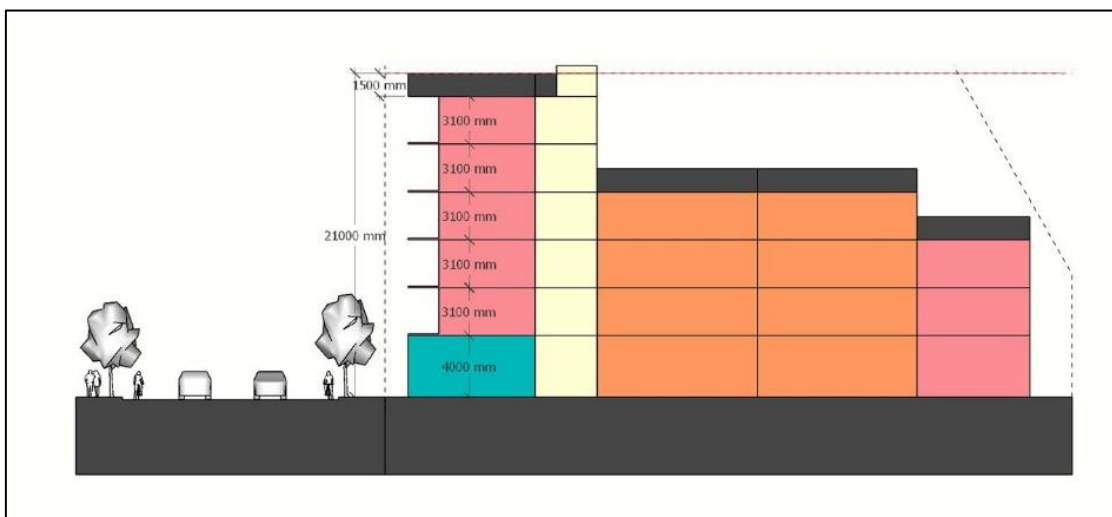


Figure 1 Diagrammatic section depicting possible floor to floor configurations for a building measuring 21m in height

A 22.5m height control is identified in the report as providing the best flexibility, greater amenity and cost efficiency along with providing an allowance for site topography.

Within the MUZ the report tested heights of 19m occupiable + 2m for roof form, 21m and 22m. For the first option a residential floor to floor height of 3.1m and a ground floor of 4m was not achievable in a 19m occupiable height limit.

Figure 2 illustrates that for a 21m building there is flexibility for 3.1m upper level floor to floor heights, a higher ground floor level, and height for roof form, whilst also providing flexibility / allowance to respond to sloping sites within this overall height.

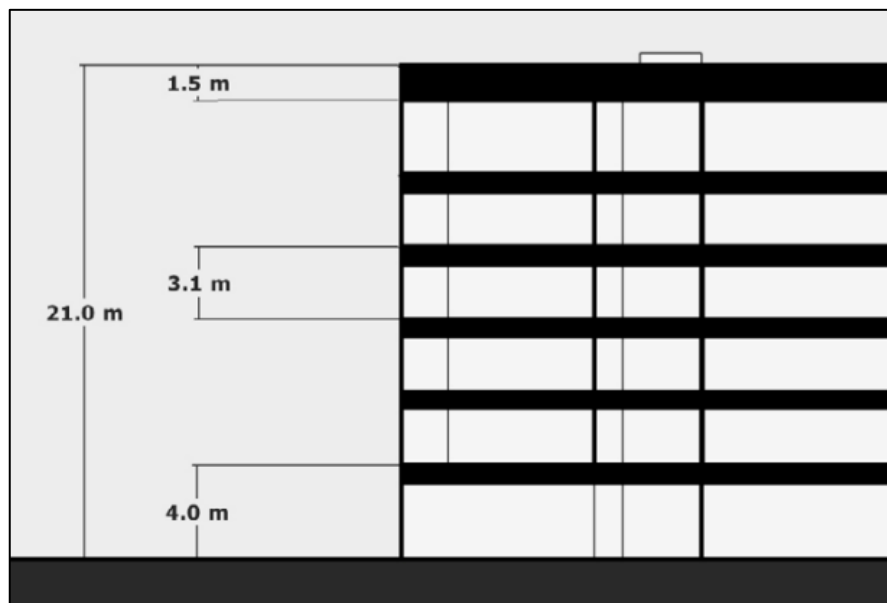


Figure 2: Diagrammatic section depicting possible floor to floor configurations for a building measuring 21m in height

A 22m height control is identified in the report as providing for greater flexibility, adaptability, and cost effective structural solutions.

### Conclusion

In evaluation of the above and to give effect to NPS-UD policy 3c it is proposed to increase and introduce a 21m height control into the THAB zone for sites within walkable catchments. This is considered to enable the delivery of high quality 6 storey building, whilst ensuring good outcomes in terms of the quality of the floorspace and amenity provided to occupants.

Business zones (TCZ, LCZ, NCZ and MUZ) will also be located in walkable catchments where policy 3c requires buildings of at least 6 storeys to be enabled. It is notable that operative and retained provisions within parts of these business zones include height thresholds in excess of 21m where buildings of a greater scale are provided for, as they are identified to achieve efficient use of land; support public transport and community infrastructure; contribute to centre vitality and vibrancy; and can be accommodated without significant effects on adjacent residential zones. The same 21m height standard has been introduced to these zones with development either able to utilise this standard (where located in a walkable catchment) or the operative and retained higher height control (if it exists) that provides for building heights greater than 21m.

The proposed building height standard of 21m in walkable catchments within the business zones, is considered adequate in enabling a 6 storey building consistent within the information considered through the IHP process.

Alongside the introduction of the 21m height control within walkable catchments as giving effect to policy 3c it is proposed to include a maximum number of storeys in the description of height standard where amended. As detailed earlier, the IHP process included discussion regarding the listing of storeys alongside the height specified in metres. Given the direction through NPS-UD policy 3c which specifies height numerically in storeys, the inclusion of this information in the

height standards is considered suitable. This additional description provides certainty and clarity to plan users, is consistent with the policy 3 drafting, provides the community with a readily interpretable understanding of planned urban built character and avoids the potential for reduced amenity outcomes from compressed floor to ceiling levels.

### **Roof form and Occupiable Height**

The current height standard within the identified business zones includes a split of the total building height into a maximum occupiable height limit from ground to the upper ceiling of the accommodation and above this a separate allowance for the roof form. The height standard in the MHU includes a total building height, and then has a further allowance for the pitch of the roof above this as found within the height density standard of Schedule 3A.

The upper portions of taller buildings, often found in the business centres where additional height is anticipated, will frequently be visually prominent, particularly from distant or elevated viewpoints and in light of larger areas of concentrated built-form site coverage (i.e., there is no building coverage standard in the business zones). The tops of buildings therefore need to be well designed while at the same time integrated into the design of the building as a whole. Provisions need to avoid a proliferation of flat roofs as an unintended consequence and response to the meeting any building height limit.

A split between the occupiable height for a building and roof build up depth allowance is therefore retained where it currently is operative in the identified business zones. This will allow and enable a variation in design treatment of roofs including adequate height for a low pitch (3-6 degrees) or flat roof with a parapet.

### **Enabling Additional Height Proposed**

For the purposes of this plan change and for the reasons set out above, a total height of 21m is proposed to enable a 6 storey building and has therefore been introduced as a height control for walkable catchments giving effect to NPS-UD policy 3c.

It is notable that operative and retained provisions within the business zones include height thresholds in excess of 21m where buildings of greater scale would be appropriate giving effect to NPS-UD policy 3d. Height Variation Controls also exist across the zones, including the THAB which specify locations where additional height would be appropriate.

Importantly, within the THAB zone, buildings over the 21m within walkable catchments are proposed to be a restricted discretionary activity. Taller buildings will be more prominent and may give rise to effects such as visual impact/dominance, landscape effects, shading and potential effects on amenity, however it is recognised that these may be appropriate in certain locations and that the plan context should allow for this.

## 3.0 Height in Relation to Boundary (HIRB)

### 3.1 Proposed Amendments and Statutory Context

The following table provides a summary of the operative and proposed amendments to the AUP(OP) HIRB standard within the zones identified.

KEY	
THAB	Residential – Terraced Housing and Apartment Buildings zone
MHU	Residential – Mixed Housing Urban zone
MHS	Residential – Mixed Housing Suburban zone
SHZ	Residential – Single House zone
LDRZ	Residential – Low Density Residential zone
MUZ	Business – Mixed Use zone
GBZ	Business – General Business Zone
OSZ	Open Space Zone
SPZ	Special Purpose Zones

Zone	Summary of Key Operative AUP(OP) HIRB Standard (vertical height on boundary + angle of recessive plane)	Summary of Key Proposed HIRB Standard (vertical height on boundary + angle of recessive plane)	IPI Status
Residential – Low Density Residential  Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	2.5m + 45 degrees	4m + 60 degrees	Schedule 3A Density Standard
Residential – Mixed Housing Urban Zone	3m + 45 degrees  and  (Alternative HIRB)  within 20m of the site frontage 3.6m (height) + 1m (inset from the boundary) + 73.3 degrees, up to 6.9m, where 2m (inset from the boundary) + 45 degrees.	4m + 60 degrees	Schedule 3A Density Standard
Residential – Terrace Housing and Apartment Buildings Zone	3m + 45 degrees  And  (Alternative HIRB)	<u>For up to 3 dwellings as MDRS permitted activity:</u>  4m + 60 degrees	Schedule 3A Density Standard

Zone	Summary of Key Operative AUP(OP) HIRB Standard (vertical height on boundary + angle of recessive plane)	Summary of Key Proposed HIRB Standard (vertical height on boundary + angle of recessive plane)	IPI Status
	<p>within 20m of the site frontage 8m + 60 degrees</p> <p>Beyond 20m of the site frontage up to 8m (height) + 2m (inset from boundary + 60 degrees.</p>	<p><u>For 4 or more dwellings and other specified consented developments:</u></p> <p>Outside walkable catchments</p> <p>8m + 60 degrees</p> <p>Within walkable catchments</p> <p>within 21.5m of the site frontage 19m + 60 degrees:</p> <p>beyond 21.5m of the site frontage 8m + 60 degrees</p>	<p>More enabling than Schedule 3A Density Standard and Giving effect to NPS-UD Policy 3c</p>
Business – Neighbourhood Centre zones	<p>Applicable to zone boundary sites dependent on the adjoining zone:</p> <p>SHZ / MHS – 2.5m + 45 degrees</p> <p>MHU – 3m + 45 degrees</p> <p>THAB – 8m + 60 degrees</p> <p>SPZ MĀORI / SCHOOL – 6m + 45 degrees</p> <p>OSZ – 4.5m + 45 degrees</p> <p>OSZ (south side) – 8.5m + 45 degrees</p>	<p>OUTSIDE WALKABLE CATCHMENT:</p> <p>SHZ / MHS – 2.5m + 45 degrees</p> <p>MHU – 3m + 45 degrees</p> <p>THAB – 8m + 60 degrees</p> <p>OSZ – 8.5M + 45 degrees</p> <p>OSZ (SOUTH SIDE) – 16.5M + 45 degrees</p> <p>IN A WALKABLE CATCHMENT:</p> <p>LDRZ, MHUZ, THAB, OSZ – 19M + 60 degrees</p>	<p>Transitional and consequential amendments to incorporating MDRS/giving effect to NPS-UD policy 3c and 3d.</p>
Business – Local Centre zones	<p>Applicable to zone boundary sites dependent on the adjoining zone:</p> <p>SHZ / MHS – 2.5m + 45 degrees</p> <p>MHU – 3m + 45 degrees</p> <p>THAB – 8m + 60 degrees</p> <p>SPZ MĀORI / SCHOOL – 6m + 45 degrees</p> <p>OSZ – 4.5m + 45 degrees</p> <p>OSZ (south side) – 8.5m + 45 degrees</p>	<p>OUTSIDE WALKABLE CATCHMENT:</p> <p>SHZ / MHS – 2.5m + 45 degrees</p> <p>MHU – 3m + 45 degrees</p> <p>THAB – 8m + 60 degrees</p> <p>OSZ – 8.5M + 45 degrees</p> <p>OSZ (SOUTH SIDE) – 16.5M + 45 degrees</p> <p>IN A WALKABLE CATCHMENT:</p> <p>LDRZ, MHUZ, THAB, OSZ – 19M + 60 degrees</p>	<p>Transitional and consequential amendments to incorporating MDRS/giving effect to NPS-UD policy 3c and 3d.</p>
Business – Mixed Use zone	<p>Applicable to zone boundary sites dependent on the adjoining zone:</p> <p>SHZ / MHS – 2.5m + 45 degrees</p> <p>MHU – 3m + 45 degrees</p> <p>THAB – 8m + 60 degrees</p> <p>SPZ MĀORI / SCHOOL – 6m + 45 degrees</p> <p>OSZ – 4.5m + 45 degrees</p> <p>OSZ (south side) – 8.5m + 45 degrees</p>	<p>Applicable to zone boundary sites dependent on the adjoining zone:</p> <p>OUTSIDE WALKABLE CATCHMENT:</p> <p>SHZ / MHS – 2.5m + 45 degrees</p> <p>MHU – 3m + 45 degrees</p> <p>THAB – 8m + 60 degrees</p> <p>OSZ – 8.5M + 45 degrees</p> <p>OSZ (SOUTH SIDE) – 16.5M + 45 degrees</p> <p>IN A WALKABLE CATCHMENT:</p> <p>LDRZ, MHUZ, THAB, OSZ – 19M + 60 degrees</p>	<p>Transitional and consequential amendments to incorporating MDRS/giving effect to NPS-UD policy 3c and 3d.</p>

Zone	Summary of Key Operative AUP(OP) HIRB Standard (vertical height on boundary + angle of recessive plane)	Summary of Key Proposed HIRB Standard (vertical height on boundary + angle of recessive plane)	IPI Status
Business – Town Centre zone	Applicable to zone boundary sites dependent on the adjoining zone: SHZ / MHS – 2.5m + 45 degrees MHU – 3m + 45 degrees THAB – 8m + 60 degrees SPZ MĀORI / SCHOOL – 6m + 45 degrees MUZ / GBZ – 8m + 60 degrees OSZ – 8.5m + 45 degrees OSZ (south side) – 16.5m + 45 degrees	OUTSIDE WALKABLE CATCHMENT: SHZ / MHS – 2.5m + 45 degrees MHU – 3m + 45 degrees THAB – 8m + 60 degrees OSZ – 8.5M + 45 degrees OSZ (SOUTH SIDE) – 16.5M + 45 degrees  IN A WALKABLE CATCHMENT: LDRZ, MHUZ, THAB, OSZ – 19M + 60 degrees	Transitional and consequential amendments to incorporating MDRS/giving effect to NPS-UD policy 3c and 3d.

HIRB is identified as a density standard in Schedule 3A of the RMA and is currently an operative standard for the above zones within the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The AUP(OP) includes standards for HIRB and Alternative HIRB (AHIRB) for both the THAB (standard H6.6.6 and H6.6.7 respectively) and MHU (standards H5.6.5 and H5.6.6 respectively) zones.

The specified business zones include HIRB standards that are applicable to sites and development where they are adjoining the boundary with other zones. The requirements of these standards vary dependent on the zone adjoining and are provided to ensure effective transition in scale between zones and that the amenity values anticipated in the adjoining zone are achieved, rather than undermined at this transition point.

While the purpose statements vary between zones, there is a common function of these standards to manage effects relating to sunlight access, shadowing and amenity, and particularly visual dominance. In the zones where provided, the HIRB standards provide an increased building envelope relative to the permitted standard. The standards are a means of achieving a quality built environment, particularly B2.3.1 Objectives (1)(a), (1)(c) and (3), and B2.3.2 Policies (1)(a), (d) and (e).

The HIRB standards have the effect of limiting the height of those parts of a building which are adjacent to a site boundary. This has a restrictive effect in terms of the overall density and height achievable on a site. For the relevant residential zone's standards H3.6.7, H5.6.5, H5.6.6 and H6.6.6 are more restrictive than provided for in Schedule 3A. Standard H6.6.7 is more lenient. In the business zones the nature of the HIRB standards varying dependent on the adjacent zone making a comparison more difficult with standards more and less restrictive in parts.

## 3.2 Key Issues and Standard Development

### Relevant Background to the AUP(OP) HIRB Standards

HIRB standards have been used as one of the key tools to manage the effects of new development by controlling the permitted building envelope. Nicholas Roberts, Council's

planning witness for the IHP process noted that the following controls were agreed by the planners working group as 'core' controls for managing off-site built character and amenity effects of development<sup>13</sup>:

- a) Height;
- b) Building coverage;
- c) Landscaping;
- d) Height in relation to boundary and building setbacks;
- e) Alternative height in relation to boundary; and
- f) Side and rear yards in the large lot zone (in the absence of a height in relation to boundary control).

The IHP's recommendations affirmed HIRB standards as part of the core suite of quantitative controls to address matters which have the most potential to create adverse effects external to the site<sup>14</sup>. This supports their intent of not controlling for density, but rather its' (development) effects on the environment as expressed by the bulk and form of development itself.

The AUP(OP) uses this approach to achieve the planned urban character of the different zones while providing reasonable amenity for existing residents<sup>15</sup>.

### **Current Performance**

As detailed in the s35 monitoring report it has been identified that in the MHU and THAB, the zone objectives in regard to height and scale were not being fully met in the development sampled. Building height trends observed through this analysis suggest that the relationship between site width and HIRB standards has a strong effect on building height achieved.

Further analysis in response to this and the need to give effect to the intensification provisions as mandated through the RMA directives means potential planning barriers to the uptake of height and scale anticipated in the zones has been examined. Based on a review of consented apartment buildings for the period 2019 – 2020 (relying on resource consent information) identified 30 developments, of which 14 were in the THAB. Of the THAB developments, only 1 met the criteria of:

- a) four to five levels and
- b) on a narrow (approximately 16m, similar to a 'typical site'), non-corner site.

This preliminary research supports the s35 findings of the role of operative HIRB standard in the uptake of height and achieving the maximum and objectively planned heights in the respective zones.

### **Impact of Operative HIRBs and need for Amendment**

The HIRB standard and its implementation has a key role in achieving the planned heights sought in the AUP(OP) for the residential zones and in particular the THAB zone. As part of giving effect to NPS-UD policy 3c modelling has been undertaken of the impact of the existing

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<sup>13</sup> para 20.3. Statement of evidence of Nicholas Roberts on behalf of Auckland Council planning – Residential Zones 9 September 2015

<sup>14</sup> p12. IHP report to AC – Topic 059 Residential zones

<sup>15</sup> para 20.3. Statement of evidence of Nicholas Roberts on behalf of Auckland Council planning – Residential Zones 9 September 2015

operative HIRB and AHIRB standard in the THAB on an assumed 6 storey building meeting the 21m height control. Site width is a key determinant in the effect of HIRB on the building envelope achieved and therefore the following three scenarios have been tested.

- Typical site: 18m width x 44.5m depth = 801 m<sup>2</sup>
- Large site 40m x 40m = 1,600 m<sup>2</sup>
- Smaller site 10m x 30m = 300 m<sup>2</sup>

The following images (Figure 3 and Figure 4) apply and overlay the operative AHIRB standard of the THAB zone to a modelled building of 6 storeys in these various scenarios

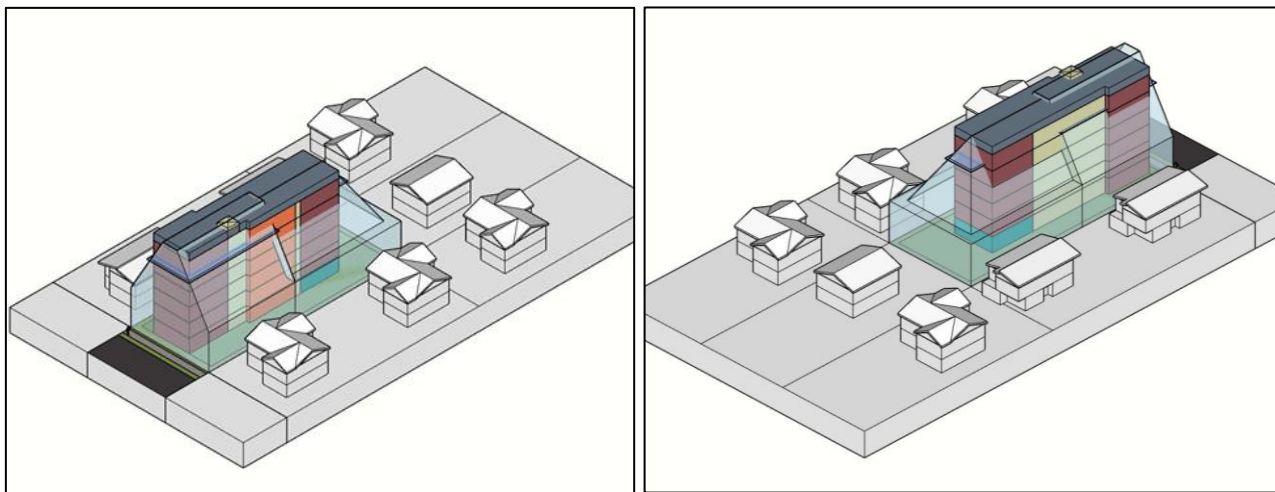


Figure 3: Front (left) and rear (right) view of operative AHIRB standard overlay on a 6 storey building on a typical site. These images show conflict between the recessive planes and potential 6 storey developments with an efficient floorplate.

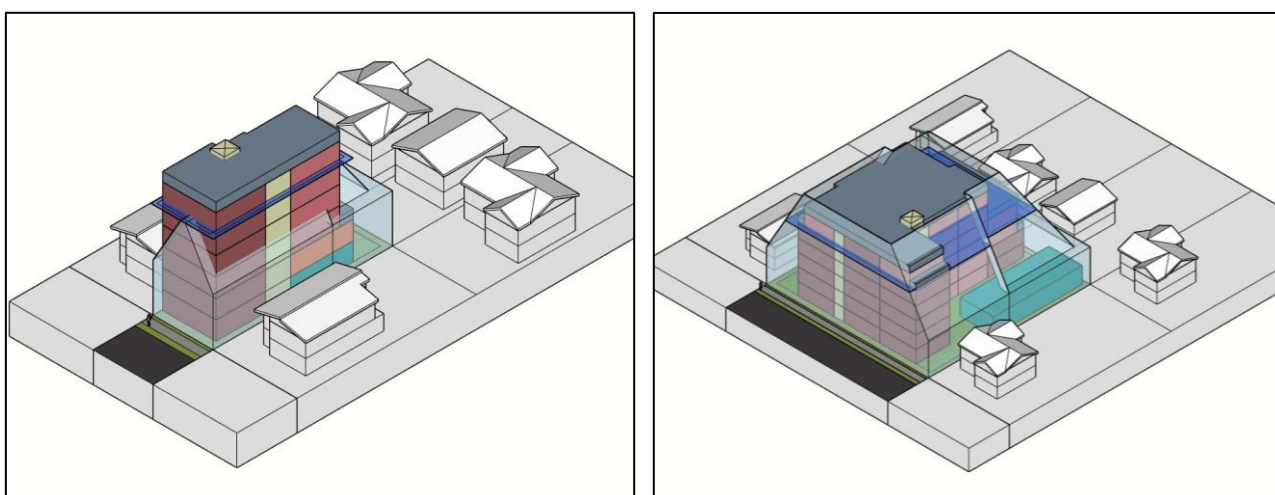


Figure 4: Front view of operative AHIRB overlay on a 6 storey building on a small (left) and large (right) site. Small site shows the conflict that exists between the operative AHIRB and potential 6 storey development. Conflict significantly reduced on larger sites.

The above demonstrates the conflict that exists between the standard and enabling an efficient 6 storey development on the majority of Auckland sites. It is therefore considered that amendment is required to ensure that policy 3c of NPS-UD can be implemented on sites.

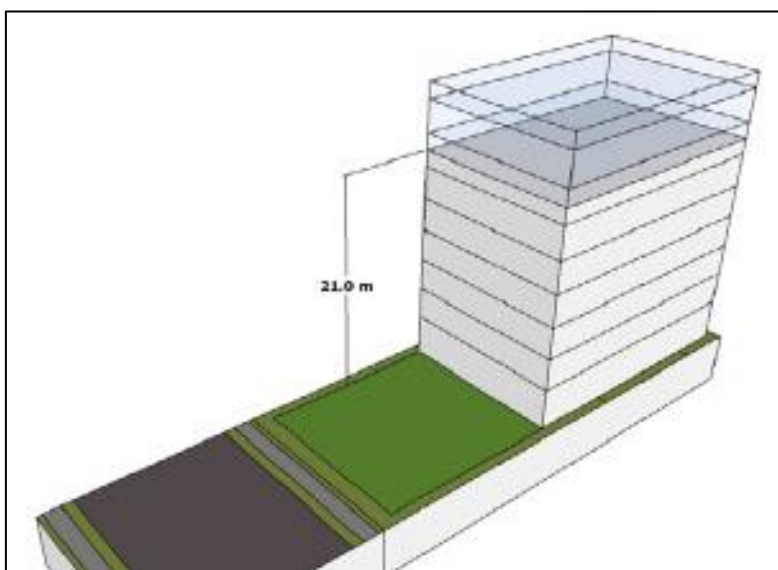
### Development of an amended HIRB and Managing Effects



In considering an amendment to the HIRB, alternative options have been tested with chapter 2.8 of the Apartments – Residential Development Testing report, produced by Jasmax providing modelling and critique of various options tested. This is to ensure that the enabling provisions are balanced with managing effects including building dominance, shading and privacy within and on adjoining sites. This also relates to how the arrangement of bulk and massing informed by the standards visually effects its surroundings and street scene. It needs to be recognised that there will be adverse effects, potentially significant, arising from enabling 6 storey buildings that are required to be provided for in walkable catchments. Importantly the standards developed need to manage new buildings that utilise this additional height and provide a level of protection to neighbouring sites that ensure a reasonable level of sunlight and daylight, privacy and relief from built form.

In the MHU, LDR and for permitted MDRS development in the THAB, the HIRB standard is amended and increased providing a recession plane of 60 degrees at a 4m vertical height above the boundary, to align with the density standard of Schedule 3A. This allows, in comparison with the current operative standard for an increase in the scale of built form.

The adoption of the Schedule 3A HIRB standard for other development in the THAB, which is more restrictive than the current AHIRB standard tested above is considered insufficient in terms of giving effect to the enabling provisions of policy 3. The removal of HIRB and their recession planes has been tested but discounted due to the potential for significant dominance and shading effects that would likely result as shown in this following image and would be inconsistent with the operative RPS.



*Figure 5: Modelling of 6 storey development massing complying with building coverage standard but with no HIRB standard applied*

The existing AHIRB standard in the THAB zone sets out two recession planes depending on the depth of the building(s) from the site frontage, recognising the sound urban design outcomes of concentrating height at the front of the site outlook onto the street and the need on deeper sites to step and reduce massing to safeguard amenity to the rear of sites where private outdoor living space is likely to be more concentrated. This principle has been taken forward and tested in the amended HIRB standard developed and proposed.

Other options were considered to manage the length of buildings in tandem with height and HIRB standards. This was not considered necessary to pursue as the outcome could be

achieved and the potential effects managed through matters of discretion and assessment criteria.

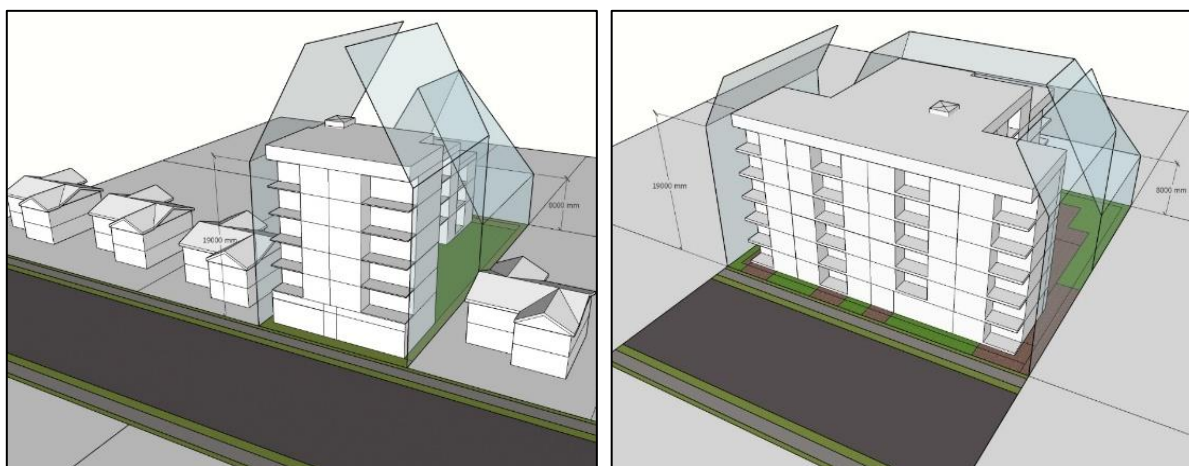
### Proposed Standard

Within THAB zone walkable catchments the standard is amended to a recession plane of 60 degrees at 19m vertical above the boundary for the first 21.5m of the site from the frontage. This typically accounts for a 1.5m front yard plus 20m potential building depth. This standard better enables the delivery of development of at least six storeys within a walkable catchment, and encourages building bulk and outlook to the front of the site / street frontage, which assists in achieving a high-density urban built character.

Within the walkable catchment of the THAB, for areas of sites beyond 21.5m from the frontage the HIRB is reduced to 60 degrees at 8m, which is more enabling than the operative HIRB and AHIRB. This, where applicable, will constrain building bulk at upper levels adjacent to boundaries beyond 21.5m from the frontage and on rear sites. This reduced building envelope provided for at the rear compared to the front of the site will assist in managing possible dominance and shading effects on neighbours and areas of private open space located on these sites.

Enabling a greater intensity and scale of built form towards the street frontage encourages an urban streetscape in keeping with the more intensive character sought in these walkable catchment areas. Taller buildings that front the street also assist in framing (enclosing) the street, which is also an appropriate response from an urban design and planned built form standpoint.

The following models ( Figure 6) have been produced as part of the testing of HIRB standards undertaken in developing this plan change. These show the application and compliance of a modelled 6 storey development with the proposed THAB walkable catchment HIRB standard on a typical



site and larger double frontage site.

Figure 6: Visual representation of proposed 6 storey developments complying with the proposed THAB Height in Relation to Boundary standard on a single (left) and double frontage (right) site.

Within the THAB, outside of walkable catchment the HIRB is amended to 60 degrees at 8m across the entire depth of the site as an amendment to the operative position where this plane applies to only the first 20m of the site from the site frontage.



*Figure 7: Visual representation of a potential 5 storey development complying with the proposed THAB HIRB standard on a typical site.*

A key finding of the monitoring of the Auckland Unitary Plan was that the height of development within the MHU and THAB zone were not being maximised in relation to the allowances of the relevant height standard. The amendments proposed are a positive response to these findings. In addition, the changes will also enable gradual, consistent changes and transition in scale and built form through the THAB zones and within/outside walkable catchment areas.

In the THAB zone, the HIRB standard is increased (more lenient) in all locations in comparison to the operative standard. Different HIRB standards are to be applied depending on whether a development is located inside a walkable catchment or outside, reflecting the different planned character anticipated for those locations within Auckland.

Additionally, the AHIRB standard is proposed to be deleted from the MHU and THAB zone. The alternative provision is considered unnecessary given the overall intent of the proposed plan change is to provide for greater height and density and the alignment with the Schedule 3A density standard.

Within the business zones the HIRB for sites and developments adjoining zones has been consequentially amended to support and respond to the amendments made to the HIRB within these zones. These changes ensure the effective transition in scale between residential and business zones in design and amenity terms. In giving effect to the intensification provisions the HIRB standard has also been amended in respect to the requirements for sites adjoining SPZ. The standard has also been amended to include different requirements dependent on the position within or outside a walkable catchment reflecting the differing scales of development sought and enabled within and outside these locations.

Generally, the AUP(OP) objectives and policies relevant to this provision remain appropriate. The amendments that are proposed seek to improve clarity for plan users and consistency with wider plan terminology. Additional assessment criteria are proposed to also improve clarity and certainty of outcome for plan users, and achieving quality built environment outcomes.

This element of the package of changes to the HIRB are necessary in order to give effect to intensification instruments NPS-UD policies 3c and 3d. The thresholds proposed are appropriate and necessary in order to continue achieving the quality built environment outcomes as required under the RPS.

## 4.0 Outlook Space

### 4.1 Proposed Amendments and Statutory Context

The following table provides a summary of the operative and proposed changes to the Outlook Space standard within the AUP(OP) within the zones identified.

Zone	Summary of key Operative AUP(OP) Standard (depth x width)	Summary of key Proposed Standard (depth x width)	IPI Status
Residential – Low Density Residential Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	N/A	4m x 4m principal living room 1m x 1m habitable room	Schedule 3A Density Standard
Residential – Mixed Housing Urban Zone	6m x 4m principal living room 3m x 3m bedroom 1m x 1m other habitable room	<p><u>For up to 3 dwellings as MDRS permitted activity:</u> 4m x 4m principal living room 1m x 1m habitable room</p> <p><u>For 4 or more dwelling:</u> 6m x 4m principal living room, Where principal living room outlook is on the ground floor and is defined by a boundary fence, outlook may be reduced to 5m. 1m x 1m habitable room 3m x 3m bedroom.</p> <p>Measured from the facade of largest window or balcony edge – whichever is closer to the boundary or opposing building.</p>	Schedule 3A Density Standard  Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	6m x 4m principal living room 3m x 3m bedrooms 1m x 1m habitable room	<p><u>For up to 3 dwellings as MDRS permitted activity:</u> 4m x 4m principal living room 1m x 1m habitable room</p> <p><u>For 4 or more dwellings:</u> Outside walkable catchments 6m x 4m principal living room except where building is greater than 3 storeys where principal living room outlook is 8m x 4m. Where principal living room</p>	Schedule 3A Density Standard  Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

Zone	Summary of key Operative AUP(OP) Standard (depth x width)	Summary of key Proposed Standard (depth x width)	IPI Status
		<p>outlook is on the ground floor and is defined by a boundary fence, outlook may be reduced to 5m.</p> <p>1m x 1m habitable room</p> <p>3m x 3m bedroom</p> <p>Within walkable catchments</p> <p>6m x 4m principal living room except where building is greater than 3 storeys where principal living room outlook is 8m x 4m.</p> <p>Where principal living room outlook is on the ground floor and is defined by a boundary fence, outlook may be reduced to 5m.</p> <p>1m x 1m habitable room</p> <p>3m x 3m bedroom</p> <p>Measured from the facade of largest window or balcony edge – whichever is closer to the boundary or opposing building.</p>	<p>Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.</p>

Outlook space is identified as a density standard as per Schedule 3A of the RMA and is an operative standard within the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The overall intent of the outlook space standards in the SHZ, MHU and THAB zones where amendments are proposed is to manage potential effects of development on the privacy and amenity (as a result of visual dominance) of residents within developments and on adjoining sites. Outlook standards contribute to achieving quality built environments, particularly B2.3.1 Objectives (1)(a) and (3), and B2.3.2 Policies (1)(a) and (b).

Increasing height and HIRB standards to give effect to the policy 3c and 3d of the NPS-UD, will enable an increase in the built form on a typical site. Accordingly, the proposed outlook standard is considered to be a consequential change that responds to this increase in bulk and massing.

The operative provisions in the MHU and THAB generally align with that provided for in Schedule 3A, with the exception of the minimum dimensions for a principal living room. The AUP(OP) standards require a 6m deep and 4m wide outlook space for principal living rooms (Standards H5.6.12 in MHU and H6.6.13 in THAB). Comparatively, Schedule 3A Standard specifies a minimum dimension of 4m by 4m.

It is proposed to introduce the Schedule 3A standard for the LDRZ and for permitted 'MDRS' activities in the MHU and THAB for up to 3 dwellings. In the MHU and THAB it is proposed to largely retain the operative outlook standard for developments of four or more dwellings and other applicable consented activities, with additional provisions and amendments to manage the amenity and quality of the outlook.

The standard is currently not listed in the AUP(OP) as 'a standard to be complied with' (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone, the outlook standard is listed as a matter of discretion for this activity. Within the MHU the standard is listed as a standard to be complied with in the activity table for the permitted activity of up to three dwellings per site. An effect of the plan change is to introduce the requirement to comply with that standard in the activity table for dwelling activities whether permitted or restricted discretionary in the THAB and MHU zones.

For relevant restricted discretionary activities in the THAB and MHU the standard has been amended so that outlook space dimensions where required are measured from the balcony edge (where provided) as opposed to the glazing line. This additional distance will assist in providing improved privacy for occupants of both the development site and any adjoining properties. It will also reduce the use of recessed balconies as a design tool to push back outlook space requirements from the main building line of a development resulting in buildings being located closer together than intended.

Generally, the operative objectives and policies, with minor amendments, are appropriate to the proposed changes for the outlook space standard. An additional assessment criterion is proposed to provide guidance and clarity for plan users on the QBE outcomes being sought, particularly in the case of infringements to the standard.

## 4.2 Key Issues and Standard Development

### **Relevant Background to the AUP(OP) HIRB Standards**

The outlook space standard was identified by Nicholas Roberts, Council's planning witness for the IHP process as one of number of controls whose purpose, along with the daylight standard is to ensure the placement, height and form of buildings within the site achieves quality living environment objectives.<sup>16</sup>

The outlook standard was initially proposed in the PAUP as one of three standards (along with building separation and daylight controls) to ensure that multi-unit developments provide a basic standard of privacy, daylight and visual amenity to enable social wellbeing and health. As confirmed in Nicholas Roberts evidence and taken forward in the IHP the proposed building separation control was deleted and daylight control amended to its current operative form. This results in the outlook standard having a key purpose in ensuring a standard of visual privacy between habitable rooms on the same or adjoining sites, and in combination with the daylight standard managing visual dominance effects within a site to ensure that habitable rooms have good outlook and a sense of spaciousness.

### **Current Performance**

The performance of the outlook standard was a key focus of the s35 monitoring report. In particular the monitoring report considered how residential development has supported/influenced people's health, safety and wellbeing. Relating to RPS objectives and policies B2.3.1(3), B2.3.2(2) and B2.3.2(4).

The s35 monitoring report reviewed compliance with the outlook requirements of the AUP(OP) for habitable rooms including the principal living room, which are the primary focus given longer time spent in these rooms and therefore larger effect on quality of lives.

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<sup>16</sup> para 20.60. Statement of evidence of Nicholas Roberts on behalf of Auckland Council planning – Residential Zones 9 September 2015

In respect to the principal living room the findings identified that 60 per cent in the MHU and 65 per cent in the THAB zones of development had all dwellings complying with this standard. In the developments which did not have full compliance, infringements varied between only one dwelling and a more significant proportion with a noted link between non-compliance with the standard on more narrow sites within the MHU and THAB zones<sup>17</sup>. Observations from site visits and consented plans showed a number of outcomes in relation to the outlook standard.

- Principal living areas extending across street where often truncated by fences, some of which were installed following completion, affecting the sense of spaciousness.
- Overlooking of adjoining sites with a loss of privacy to both sites was evident from principal living and habitable rooms on the upper floors of buildings.
- In response to the outlook standard, some upper level dwellings had the primary living area windows set deep into the dwelling space from the main façade through the incorporation of recessed balconies. This gives rise to conditions where the occupants of a new dwelling are able to overlook the adjacent site / dwelling more closely from the edge of the balcony, frustrating the purpose of the outlook standards effect as a method for ensuring adequate building separation.

The s35 monitoring report also looked at the typical locations of the principal living room area outlook spaces and found in the residential zones, 65 per cent of developments have the majority of their spaces over ground floor outdoor living spaces, 20 per cent the majority across balconies, 10 per cent with the majority across driveways or parking areas and 5 per cent with the majority across the street<sup>18</sup>.

Amongst the recommendations of the report was that the outlook standard becomes a core standard, where it is not already rather than its current status as a matter of discretion for development in the THAB and MHU zone. In addition, it was recommended to consider requiring that where a window is set back from the primary facade of a building, the measurement of depth to taken from the building façade or balcony edge to achieve privacy between dwellings (including adjacent sites) and retain a sense of spaciousness.

### **Outlook Space measured from the balcony edge**

Operative outlook space standard measurements are taken from the principal glazing of a habitable room. Where outdoor living space is provided in the form of a balcony in front of habitable rooms, the operative standard does not require this outlook space to be measured from the edge of the balcony as highlighted in the findings of the s35 monitoring report.

This has resulted in situations where balconies can therefore be located considerably closer to side boundaries, bringing people closer to adjoining properties in these residential zones. The closer proximity of people to adjoining properties, and their elevated position afforded from an upper-level balcony, often creates adverse privacy and overlooking effects between sites.

This impact on privacy between sites is exacerbated with multi-unit developments where there are more likely to be multiple balconies overlooking adjoining sites, and principal living areas at upper levels.

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<sup>17</sup> p58. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

<sup>18</sup> p62. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

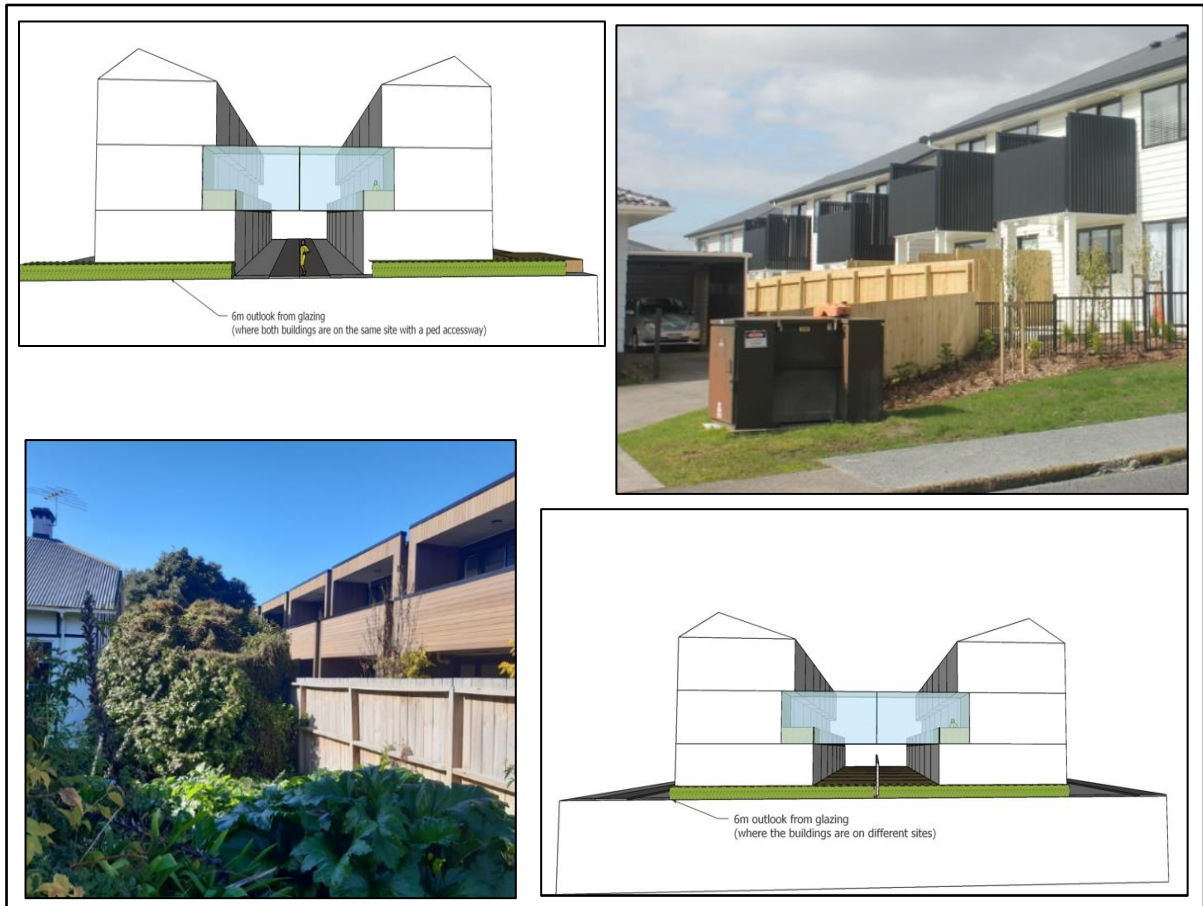


Figure 8: Examples of balcony design on the boundary and modelled images of outcomes possible under the current operative standard.

In other situations, observed balconies can under the current operative standards, often face directly across from habitable room and bedroom windows of other units within the same development. With outlook space measurements not applying from the edge of a balcony in the operative standard, this leads to a design approach and arrangement where balconies are recessed in the building elevation for the purposes of setting back required outlook spaces (most often the largest principal living room dimension) from the main elevation. This results in buildings being located closer together within a development than would be expected or sought, and balconies located within close proximity to habitable room and bedroom windows of other dwellings. This reduces privacy and a sense of spaciousness for residents, and increases dominance impacts within a site as shown in the following images. The resulting outcome of balconies is not in accordance with zone objectives and policies in terms on on-site amenity for residents and adjoining sites; and the standard's purpose statement in terms of visual privacy.



The Schedule 3A Density standard allows as shown in the following modelled images outlook to be measured across a balcony. The adoption of this standard for residential development of the intensity that can be brought forward as a restricted discretionary is not considered sufficient to manage these effects

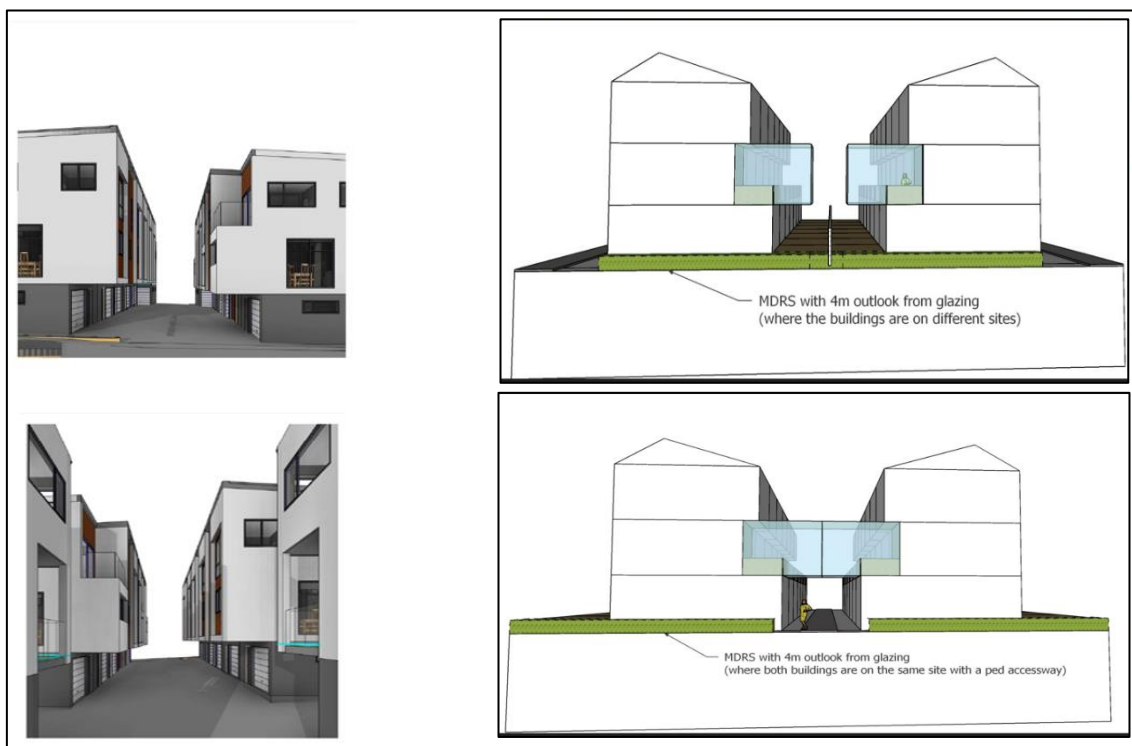


Figure 9: Examples of consented developments and Schedule 3A density outlook space standard, where buildings are closer together due to use of recessed balconies, with outlook being measured from the recessed glazing line and not being required to be measured from the edge of a balcony, reducing outlook, sense of space and privacy for residents, and increasing dominance impacts within a site.

### Principal Living Room Depth

It is proposed that the existing principal living space outlook control of 6m depth x 4m width for the THAB and MHU zones is retained for relevant residential consented activities. The exception to this is in the THAB zone where the principal living space is located at the ground floor of a dwelling, as occurs with many terraced houses. In this case the principal living outlook space can be reduced from 6m to 5m. This depth is considered important and necessary to ensure that amenity and privacy within and between units, in the same development or adjoining is safeguarded particularly given the more daytime and intensive use of these living spaces.

Above three storeys in the THAB the outlook space depth for principal living rooms is increased to 8m given the additional scale and bulk associated with buildings of this scale requiring a larger relative dimension.

Given that buildings of six storeys are enabled within walkable catchments of the THAB, and as a result of testing an 8m (from the balcony edge if provided) separation distance has been identified that will still provide for a reasonable standard of visual privacy between principal living areas at the higher levels of different buildings, on the same or adjacent sites. In conjunction with the operative daylight standard this outlook space will also assist in managing the potential visual dominance effects of taller buildings within a site by ensuring that habitable rooms have an effective outlook and sense of space.

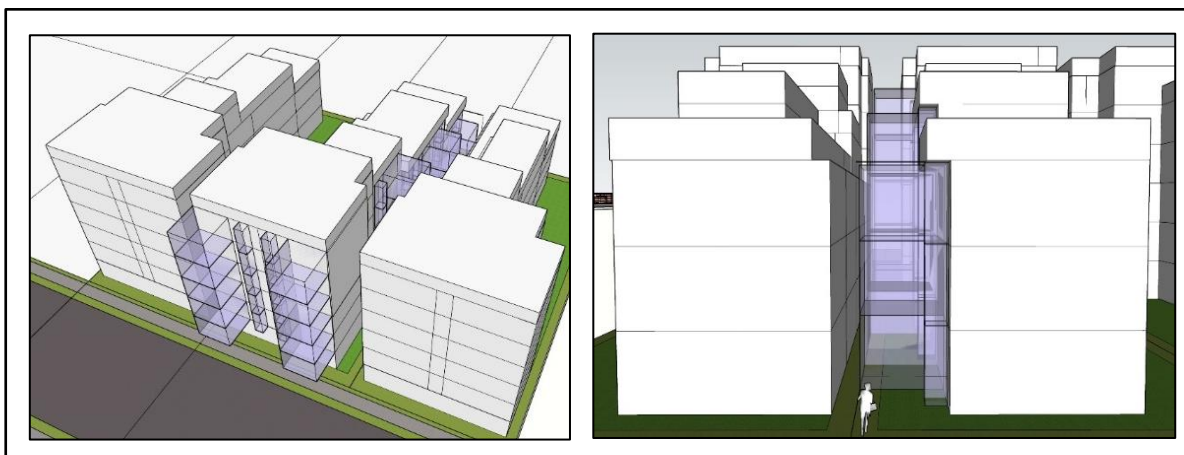


Figure 10: Modelling of 4m principal living room depth outlook standard. Modelling showing notional 6 storey development on a typical site along with similar outcomes on adjacent sites.

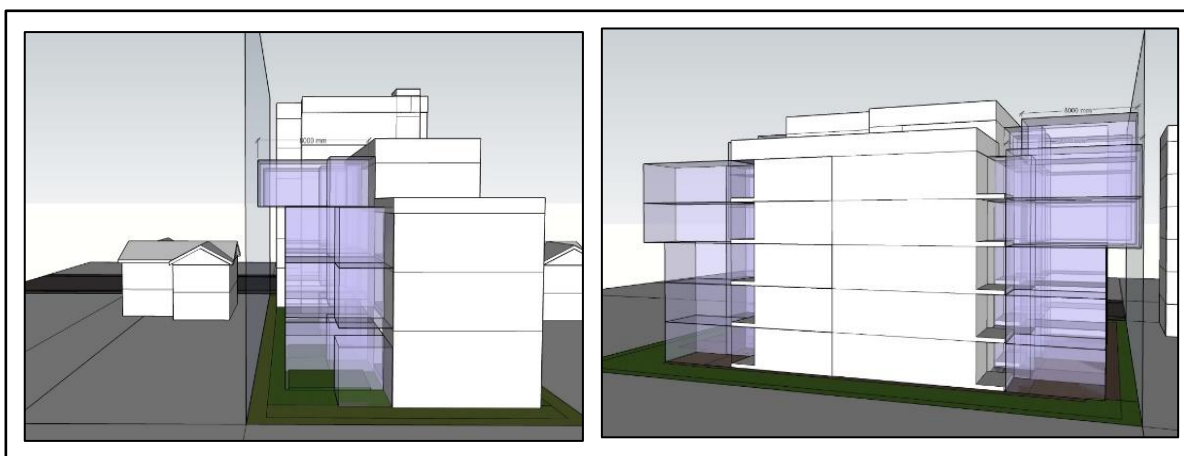


Figure 11: Modelling of 4m principal living room outlook depth standard. Modelling showing notional 6 storey development alongside an existing notional 2 storey dwelling. Figure 12: Modelling of 8m principal living room depth standard. Modelling showing notional development informed/encouraged by the standard including measurement from balcony edge where provided.

Alongside other standards including the HIRB standard, the built form resulting will encourage living areas to gain aspect from the street, providing the benefit of passive surveillance and positively contributing to an active and safe streetscape frontage. For sites of sufficient depth, any rear part of the building or rear buildings located beyond 21.5m of the site frontage need to comply with an 8m and 60 degrees HIRB. The required 8m outlook will complement this standard by also encouraging built form to pull away from the side boundary and therefore managing both privacy and potential visual dominance effects.

The following image (Figure 13) provides a modelled example of how the proposed outlook standard would alongside other standards encourage, inform and shape development on a site demonstrating separation, privacy and streetscape benefits.



Figure 13: Modelling of 8m principal living room depth standard. Modelling shows modelled development informed by the proposed standards with principal living room areas drawn to the street or set back from site boundaries towards the rear.

## 5.0 Front yard, side yard, rear yard standards

### 5.1 Proposed Amendments and Statutory Context

The following table provides a summary of the key operative and proposed changes to the yard standard within the AUP(OP) for the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard (minimum depth)	Summary of Key Proposed Standard (minimum depth)	IPI Status
Residential – Low Density Residential  Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	3m front yard 1m side yard 1m rear yard	3m front yard 1m side yard 1m rear yard (excluded on corner sites)	To align with Schedule 3A Density Standard inclusive of Qualifying matters.
Residential – Mixed Housing Urban Zone	2.5m front yard 1m side yard 1m rear yard	1.5m front yard 1m side yard 1m rear yard (excluded on corner sites)	Schedule 3A Density Standard

Zone	Summary of Key Operative AUP(OP) Standard (minimum depth)	Summary of Key Proposed Standard (minimum depth)	IPI Status
Residential – Terrace Housing and Apartment Buildings Zone	1.5m front yard 1m side yard 1m rear yard	1.5m front yard 1m side yard 1m rear yard (excluded on corner sites)	Schedule 3A Density Standard

Front, side and rear yard standards are identified as density standards in Schedule 3A of the RMA and are current operative standards within the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the incorporation of MDRS or Policy 3 of the NPS-UD.

The AUP(OP) provides standards relating to front, side, rear, riparian, lakeside and coastal protection yards. This report only addresses the standards as they relate to front, side and rear yards.

The purpose statements for MHU and THAB zones are the same with the common intent being to create an urban streetscape character, manage effects on amenity values and ensure sites are functional by providing adequate space for building and service maintenance. The standards are thereby a means of achieving a quality built environment, particularly B2.3.1 Objective (1)(a) and (3), and Policies (1)(a) and (1)(e).

The operative standard in the AUP(OP) THAB zone generally aligns with the setback requirements of Schedule 3A with the exception of the exclusion of corner sites from compliance with the 1m rear setback requirement.

It is proposed to align the standards with Schedule 3A for relevant permitted and consented activities in both the MHU and THAB zones.

In the LDRZ it is proposed to retain the existing operative standard of the SHZ with the exception of incorporating the corner site exclusion as set out within Schedule 3A. The more restrictive 3m front yard is retained on the basis of being a necessary requirement to protect sites within this zone which are subject to qualifying matter, where the values of those qualifying matters would be compromised if the Schedule 3A density standard were adopted. Refer to the s32 evaluations for individual qualifying matters for further detail on this matter.

The operative objectives, policies and assessment criteria are considered to remain appropriate to the proposed changes.

## 5.2 Key Issues and Standard Development

### Front Yard

A 1.5m (minimum) front yard depth encourages an engaged urban street character by facilitating buildings being located close to the street. This provides a more built or urban character when compared with larger front yards which bring a sense of openness and spaciousness, consistent with lower density residential areas. The 1.5m front yard also provides a sense of street enclosure, again by enabling development proximate to the street. At

the same time this retained distance in the THAB and reduced distance in the MHU for the front yard still acts as a privacy buffer and amenity zone for frontage facing dwellings.

A minimum 1.5m deep front yard provides sufficient space for landscaping in the context of the associated amendments to the landscaping standard in the THAB and MHU zone, which requires a minimum of 50 per cent of the front yard to be landscaped area.

In the LDRZ the 3m front yard setback is retained as a qualifying matter. A reduction to 1m is considered to enable a level of development which would be inappropriate to these locations given the qualifying matters values which exist in these urban areas and the lower intensity residential development sought.

### Side and Rear Yard

The 1m minimum side and rear yard depth remains unchanged from the AUP(OP) MHU, THAB and the SHZ standard adopted by the LDRZ in line with the requirements of Schedule 3A density standard.

## 6.0 Building Coverage Standards

### 6.1 Proposed Amendments and Statutory Background

The following table provides a summary of the key operative and proposed amendments to the building coverage standard of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard (maximum building coverage)	Summary of Key Proposed Standard (maximum building coverage)	IPI Status
Residential – Low Density Residential Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	35 % net site area	No change	ss77G Qualifying Matter
Residential – Mixed Housing Urban Zone	45 % of net site area	50 % of net site area.	Schedule 3A Density Standard
Residential – Terrace Housing and Apartment Buildings Zone	50 % of net site area	No change	Schedule 3A Density Standard

The building coverage standard is identified as a density standard in Schedule 3A of the RMA. Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The AUP(OP) provides core standards relating to the total percentage coverage of buildings on a site in relation to permitted and restricted discretionary activities (H3.6.10, H5.6.10 and

H6.6.11). As identified in the purpose statements for these standards these are key to managing the extent of buildings on sites to achieve the relative planned urban character of the respective zones given the control this provides to the proportions of buildings and open space.

The building coverage standard in the AUP(OP) for the THAB zone aligns with the building coverage standard of Schedule 3A. It is proposed to align the standard with Schedule 3A for relevant permitted and consented activities in the MHU zone, enabling site coverage to be increased from 45 per cent to 50 per cent.

In the LDRZ it is proposed to retain the existing operative standard of the SHZ at 35 per cent site coverage. The more restrictive 35 per cent standard is retained on the basis of being a necessary requirement to protect sites subject to qualifying matter, where the values of those qualifying matters would be compromised if the Schedule 3A density standard were adopted.

The standard is currently not listed in the AUP(OP) as a 'standard to be complied with' (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone. The standard is listed as a matter of discretion for this activity. Within the MHU the standard is listed as a standard to be complied with in the activity table for the permitted activity of up to three dwellings per site. An effect of the plan change is to list the standard in those required to comply with in the activity table for dwellings, whether permitted or restricted discretionary.

## 6.2 Key Issues and Standard Development

Building coverage standards manage the extent of buildings on a site and contribute to the planned urban character of the zone. In line with the intensification provisions and intent of the NPS-UD and to provide consistency with the Schedule 3A MDRS density standard, the coverage standard in the MHU zone is proposed to increase from 45 per cent to 50 per cent. Within the THAB zone both within and outside walkable catchments the coverage standard of 50 per cent is retained in accordance with the Schedule 3A density standard.

These standards have been modelled alongside other proposed standards within the reports referred to in chapter 17 (yield) of this report. The below images ( and 16) display the intensification achievable whilst complying with the retained and proposed building coverage standard in the THAB zone.

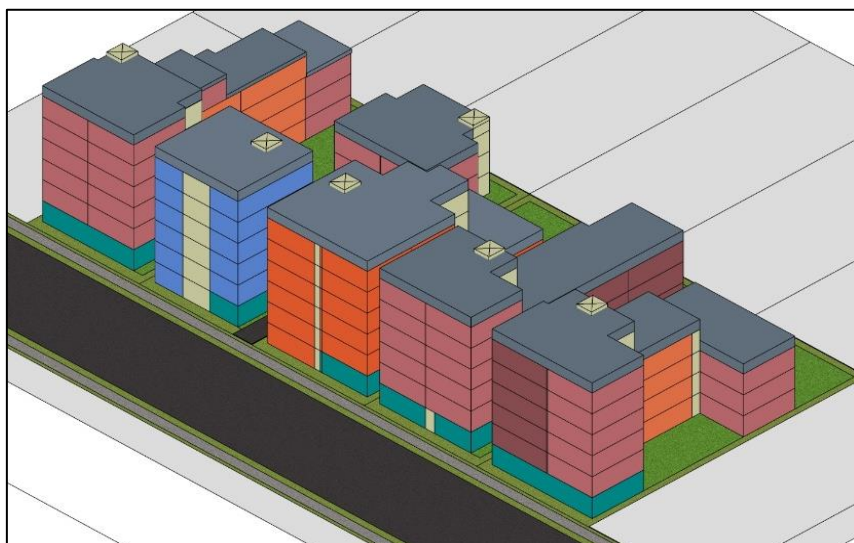


Figure 14: Range of 6 storey development forms and layouts that can be realised whilst still achieving 50 per cent building coverage standard compliance

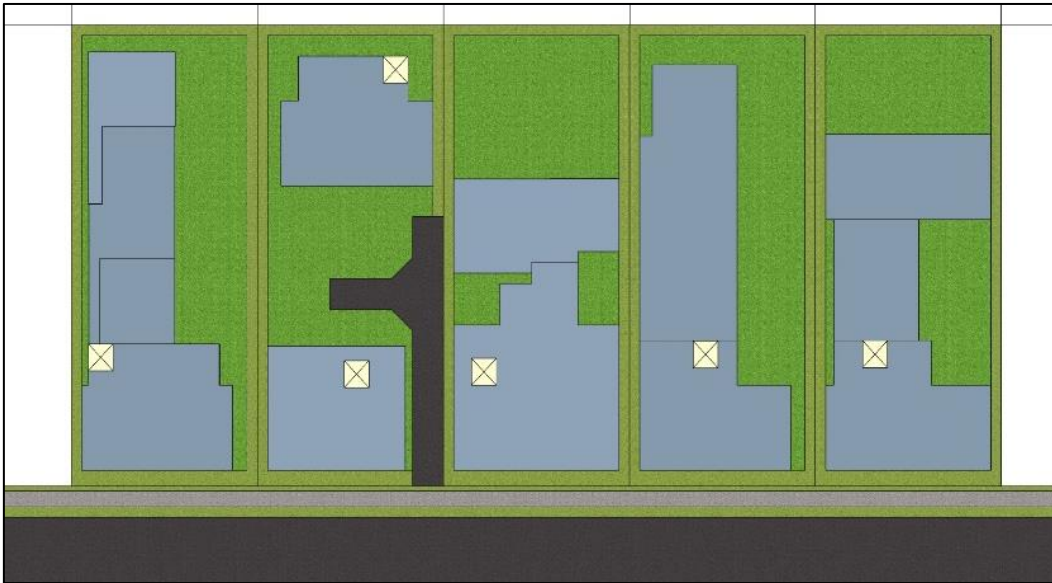


Figure 15: Range of 6 storey development layouts that can be realised whilst still achieving 50 per cent building coverage standard compliance.

The modelling is considered to ensure that the resulting urban character and sense of space provided is in line with the intensity of built form sought in the zones. Given the relatively lower intensity and scale of built form in the MHU the modelling is considered to demonstrate that the effects of changing the operative provision will not be adverse.

Within the renamed LDR the 35 per cent building coverage standard found in the existing SHZ is retained rather than incorporating the Schedule 3A building coverage density standard. This is necessary to protect the qualifying matters identified values that exist within these areas and the lower intensity of building coverage required as a result on sites.

## 7.0 Landscaped Area Standards

### 7.1 Proposed Amendments and Statutory Background

The following table provides a summary of the operative and proposed changes to the landscaped areas standard of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP Standard (maximum landscape area)	Summary of Key Proposed Standard (maximum landscape area)	IPI Status
Residential – Low Density Residential Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	40 % net site area Minimum 50 % of front yard must be landscaped area	20 % of net site area	Schedule 3A Density Standard
Residential – Mixed Housing Urban Zone	35 % net site area Minimum 50% of front yard must be landscaped area	<p><u>For up to 3 dwellings as MDRS permitted activity:</u> 20 % of net site area</p> <p><u>For 4 or more dwellings and other specified consented developments:</u> 20 % net site area (any part of the landscaped area must have a minimum dimension of 1m and minimum area of 4m<sup>2</sup>)</p> <p>Minimum 50 % of front yard must be landscaped area</p> <p>Landscaped area must have a minimum dimension of 1m and total area of 4m<sup>2</sup></p>	<p>Schedule 3A Density Standard</p> <p>Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.</p>
Residential – Terrace Housing and Apartment Buildings Zone	30 % net site area	<p><u>For up to 3 dwellings as MDRS permitted activity:</u> 20 % of net site area</p> <p><u>For 4 or more dwellings and other specified consented developments:</u> 20 % net site area (any part of the landscaped area must have a minimum dimension of 1m and minimum area of 4m<sup>2</sup>)</p> <p>Minimum 50 % of front yard must be landscaped area</p> <p>Landscaped area must have a minimum dimension of 1m and area of 4m<sup>2</sup></p>	<p>Schedule 3A Density Standard</p> <p>Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.</p>

Landscaped area is identified as a density standard in Schedule 3A of the RMA and an operative standard within the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the



amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The AUP(OP) applies landscaped area standards in both the MHU and THAB zones. The purpose statements for the standard are the same in both zones with the overall intent being to create a sense of space commensurate with the planned urban character and manage effects of development on amenity values. The purpose statements specifically refer to creating “quality living environments”. The landscape area standards contribute to achieving quality living environments, particularly B2.3.1 Objective (1)(a) and (3), and B2.3.2 Policy (1)(a).

The operative standards are more restrictive than Schedule 3A, with standard H6.6.12 in the THAB zone requiring a minimum 30 per cent of net site area to be landscaped and H5.6.11 in MHU requiring 35 per cent of net site area, of which 50 per cent must be located within the front yard.

In order continue to meet Part B2.3 of the RPS whilst giving effect to the intensification instruments, a package of amendments is proposed including:

- Amending the definition of “landscaped area” in the AUP(OP) to provide for only natural grass, plants or trees and remove reference to artificial and non-permeable features (does not apply to MDRS development of up to 3 dwellings);
- Amending the landscaped area standard for four or more units in the MHU and THAB zones to align the threshold with the 20 percent requirement of Schedule 3A and include additional requirements than provided for in Schedule 3A and the AUP(OP) in relation to front yard landscaping;
- Including additional assessment criteria for infringements to the standard; and

The reduction in landscaped area from what is currently required in the AUP(OP) is necessary to give effect to the RMA requirements. The remaining package of amendments therefore seek to improve the quality and outcomes of that reduced landscaped area.

The operative objectives and policies have generally been retained as they apply to this standard as they are considered to remain appropriate. Additional criteria are proposed, in particular, the desire to retain existing trees and for landscaped areas to be retained and maintained over time.

The standard is currently not listed in the AUP(OP) as a ‘standard to be complied with’ (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone. The landscaped area standard is listed as a matter of discretion for this activity. Within the MHU the standard is listed as a standard to be complied with in the activity table for the permitted activity of up to three dwellings per site. An effect of the plan is to introduce the requirement to comply with the standard into the activity table for dwellings whether permitted or restricted discretionary in the THAB and MHU zones.

## 7.2 Key Issues and Standard Development

### Landscaped Areas and Quality

In relation to the performance of the existing landscaped area standard, the s35 monitoring report found that<sup>19</sup>:

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<sup>19</sup> p89. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

- 40 per cent of sampled developments infringed the 35 per cent net site landscape area standard in the MHU zone. The majority of these infringed the standard by between 1- 5 per cent.
- 45 per cent of sampled developments infringed the 30 per cent net site landscape area standard in the THAB zone. The majority of these infringed the standard by between 1- 5 per cent.

The AUP(OP) landscaped area definition allows for up to 25 per cent of the landscaped area to be treatments that are not vegetation. The proposed amendments to definitions and standards will ensure that an amount equivalent to 20 per cent of the site area is provided as natural landscaped area. Whilst this represents a reduction of landscaped area overall comparing to the operative standard, necessary to enable the intensification provisions of the RMA, this is offset by the quality of landscaped area that is required by the proposed provisions. Aspects of the changes which are considered to deliver positive QBE outcomes (both visual amenity, and vegetated quality of the landscaped area) are as follows:

- Requiring that 50 per cent of the front yard for THAB and MHU is provided as a landscaped area (as the operative MHU currently does).
- Introducing minimum dimensions and area for landscaped areas.
- Requiring a landscape plan including maintenance specifications.
- Landscaped area can overlap with deep soil and tree canopy areas (subject to its own proposed standard) this will better enable landscaped area to include trees and the characteristics required to support their growth.

Analysis of approved plans under the AUP(OP) shows that landscaped areas often overlap with private outdoor living areas<sup>20</sup>. Private outdoor living areas are not always conducive to also being landscaped area, particularly when taking a view that landscaped area is vegetation (in alignment with the Schedule 3A landscaped area standard) rather than the more encompassing soft and hard outdoor treatment as the AUP(OP) currently does. The proposed provisions positively address these issues by being more specific as to what landscaped area is and further requirements on how landscaped areas are provided on relevant THAB and MHU developments.

The definition of landscaped area for all zones in the AUP is proposed to be amended to generally align with the Schedule 3A landscaped area standard. This will ensure the health and longevity of existing and planted trees with the canopy areas of trees included if specific permeable and natural surfaces are provided in the Root Protection Area. The Schedule 3A landscaped area standard which will be applicable for MDRS development allows areas to be included within the canopy of a tree regardless of the treatment below, effectively enabling impervious surfaces up to the trunks.

As with the schedule 3A landscaped area standard, the definition change proposed means that to qualify land would be required to consist of vegetation (grass, plants or trees). With the exception of 1m wide pervious paths to access dwellings through landscaped areas (and being no more than 10 per cent of the landscaped areas). This is to ensure that landscaped areas contribute to a vegetated character and amenity and removes the ambiguity of having non-vegetated treatments included. The inclusion of trees in these areas also incentivises their retention.

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<sup>20</sup> p92. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

The objectives and policies are amended to support this intent. In doing so, it ensures that current landscaped area treatments such as artificial grass, paving, decking and pools are not included in landscaped areas such as yards or landscaped buffer spaces, these can be included in private outdoor living areas outside of landscaped areas.

Additional assessment criteria are also added to support this vegetated intent for landscaped areas, in alignment with the Schedule 3A landscaped area standard.

## **Climate Change**

The landscaped area standards are for the planting of grass, plants or trees or a combination. The provision of canopy trees can also contribute to vegetated character and amenity and therefore landscaped areas and deep soil areas can overlap. The addition of the separate deep soil and canopy tree standard proposed ensures that a proportion of landscaped area can be consolidated as deep soil area to support canopy tree provision that will help to build greater climate resilience than marginal spaces of grass or plants.

## **Overall**

The reduction of the landscaped area standard to a minimum of 20 per cent for the THAB, MHU and LDRZ in alignment with the Schedule 3A standard percentage is considered appropriate for the following reasons:

- As landscaped area can overlap with deep soil area, it is likely that a significant proportion of the required landscaped area in residential sites will also be deep soil area, which support canopy trees and builds resilience to the effects of climate change. In addition, the requirement for 50 per cent of the front yard to be landscaped area will also contribute positively to the vegetated character and amenity of developments. Additional landscaped areas above the 20 per cent required may be located within private outdoor living areas but the reduced landscaped area requirements are likely to give greater flexibility for how private outdoor living areas are developed and used. For example, private outdoor living areas could consist of paving, decking, artificial grass, pools or other treatments that are not included in the landscaped area definition or standards.
- The definition and standards of landscaped area are amended to be only vegetation (grass, plants or trees) to align with the Schedule 3A landscaped area standard and to ensure they provide for a vegetated character and amenity. This creates less ambiguity in what landscaped areas consist of, ensures more efficient assessment and compliance and ensures that they provide for quality treatments. The exception from landscaped areas being only vegetation, is to allow pervious paths of maximum 1m width (and up to a maximum 10 per cent of total landscaped area) to enable private access through landscaped areas to dwellings.
- The landscaped area standards require a landscape plan be provided with specific information requirements and including maintenance specifications. This will ensure a quality treatment of landscaped area is provided and that it can be maintained for a minimum period of 12 months.
- In aligning the landscaped area definition to the Schedule 3A landscaped area standard it is recognised that including the canopy of trees in landscaped area can help incentivise the retention of existing trees. There is a change from the Schedule 3A landscaped area standard in this regard however in that it requires the critical root zone

of trees to be protected through a surface of grass, plants or mulch to ensure their health is maintained.

## 8.0 Outdoor Living Space Standards

### 8.1 Proposed Amendments and Statutory Background

The following table provides a summary of the operative and proposed outdoor living space standard of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard (maximum building coverage)	Summary of Key Proposed Standard	IPI Status
Residential – Low Density Residential Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	N/A	<p><u>Dwelling with ground floor level:</u> At least 20m<sup>2</sup>. No dimension less than 3m and a gradient not exceeding 1 in 20. If includes provision as a balcony, patio or roof terrace this must be at least 8m<sup>2</sup> and minimum dimension of 1.8m.</p> <p><u>Above ground floor level dwelling:</u> At least 8m<sup>2</sup>. A minimum dimension of 1.8m.</p> <p><u>All</u> Outdoor living space provided can be grouped cumulatively in a communally accessible area at ground level, or adjacent to the unit.</p>	Schedule 3A Density Standard
Residential – Mixed Housing Urban Zone	<p><u>Dwelling with ground floor level:</u> At least 20m<sup>2</sup>. No dimension less than 4m and a gradient not exceeding 1 in 20. If includes provision as a balcony, patio or roof terrace this must be at least 5m<sup>2</sup> and minimum dimension of 1.8m.</p> <p><u>Above ground floor level dwelling:</u> At least 5m<sup>2</sup> for studio or 1 bedroom. At least 8m<sup>2</sup> for 2+ bedroom, Except that, a balcony or roof terrace is not required where the net internal floor area of a dwelling is at least 35m<sup>2</sup> for a studio and 50m<sup>2</sup> for a dwelling with one or more bedrooms. A minimum dimension of 1.8m;</p> <p><u>All</u> South facing outdoor living standard</p>	<p><u>For up to 3 dwellings as MDRS permitted activity:</u></p> <p><u>Dwelling with ground floor level:</u> At least 20m<sup>2</sup>. No dimension less than 3m and a gradient not exceeding 1 in 20. If includes provision as a balcony, patio or roof terrace this must be at least 8m<sup>2</sup> and minimum dimension of 1.8m.</p> <p><u>Above ground floor level dwelling:</u> At least 8m<sup>2</sup>. A minimum dimension of 1.8m.</p> <p><u>All</u> Outdoor living space provided can be grouped cumulatively in a communally accessible area at ground level, or adjacent to the unit.</p> <p><u>For 4 or more dwellings and other specified consented developments:</u></p>	Schedule 3A Density Standard

Zone	Summary of Key Operative AUP(OP) Standard (maximum building coverage)	Summary of Key Proposed Standard	IPI Status
		<p><u>Dwelling with ground floor level:</u> At least 20m<sup>2</sup>. No dimension less than 4m and a gradient not exceeding 1 in 20. If includes provision as a balcony, patio or roof terrace this must be at least 5m<sup>2</sup> and minimum dimension of 1.8m.</p> <p><u>Above ground floor level dwelling:</u> At least 5m<sup>2</sup> for studio or 1 bedroom unit. At least 8m<sup>2</sup> for 2+ bedroom unit. Except that, a balcony or roof terrace is not required where the net internal floor area of a dwelling is at least 35m<sup>2</sup> for a studio and 50m<sup>2</sup> for a dwelling with one or more bedrooms. A minimum dimension of 1.8m.</p> <p><u>All</u> South facing outdoor living standard.</p> <p><u>Developments greater than 20 dwellings:</u> Must additionally provide communal living space of at least 10m<sup>2</sup> for every 5 dwellings it serves.</p>	<p>Achieving quality built environment outcomes when incorporating MDRS.</p>
<p>Residential – Terrace Housing and Apartment Buildings Zone</p>	<p><u>Dwelling with ground floor level:</u> At least 20m<sup>2</sup>. No dimension less than 4m and a gradient not exceeding 1 in 20. If includes provision as a balcony, patio or roof terrace this must be at least 5m<sup>2</sup> and minimum dimension of 1.8m.</p> <p><u>Above ground floor level dwelling:</u> At least 5m<sup>2</sup> for studio or 1 bedroom. At least 8m<sup>2</sup> for 2+ bedroom A minimum dimension of 1.8m. Except that, a balcony or roof terrace is not required where the net internal floor area of a dwelling is at least 35m<sup>2</sup> for a studio and 50m<sup>2</sup> for a dwelling with one or more bedrooms.</p> <p><u>All</u> South facing outdoor living standard.</p>	<p><u>For up to 3 dwellings as MDRS permitted activity:</u></p> <p><u>Dwelling with ground floor level:</u> At least 20m<sup>2</sup>. No dimension less than 3m. If includes provision as a balcony, patio or roof terrace this must be at least 8m<sup>2</sup> and minimum dimension of 1.8m.</p> <p><u>Above ground floor level dwelling:</u> At least 8m<sup>2</sup>. A minimum dimension of 1.8m.</p> <p><u>All</u> Outdoor living space provided can be grouped cumulatively in a communally accessible area at ground level, or adjacent to the unit.</p> <p><u>For 4 or more dwellings and other specified consented developments:</u></p> <p><u>Dwelling with ground floor level:</u> At least 20m<sup>2</sup>. No dimension less than 4m and a gradient not exceeding 1 in 20. If includes provision as a balcony, patio or roof terrace this must be at least 5m<sup>2</sup> and minimum dimension of 1.8m.</p>	<p>Schedule 3A Density Standard</p>

Zone	Summary of Key Operative AUP(OP) Standard (maximum building coverage)	Summary of Key Proposed Standard	IPI Status
		<p><u>Above ground floor level dwelling:</u>            At least 5m<sup>2</sup> for studio or 1 bedroom unit.            At least 8m<sup>2</sup> for 2+ bedroom unit.            Except that, a balcony or roof terrace is not required where the net internal floor area of a dwelling is at least 35m<sup>2</sup> for a studio and 50m<sup>2</sup> for a dwelling with one or more bedrooms.            A minimum dimension of 1.8m.  <u>All</u>            South facing outdoor living standard.</p> <p><u>Developments greater than 20 dwellings:</u>            Must additionally provide communal living space of at least 10m<sup>2</sup> for every 5 dwellings it serves.            A minimum dimension of 4m</p>	<p>Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.</p>

Outdoor living space is identified as a density standard in Schedule 3A of the RMA, and is currently an operative standard in the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The general intent of the outdoor living space standards in the AUP(OP) is to manage on-site residential amenity by providing functional, accessible areas that have access to sunlight. This contributes to quality built environments and addresses RPS Objective B2.3.1(3) and Policies B2.3.2(1)(e) and (2)(a).

The AUP(OP) applies the same standard in the MHU and THAB zones. The operative standards vary in how they align and compare to the density standard within Schedule 3A. Some parts of the standard are marginally more restrictive and others marginally more lenient. The key difference between the AUP(OP) and Schedule 3A is the operative standard do not specifically provide for communal spaces.

It is proposed to adopt the outdoor living space standard of Schedule 3A within the LDRZ and for permitted residential development (3 dwellings or less) in the THAB and MHU. It is proposed to retain the operative standard for four or more units within the MHU and THAB. The cumulative and key variations from the schedule 3A density standard are as follows:

- Ground level space to have no dimension less than 4m rather than 3m.
- For ground floor units, where outdoor living space is provided in the form of a balcony, patio or roof terrace this must be at least 5m<sup>2</sup> rather than 8m<sup>2</sup>.
- For above ground floor levels units requirements for at least 5m<sup>2</sup> space for studio or 1 bedroom unit and 8m<sup>2</sup> for 2+ bedroom unit, rather than 8m<sup>2</sup> for all units.
- The requirement for outdoor living space for above-ground units can be waived where the net internal minimum floor areas (35m<sup>2</sup> and 50m<sup>2</sup> respectively) are met.
- Specific design restraint on provision of outdoor living space south of any building.

- No allowance for outdoor living space to be grouped cumulatively, as is the case in the Schedule 3A density standard but an additional requirement for developments greater than 20 dwellings to provide communal living space of 10m<sup>2</sup> per 5 dwellings.

This approach is deemed to be the most appropriate for the larger scale development enabled in order to continue achieving quality built environments while enabling greater density as required under the RMA.

The standard is currently not listed in the AUP(OP) as a 'standard to be complied with' (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone. The landscaped area standard is listed as a matter of discretion for this activity. Within the MHU the standard is listed as a standard to be complied with in the activity table for the permitted activity of up to three dwellings per site. An effect of the plan change is to introduce the requirement to comply with as a standard in the activity table for dwellings whether permitted or restricted discretionary in the zones.

## 8.2 Key Issues and Standard Development

### Relevant Background to the AUP(OP) Standards

The outdoor living standard were noted by Nicholas Roberts, Council's planning witness for the IHP process within his Statement of Evidence as having the purpose to provide dwellings with space that is of a functional size and dimension<sup>21</sup>.

Through the IHP process and mediation, amendments were made to the standard including the flexibility for the outdoor living area to be accessible from the dining room or kitchen in addition to a principal living room. An additional control was added to ensure where the outdoor living room is located to the south of a building, it is offset from that building to enable sunlight access.

Also, in support of and to encourage flexibility in apartment design within the MHU and THAB zone flexibility was inserted into the standard to provide a larger internal living area rather than an external balcony.

### Communal Space

Due to the more intensive form of development enabled and anticipated in the zones and to support the development of well-functioning dwellings that provide a reasonable standard of amenity, 20 or more units in the MHU and THAB zones must provide a communal outdoor living space at the ratio of 10m<sup>2</sup> per each five units. This requirement is particularly important for larger and apartment developments of this scale in order that useable outdoor spaces that receive a reasonable standard of sunlight are available for active or passive recreation for residents of all ages.

In addition to offering a space for recreation and contributing to the amenity of a development, the requirement for communal space from development of this scale, also provides opportunities for social interaction; a key contributor to quality of life, health and wellbeing. Furthermore, the requirement that for an area of at least 20m<sup>2</sup> the total communal outdoor living space must receive a minimum of three hours of sunlight per day between the hours of 9am – 4pm on 21 June will provide residents with access to sunlight and amenity when enjoying this space.

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<sup>21</sup> para 20.44. Statement of evidence of Nicholas Roberts on behalf of Auckland Council planning – Residential Zones 9 September 2015

## Modelling of Outdoor Living Space Requirements

Modelling has been undertaken to test and demonstrate the soundness of the proposed standards where this departs from Schedule 3A for development of greater than 4 units (discussed in further detail in chapter 17). This modelling has demonstrated that these standards can be met and positive amenity outcomes provided for occupants without undermining the intensification objectives that the plan change responds to. These models have been based on an assumed development responding to the other proposed standards that are key to manage the form of the building including height, HIRB and outlook (Figure 16 and Figure 17).



Figure 16: Model showing potential provision of ground floor outdoor living (purple) and communal space (pink) requirements for assumed development. Key locations shown for clarity.

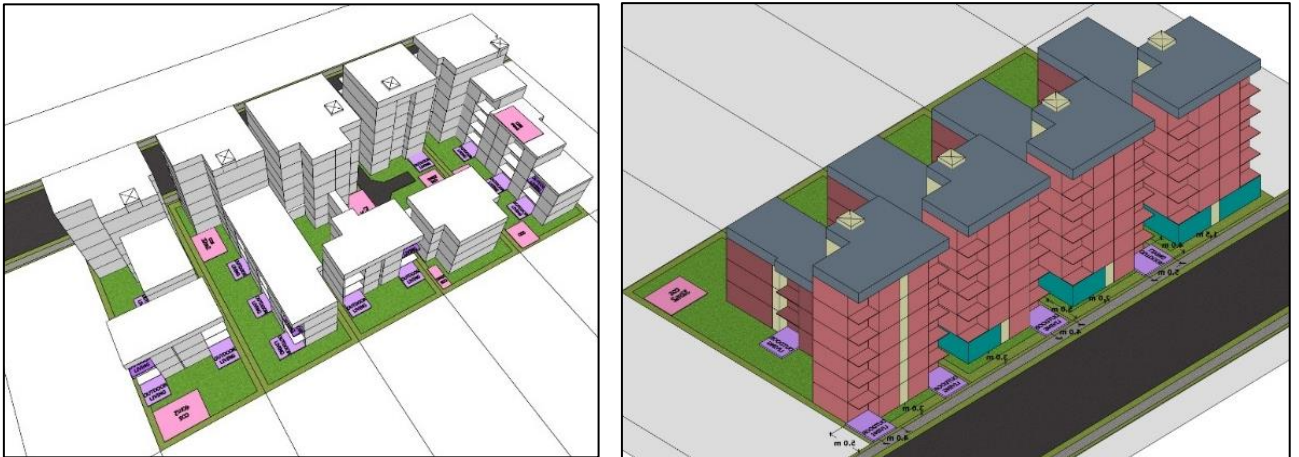


Figure 17: Models showing potential provision of ground floor outdoor living (purple) and communal space (pink) requirements for assumed adjoining future terrace and apartment development delivered in accordance with planned objectives for the THAB zone within walkable catchments.



## 9.0 Windows to Street; and Private Pedestrian and Vehicle Accessways Standards

### 9.1 Proposed Amendments and Statutory Background

The following table provides a summary of the operative and proposed windows to street; and private pedestrian and vehicle accessway standards of the AUP(OP) within the identified zones.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard (minimum glazing %)	IPI Status
Residential – Low Density Residential Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	N/A	<u>For up to 3 dwellings as MDRS permitted activity:</u> 20 % glazing in street facing façade.	Schedule 3A Density Standard
Residential – Mixed Housing Urban Zone	N/A	<u>For up to 3 dwellings as MDRS permitted activity:</u> 20 % glazing in street facing façade. <u>For 4 or more dwellings and other specified consented developments:</u> 20 % glazing in street facing façade. 20% glazing in onsite vehicle and pedestrian accessway facing facades.	Schedule 3A Density Standard  Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	N/A	<u>For up to 3 dwellings as MDRS permitted activity:</u> 20 % glazing in street facing façade. <u>For 4 or more dwellings and other specified consented developments:</u> 20 % glazing in street facing façade. 20% glazing in onsite vehicle and pedestrian accessway facing facades.	Schedule 3A Density Standard  Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

Windows to street is identified as a density standard in Schedule 3A of the RMA. Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The AUP(OP) does not currently include such a standard including within the identified residential zones. It is proposed to include the Schedule 3A standard for the LDR and for MDRS permitted activities within the MHU and THAB zones. An amended version of the Schedule 3A standard for development of four or more dwellings and other specified activities in the MHU

and THAB is proposed to include the requirement for glazing to apply to on-site private vehicle or pedestrian accessways in addition to street facing frontages.

The intent of this proposed standard is to provide for safety of people on streets, while maintaining the privacy and safety of residents in units. This contributes to quality built environment outcomes and addresses Objective B2.3.1(3) and Policy (1)(b). An amended version of the Schedule 3A standard is proposed for restricted discretionary activities of 4 or more units in the THAB and MHU zones consequential to the increased density being provided in these zones.

The proposed standard and accompanying assessment criteria are considered necessary to ensure quality built environment outcomes in areas of increased density as required under the HSAA, Policy 3.

## 9.2 Key Issues and Standard Development

### Managing windows to street, and private pedestrian and vehicle accessways

The incorporation of the Schedule 3A standard recognises that the provision of windows, glazing and surveillance that face the street aligns with fundamental principle of urban design master planning and well-functioning residential neighbourhoods of more ‘public fronts’ and ‘private backs’.

This standard has multiple benefits including:

- Actual and perceived safety for the individual in the street from sense of surveillance.;
- Prevention of crime either on the street or at the dwelling due to the likelihood of being seen;
- An enhanced streetscape when the elevation is designed as the building frontage.

However, it is considered that beyond permitted ‘MDRS’ development the scale of development planned for in the MHU and THAB is likely to be of an intensity and site arrangement where a number of the dwellings and key architectural facades will have important frontages onto vehicle and pedestrian accessways.

Therefore, for residential development of a greater intensity the standard is amended to include the glazing requirement for facades overlooking accessways in addition to the street. As a result, adequate glazing will be provided at the front of dwellings to allow for overlooking and surveillance of the street or accessway by the occupants.



Figure 18: Examples of developments that face onto a street or accessway and have garages only and/or no windows at the ground level and/or low levels of glazing and articulation in the façade. This results in low amenity and poor safety both on the street/accessway and for the residents. Source: Auckland Council.



Figure 19: Examples where glazing is provided at ground level, facing the street or lane/accessway and/or proposed standard is met. This provides a safer environment for those in the public space and for the residents and their properties (Source: Auckland Council).

# 10.0 Safety and privacy buffer to private pedestrian and vehicle accessways Standards

## 10.1 Proposed Amendments and Statutory Background

The following table provides a summary of the proposed safety and privacy buffer to private pedestrian and vehicle accessways of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard (maximum building coverage)	Summary of Key Proposed Standard (maximum building coverage)	IPI Status
Residential – Mixed Housing Urban Zone	N/A	A minimum 1m buffer distance between a dwelling and private accessway.	Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.
Residential – Terrace Housing and Apartment Buildings Zone	N/A	A minimum 1m buffer distance between a dwelling and private accessway.	Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

This standard is not currently provided for as a density standard in the RMA. However, s80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

It is proposed to apply this as a built form standard to both MDRS and development of four or more units, in both the MHU and THAB zones. The purpose of the standard is to manage effects on the privacy and safety of ground floor residential units adjacent to private accessways. This aligns with Part B2.3 of the RPS, particularly B2.3.1 Objective (3) and B2.3.2 Policy(1)(b).

It is considered to be a key standard in achieving quality built environment outcomes, in response to increases in density anticipated. The standard is in addition, rather than overlapping with yard standards where these apply also.

The proposed amendments to Policy H5.3(5)(a) (MHU) and Policy H6.3(6)(a) (THAB) regarding safety are also deemed to address policy gaps for the proposed new standard. It is proposed to amend the matters of discretion H5.8.1(2)(a)(i) and H6.8.1(2)(a)(i) and provide new assessment criteria to support the application of the proposed standard and thereby strengthen the quality built environment outcomes achieved.

## 10.2 Key Issues and Standard Development

### Safety

A focus of the s35 monitoring report undertaken was to review pedestrian safety within residential developments. This was of particular concern given the high incidence of driveway accidents involving pedestrians. The report identified the safety of pedestrians within sites as one of the notable areas where the sampled schemes indicated that the operative provisions were not managing matters effectively or efficiently.

Conflict was identified in respect to pedestrian access and circulation, with findings identifying that the width and design of accessways, and in particular the provision and design of pedestrian accessways varying significantly. This included development often incorporating the footpath within the same surface as the driveway with AUP(OP) provisions only requiring separate footpaths at certain thresholds of residential units (Chapter E27 of the AUP(OP))<sup>22</sup>.

Key statistical findings of the s35 monitoring report included<sup>23</sup>:

- 65 per cent of the development contained a footpath as a separate provision to the driveway for access between the street and residential dwellings.
- However, of this one quarter provided this separate via a raised kerb or landscape buffer from the driveway with the remainder providing these as shared surfaces utilising changes in colour or material to delineate spaces.
- The width of these footways varied as follows:
  - 10 per cent less than 1m
  - 45 per cent 1m
  - 45 per cent 1m or more.

The provision, design and location of these footpaths is of importance from a safety perspective given the fact that the vast majority of residential sites include vehicular movements as evidenced through the following findings from the residential developments, with only four of the developments featuring no car parking currently.

Where footpaths were provided a concerning trend from the s35 monitoring report was the overlap between these areas and the intended manoeuvring space of cars, with 50 per cent of developments requiring footpath that are located within the reversing space of cars. An example of this is shown in this image.

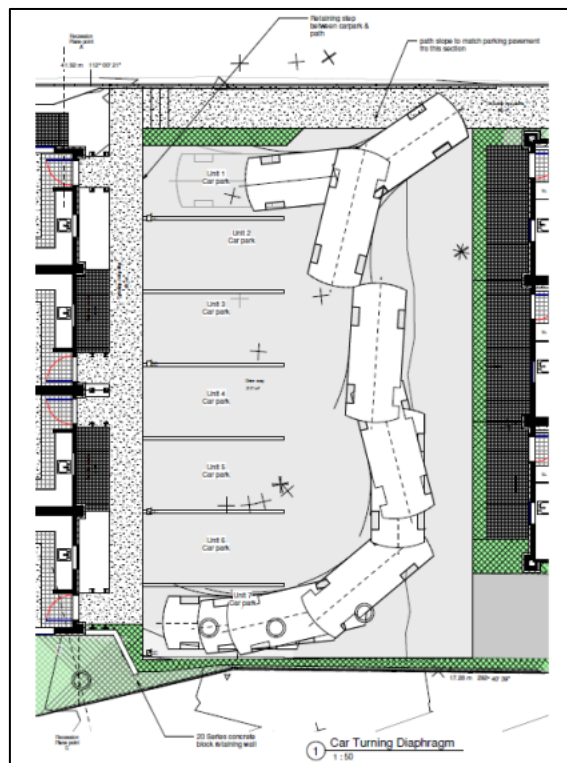


Figure 20: A development requiring cars to reverse manoeuvre over a footpath

<sup>22</sup> p97 – 98. Section 35 monitoring report (B2.3 Quality Built Environment) of the Auckland Unitary Plan

<sup>23</sup> p98. Section 35 monitoring report (B2.3 Quality Built Environment) of the Auckland Unitary Plan

As identified a large proportion of developments did not feature a footpath. A consequence in part of this as found in the schemes reviewed was that 20 per cent of residential developments included a front door which opened directly onto a driveway or parking area as shown in Figure 21. This arrangement and the absence of defensible space and separation between the pedestrian access to the home and driveway has a number of negative effects most notably on pedestrian safety.



Figure 21: Residential development where front doors open directly onto a parking area.

## Privacy

In addition to the identified issues of safety, the absence of defined separation between dwellings and accessways, is considered to lead to a number of adverse effects on amenity (including undermining privacy) that necessitate provisions to manage them.

The report prepared by the Tamaki Makaurau Design Ope (TMDO) titled “Pedestrian Access Routes to Dwellings. Issues, Analysis & Recommendations in support of Proposed Plan Change 79: Transport Chapter” identifies the consequential effects of the removal of car parking minimums as required by the National Policy Statement on Urban Development (NPS UD). One of the consequences identified is that it will enable an increase in developments that have private footpaths as their sole means of access to the site and individual dwellings. The TMDO report identifies that there are currently no standards in the Unitary Plan for private footpaths that are the sole means of access and that there is “an associated increased risk of poorly designed and unsafe footpath access”

The TMDO report recommends a number of design requirements to improve the quality of private footpaths, including the need for a planted setback between dwellings and private pedestrian accessways.

The report focuses on private pedestrian accessways rather vehicle accessways. However, the findings and evidence within this report in relation to planted setbacks are of equal relevance to vehicle accessways. The report identifies that the quality of accessways (design and materials), and of the spaces adjacent to them, have an impact on how residents and visitors experience their development as they move from the public street to their front door.

In addition, a lack of separation between accessways, property boundaries, and dwellings can reduce the privacy and security of residents in their homes. The report states that “the perceived quality of a development, particularly medium density housing including terraced housing, is strongly influenced by the design of the approach, or the transition between the public street and private building. A well-designed footpath and the adjacent spaces... will contribute positively to the look and feel of the approach... and help to define public, semi-public and private spaces”.

Under the AUP(OP), developments that front a street are required to provide a front yard to create an urban streetscape character and provide sufficient space for landscaping. This front yard also maintains an appropriate level of residential amenity and privacy for occupants and helps to define public, semi-public and semi-private space. This is depicted in Figure 20 below.



Figure 22: Front yard example with landscape treatment (Source: pg36 of the TMDO report).

A front yard or similar design feature is not currently required in the AUP(OP) for parts of development that front private pedestrian and vehicle accessways. This often results in reduced privacy and security for residents, with people easily able to walk up and look into windows, and a poor-quality environment for residents and visitors when walking from the street to their front door.

Figure 23 alongside shows a private pedestrian accessway running along the edge of a dwelling, and trellis being erected as a secondary screening device to provide privacy to adjacent rooms. Whilst assisting with the security of the dwellings, this additional screening impacts on the quality of the approach to front doors, and on the internal amenity of the adjacent rooms.



Figure 23: Private pedestrian accessway with additional screening impacts on the internal amenity of adjacent rooms

Figure 24 on the following page show two examples of vehicle accessways running along the edge of dwellings and adjacent to habitable room windows. This reduces resident's privacy and security with people in cars or walking, easily able to look into and access internal living spaces through the windows.



Figure 24: Two examples of no setback between the private vehicle accessways and adjacent dwellings

A total of 62 approved resource consents (with a total of 854 dwellings) were analysed to inform the TMDO report. The analysis identified that:

- 95 per cent of developments provided for some separation between a dwelling and a footpath.
- Of these, 58 per cent provided for widths between 0.1-0.99m, which limited opportunities for planting, the type of species able to be accommodated, and the long-term survival of the planting.
- Of these, 37 per cent provided for widths of at least 1m, and were able to accommodate low shrub planting and in some instances trees, which contributed to the privacy of the adjacent unit, as well as the overall amenity of the footpath.

The following photos (Figure 25) illustrate the amenity, privacy and safety outcomes from different levels of separation distances between pedestrian accessways and dwellings.

The image to the left illustrates separation distances of approximately 0.2m. These examples show a lack of windows along the facades at eye level due which in turn then creates safety issues for pedestrians with no passive surveillance being provided.

The photo on the right shows a wider buffer with room for a good level of planting that creates separation from the accessway. The amenity provided enables/encourages a window and outlook to be provided at eye level facing the accessway to provide passive surveillance and improve the safety of the accessway. The planting also provides an attractive approach for residents and visitors moving from the public street to their front door, giving a sense of ownership and safety.





Figure 25: 0.2m to 1m separation distances between pedestrian accessways and dwellings (Source: pg. 37 of the TMDO report).

Figure 26 provides an example of a 1m landscaped separation buffer between the dwellings and accessway, combined with a communal planting area, that together contribute positively to the amenity of the approach to the individual houses.



Figure 26: Landscaped separation buffer combined with a communal planting area enhancing the approach to front doors

## National Medium Density Design Guide 2022

As context on this matter the MfE National Medium Density Design Guide 2022 recognises the importance of planted buffers between streets, accessways and the private home to enhance the safety and comfort of residents<sup>24</sup>. The guide recommends creating a planted buffer with a minimum width of 800mm between homes and accessways.

Figure 27 provides a diagram from the National Medium Density Design Guide that shows a shared vehicle and pedestrian accessway with an 'at least' 800mm planting buffer on each side.

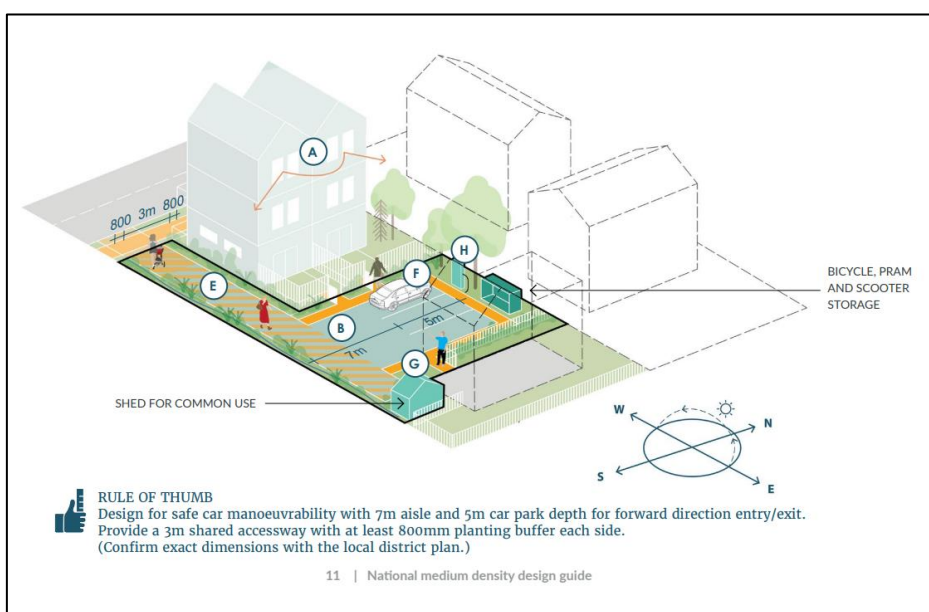


Figure 27: Diagram from the National Medium Density Design Guide recommending an 800mm planting buffer

## Overall

These issues have been noted as outcomes of the operative provisions of the AUP(OP) which encourage and enable an intensity of development within the MHU and THAB zones. In giving effect to the intensification provisions of the RMA, more intensive housing is expected within these residential zones. Whilst it is recognised that the removal of minimum car parking provisions may have an effect on some sites in relation to vehicular movements, the identified conflict and poor safety and privacy outcomes will if not addressed still be encountered.

Therefore, as a consequential amendment an additional standard has been developed to manage how dwellings front and interface with these private ways. The standard developed based on the identified issues and as a package of overlapping measures positively address RPS objective B2.3.1(3) 'the health and safety of people and communities are promoted' and objective B2.3.2(4) 'balance the main functions of streets as places for people and as routes for the movement of vehicles'.

This provision for vegetation in the buffer space is beneficial from an visual amenity perspective but also aligns and allows overlap with standards, requirements and objectives in relation to landscaping and pervious areas.

<sup>24</sup> p8. MfE National Medium Density Design Guide 2022

# 11.0 Deep Soil Area and Canopy Tree Standards

## 11.1 Proposed Amendments and Statutory Context

The following table provides a summary of the proposed Deep Soil and Canopy Trees standard of the AUP(OP) within the identified zones.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
Residential – Mixed Housing Urban Zone	N/A	<p><u>Deep soil area provision</u></p> <p><u>For pre-development sites 200m<sup>2</sup> - 1,200m<sup>2</sup></u> a minimum of 10% of the site must be provided as contiguous deep soil area with minimum 3m dimensions</p> <p><u>For pre-development sites greater than 1,200m<sup>2</sup></u> a minimum of 10% of the site must be provided as contiguous deep soil area(s) with minimum 3m dimensions If not contiguous each deep soil area must be a minimum of 60m<sup>2</sup></p> <p><u>Canopy tree provision</u></p> <p><u>For pre-development sites 200m<sup>2</sup> - 600m<sup>2</sup></u> 1 small canopy tree per 200m<sup>2</sup> of site</p> <p><u>For pre-development sites 601m<sup>2</sup> - 1,500m<sup>2</sup></u> 1 medium canopy tree per 300m<sup>2</sup> of site</p> <p><u>For pre-development sites 1,501m<sup>2</sup> or more</u> 1 large canopy tree or 2 medium canopy trees per 500m<sup>2</sup> of site</p> <p><u>All</u></p> <p>Deep soil areas must not be included in private outdoor living spaces but can be included in communal outdoor living spaces and landscaped areas.</p>	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	N/A	<p><u>Deep soil area provision</u></p> <p><u>For pre-development sites 200m<sup>2</sup> - 1,200m<sup>2</sup></u> a minimum of 10% of the site must be provided as contiguous deep soil area with minimum 3m dimensions.</p> <p><u>For pre-development sites greater than 1,200m<sup>2</sup></u> a minimum of 10% of the site must be provided as contiguous deep soil area(s) with minimum 3m dimensions. If not contiguous each deep soil area must be a minimum of 60m<sup>2</sup></p> <p><u>Canopy tree provision</u></p> <p><u>For pre-development sites 200m<sup>2</sup> - 600m<sup>2</sup></u></p>	

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
		<p>1 small canopy tree per 200m<sup>2</sup> of site.</p> <p><u>For pre-development sites 601m<sup>2</sup> - 1,500m<sup>2</sup></u></p> <p>1 medium canopy tree per 300m<sup>2</sup> of site.</p> <p><u>For pre-development sites 1,501m<sup>2</sup> or more</u></p> <p>1 large canopy tree or 2 medium canopy trees per 500m<sup>2</sup> of site.</p> <p><u>All</u></p> <p>Deep soil areas must not be included in private outdoor living spaces but can be included in communal outdoor living spaces and landscaped areas.</p>	<p>Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.</p>

This standard is not currently provided for as a density standard in the RMA and is not provided for in the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The overall intent within the THAB and MHU zone of the proposed standard and accompanying assessment criteria is to build resilience to climate change at the time of development through either retention of existing trees, or provision of the appropriate space and resources for new tree growth. This standard also responds to the anticipated increase of impervious area across urban residential areas as a result of giving effect to the RMA. The increase in impervious areas will have implications in terms of stormwater management and urban-heat effects. The proposed standard also responds to the reduction and amendments to landscape standard by ensuring that where there is overlap that the landscape space is of high quality.

For the reasons discussed above and, in the analysis, below, the standard contributes to quality built environment outcomes, including RPS objectives B2.3.1(1)(a), (2) and (3), and RPS policies B2.3.2(1)(a) and (5). It is proposed to be applied to both permitted and restricted discretionary residential activities as a standard in MHU and THAB zones above a 200 sqm threshold.

It is proposed that a new diagram will accompany the standard and new definitions and requirements of what constitutes “canopy tree” and “deep soil area”. These additions will support the application and interpretation of the standard.

## 11.2 Key Issues and Standard Development

### Rationale for the Standard

Building resilience within the urban form is essential to reducing risks associated with the increasing frequency and severity of extreme weather events, triggered by climate change, and amplified in dense urban environments. The purpose of the deep soil area and canopy tree standards is to build resilience to climate change effects through provision of deep soil areas that support canopy trees, which assist in removing carbon, reducing urban heat island effects, and enabling the infiltration of stormwater on sites. This is in alignment with objective 8(b) and policy 1(f) of the NPS-UD and a range of Auckland Council adopted strategies, including The

Auckland Plan 2050, Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan, Auckland's Urban Ngahere (Forest) Strategy and Auckland Water Strategy. The standard also aligns with the proposed climate change amendments to RPS. The effects that climate change will have in the Auckland environment are summarised in Proposed Plan Change 80 (PC80) to the RPS on Well-functioning Urban Environment, Climate Change Resilience and Qualifying Matters to the Auckland Unitary Plan (Operative in part) Section 32 Evaluation Report. In summary, for urban areas these include:

- increased extent or frequency of some types of natural hazards.
- increased frequency and severity of urban heat events.
- increased drought with water supply implications.
- effects on biodiversity, natural resources and natural heritage (all of which occur in urban as well as rural areas).
- increased risk to urban infrastructure and related costs to society.

From the perspective of scientific knowledge, these effects of climate change are significant and are at a global, national and Auckland-wide scale. The New Zealand Coastal Policy Statement, the NPS-UD and section 7 of the Resource Management Act (RMA) reference various aspects of the effects of climate change and resilience to those effects. From a statutory perspective, the effects of climate change are significant and at scale. Auckland Council is required to give effect to these statutory provisions.

This statutory requirement predetermines that the general risk from the effects of climate change is high enough to require action and improve resilience in RMA plans. However, within that general risk action requirement, there is some discretion as to how this is done within RMA plans. The reason for that is that the effects and risk are not equally distributed across New Zealand and even within Auckland. Therefore, action to improve resilience needs to be context specific to the climate change effects and risks of Auckland.

The urban heat island effect (Figure 28) is used to explain that urban areas have higher average temperatures than surrounding rural areas. This is because urban environments have different albedo (solar energy reflectance) and evapotranspiration (processes by which water moves from the earth's surface to the atmosphere) rates compared to vegetated rural environments.

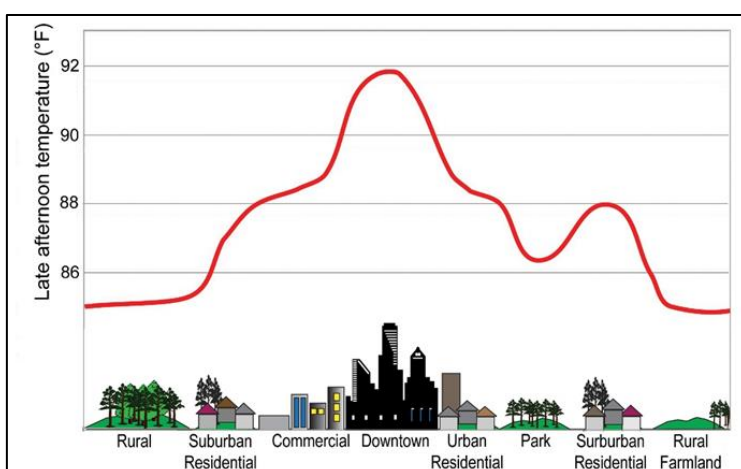


Figure 28: Urban Heat Island Effect (Source: <https://nca2009.globalchange.gov/urban-heat-island-effect/index.html>)

The higher urban temperatures will be exacerbated by climate change to the degree that Auckland will suffer from increased extreme urban heat events. By the beginning of the 2100s, Auckland is projected to experience 80 extra hot days. Extreme heat events pose a significant threat to the health and well-being of Auckland's population. Evidenced by extreme heat events reported in cities around the world, these events can have a catastrophic effect on the population, particularly those that are chronically ill, socially marginalised or with reduced capacity to adapt and mitigate the effects of heat.

As urban land use density increases, the amount of tree cover voluntarily retained or planted on private land would be expected to decrease. While urban intensification coupled with public transport may reduce greenhouse gas emissions, it can also reduce the resilience to urban heat events unless a more proactive approach is taken to providing and retaining urban tree canopy cover. This can be addressed through the proposed deep soil area and canopy tree standards. These standards are specifically for the purpose of building resilience to climate change effects and are different to the amenity and character purpose of the landscaped area standard. They are consequential to the proposed residential intensification and denser urban environments.

The deep soil area and canopy tree standards are in alignment with the proposed amendments to the RPS to incorporate objectives and policies to build resilience to the effects of climate change, including where climate resilience is inserted into a well-functioning urban environment.

#### **Deep soil area and canopy tree standard - Metrics**

The metrics applied to the deep soil area and canopy tree standards ensure sufficient deep soil area and dimensions to support ongoing canopy tree growth and resilience. The overall 10 per cent site area requirement for deep soil areas (for sites 200m<sup>2</sup> or more) will ensure that approximately 15 – 20 per cent tree cover can be retained and/or established on all relevant sites to provide for climate resilience.

This extent of deep soil area and canopy tree cover will provide for climate resilience to residents within the site through the provision of cooling during summer heat events and associated health and wellbeing, and economic benefits. Cumulatively, they will contribute to greater carbon removal and stormwater infiltration. The retention and/or establishment of tree cover through the deep soil and canopy tree standards will assist in achieving the targets in the Urban Ngahere Strategy and align to the Climate Plan, and proposed climate resilience amendments to the RPS.

The proposed deep soil and canopy tree metrics, have been tested through modelling, presented in the studies referred to in chapter 17 (yield) of this report) to provide for climate resilience whilst having minimal impact on potential development yield.

Notably, landscaped area as per the Schedule 3A density standard, and as generally defined for other residential zones included in the intensification plan change (proposed THAB and MHU), does not in itself require either deep soil or canopy trees to be provided. Landscaped area can consist of grass, plants or the canopy of trees, making it feasible that no trees are planted within residential sites. This trend is supported by the s35 monitoring report that found that 25 per cent of developments had landscape plans that did not identify trees that could grow to a height of 2m or more.<sup>25</sup> Of the developments that did include trees on landscape plans, the s35 monitoring found that many were not planted or were not well-established, signalling they were not supported by the appropriate growth conditions. Given the permissive activity status of

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<sup>25</sup> pg.92 Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

MDRS standards and the amendments to landscaped area coverage compared to operative standards, it is considered that these issues will be exacerbated without the inclusion of the deep soil area and canopy tree standards.

In this regard, the deep soil area and canopy tree standards will provide for climate resilience (through the provision of deep soil and tree cover) in a way that landscaped area does not on its own achieve. They will by their nature, however, contribute to a vegetated character and amenity that is the purpose of landscaped area. Accordingly, deep soil area can overlap with landscaped area. Through their inclusion within landscaped area (can be 50 per cent of the total landscaped area), deep soil and canopy tree standards will not contribute to any notable loss of potential development yield. The other 50 per cent of landscaped area is sufficient to support that standard's purpose, whilst not necessarily providing for the same degree of climate resilience by not requiring deep soil or trees.

The minimum deep soil area (on a site of 200m<sup>2</sup> - 1,200m<sup>2</sup>) that can be created is 10 per cent of the site, with minimum 3m dimensions. The minimum deep soil area on a larger site (greater than 1,200m<sup>2</sup>) that can be created is 10 per cent of the site with minimum 3m dimensions and if not contiguous, each area must be a minimum of 60m<sup>2</sup>. The canopy tree provision is also based on the area of a site. Sites between 200m<sup>2</sup> - 600m<sup>2</sup> must be able to support 1 small canopy tree (capable to reaching 8m in height and canopy diameter of 6m), sites between 601m<sup>2</sup> - 1,500m<sup>2</sup> must be able to support 1 medium canopy tree (capable of reaching 10m in height and canopy diameter of 8m), and sites greater than 1,501m<sup>2</sup> must be able to support two medium canopy trees or a large canopy tree (capable of reaching 15m in height and canopy diameter of 12m). The importance of minimum dimensions (in addition to area) is to support the establishment of mature vegetation, something that narrow and fragmented deep soil zones fail to do. The metrics applied to the small, medium, and large canopy trees will ensure various tree species can be provided that are appropriate to the corresponding sites area and provide for a proportionate tree canopy cover. By requiring that new canopy trees be planted at specific grades, and by requiring a landscape plan with specific implementation and maintenance specifications, will ensure the trees establish.

There is no depth specified for deep soil areas as structures beneath trees can restrict tree growth and reduce their resilience, as well as restricting stormwater infiltration and carbon storage capacity. The definition included for deep soil area is that there are no obstructing structures above or below ground level. The standards requiring details be provided on a landscape plan are important to ensure the compliance and viability of the deep soil area and canopy tree standards.

There could be constraints within properties such as infrastructure or geological features that may prohibit deep soil. If the deep soil and canopy tree standards cannot be met, the assessment criteria give options to adjoin a reduced/infringed deep soil area in the development site with a deep soil area on an adjacent site (that can help support canopy trees within the development site) and/or providing alternative canopy structures such as green roofs or green walls.

### **Overlays with other standards**

The deep soil area and canopy tree standards can be included in areas identified as landscaped areas. This can help to ensure that half of the total landscaped area requirement is consolidated as deep soil area with the provision of canopy trees. The deep soil area and canopy tree standard can also be included as communal open space where applied (refer Figure 29 below). The deep soil area and canopy tree standard can be included within pervious area to meet impervious areas standards. These opportunities to overlap with other standards ensures the deep soil area and canopy tree standard will have a minimal impact on

development yield, whilst contributing to the objective of creating well-functioning urban environments.



Figure 29: Visual modelling of relationship between deep soil area overlapping with landscaped areas and communal outdoor living spaces.

Deep soil area and canopy tree standards cannot overlap with private outdoor living spaces. This is because private outdoor living spaces do not have the necessary spatial area to support deep soil areas and canopy trees. Also, private outdoor living spaces often have a functional requirement for surfaces and structures that do not support deep soil area and canopy trees, for example, paving. This does not, however, prohibit trees or vegetation being planted in private outdoor living spaces, or this vegetation being included as landscaped area.

### Alternative options considered

An alternative option considered was to include the requirement for deep soil area and canopy trees to form part of an amended landscaped area definition and standard. This option is not preferred due to the prescriptive nature of the Schedule 3A standard that includes landscaped area. As it is a consequential change helping to achieve the objectives and policies of the NPS-UD, the deep soil area and canopy tree standards are applied to MHU and THAB zones, including where the MDRS are inserted.

It is also considered that deep soil area and canopy tree standards have a different purpose (building climate resilience) from landscaped area standards (vegetated character and amenity). In this regard, it is considered appropriate to keep the standards separate to ensure both purposes can be achieved whilst avoiding one being prioritised over the other through dual purpose standards.

Other options considered applying more or less of a site area to deep soil area (capable of supporting a varying number and size of canopy trees). These options were tested through modelling of standards (including other proposed design standards) on various site areas to understand the potential impact on development yield. The deep soil area and canopy standards as proposed are preferred as they give effect to the purpose of the standard whilst having minimal impact on potential development yield as demonstrated by the modelling.



## 12.0 Front, side and rear fences Standards

### 12.1 Proposed Amendments and Statutory Context

The following table provides a summary of the operative and proposed front, side and rear fences/walls standard of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard (Maximum heights of fences/walls)	Summary of Key Proposed Standard	IPI Status
Residential – Low Density Residential Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	Within the front yard, either: (i) 1.4m in height, or (ii) 1.8m in height for no more than 50 per cent of the site frontage and 1.4m for the remainder, or (iii) 1.8m in height if the fence is at least 50 per cent visually open as viewed perpendicular to the front boundary. Within the side, rear, coastal protection, lakeside or riparian yards: 2m.	No change	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Mixed Housing Urban Zone	Within the front yard, either: (i) 1.4m in height, or (ii) 1.8m in height for no more than 50 per cent of the site frontage and 1.4m for the remainder, or (iii) 1.8m in height if the fence is at least 50 per cent visually open as viewed perpendicular to the front boundary. Within the side, rear, coastal protection, lakeside or riparian yards: 2m.	No change	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	Within the front yard, either: (i) 1.4m in height, or (ii) 1.8m in height for no more than 50 per cent of the site frontage and 1.4m for the remainder, or (iii) 1.8m in height if the fence is at least 50 per cent visually open as viewed perpendicular to the front boundary. Within the side, rear, coastal protection, lakeside or riparian yards: 2m.	No change.	Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

This standard is not currently provided for as a density standard in the RMA but is operative within the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The purpose statements for this standard are to provide privacy for dwellings in a way which enables passive surveillance and ensures visual dominance effects are minimised. The standard contributes to quality built environment outcomes by aligning with Part B2.3 of the RPS, particularly B2.3.1(1)(a) and (3), and Policies (1)(a), (b) and (d).

In order to give effect to the levels of density required under the RMA, while continuing to meet Part B2.3 of the RPS, it proposed to retain this standard for specified development in the LDRZ, MHU and THAB zones. The standard is proposed to be applied to the permitted activity of 3 dwellings or less as well as residential restricted discretionary activities both within and outside of walkable catchments.

No changes are proposed to the operative standard.

The standard is currently not listed in the AUP(OP) as a 'standard to be complied with' (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone. The standard is listed as a matter of discretion for this activity. Within the MHU the standard is listed as a standard to be complied with in the activity table for the permitted activity of up to three dwellings per site. An effect of the plan change is to introduce the requirement to comply with the standard in the activity table for dwellings whether permitted or restricted discretionary in the THAB and MHU zones.

## 12.2 Key Issues

### **Background to the AUP(OP) Standard**

The operative standard was discussed and amended through the IHP process prior to the AUP becoming operative. Nicholas Roberts on behalf of Auckland Council identified in his statement of evidence that the PAUP definition of building (excluding a fence up to 2.5m) could result in such fences being erected as a permitted activity. It was also identified in this evidence that fences have an important role in providing for safety and the amenity, health, and well-being of residents<sup>26</sup>.

A balanced approach was required and proposed for the standard which became operative, enabling the erection of fences as a right up to the prescribed height controls depending on the position on the site.

### **Current Performance**

A related focus of the s35 analysis undertaken which relates to this standard was the investigation of the extent to which developments undertook earthworks and the provision of retaining walls. The findings showed that 85 per cent of developments undertook cut and fill on sites in preparation for developments<sup>27</sup>. The AUP(OP) standard which it is proposed to retain applies only to retaining walls provided as a result of fill, not for the cut walls created by earthworks cutting into the site. As evidenced through this analysis and depending on the retaining wall height and its location, poor outcomes can arise in terms of the effects on residential amenity (dominance and shading), whether this is adjoining outdoor living spaces or blocking outlook from habitable rooms. The following image (Figure 30) provides a visual understanding of this issue and the effects of a high retaining wall and fence on outdoor living spaces.

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<sup>26</sup> para 20.25. Statement of evidence of Nicholas Roberts on behalf of Auckland Council planning – Residential Zones 9 September 2015

<sup>27</sup> p22. Section 35 monitoring report (B2.3 Quality Built Environment) of the Auckland Unitary Plan



Figure 30: Photograph of effects of fencing on outdoor living areas when built upon retaining walls.

It was also identified in this analysis that earthworks in many cases contributed to better quality outcomes such as terraced building platforms. These were necessary to enable different housing types or provided visual and / or physical separation to improve privacy and outlooks or reduce dominance effects to adjacent site<sup>28</sup>.

Consideration by the QBE workstream was given to the need for amendment to the operative standard to address the above issues. However, in critical review such an amendment has been rejected given the potential consequences and implications of such a change, including the good outcomes that are also achieved through this outweighing the need to act at this time.

### **Role of Standard**

The provision of boundary fences and walls as a means of enclosure to define separate private living areas and provide privacy between residents within and adjoining developments is a required and accepted feature of residential development. Having a standard within the AUP(OP) which sets out the scope and flexible requirements of such features is considered a positive approach providing clarity and certainty to plan users and developers regarding the expectations and controls of such features which are a consequence of development.

The current operative standard provides a framework that balances visual and amenity considerations (privacy, dominance, and shading) in the controls it sets. The standard has a specific standard for the rear and side boundaries and then recognising the streetscape and character importance of development engaging area specific controls for the front of developments.

The approach put forward represents a continuation of the AUP(OP) approach determined through the IHP process.

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<sup>28</sup> p23. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

## 13.0 Impervious Surface Standards

### 13.1 Proposed Amendments and Statutory Context

The following table provides a summary of the operative and proposed impervious surface standard of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
Residential – Low Density Residential Renamed Zone: Operative Standard is therefore current Residential Single House Zone.	Maximum 60% of site area	No change	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Mixed Housing Urban Zone	Maximum 60% of site area	No change	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	Maximum 70% of site area.	No change.	Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

The standard is not currently provided for as a density standard in the RMA but is operative within the AUP(OP). s80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support or are consequential on the MDRS or policy 3 of the NPS-UD.

The purpose statements for this standard are the same for THAB and MHU zones where the overall intent is to manage stormwater runoff (particularly in response to stormwater network capacity) and flood risk and to support other standards in managing effects of visual dominance (build coverage), amenity (landscaped area) and water quality / ecology (waterbody setbacks). The standard contributes to quality built environment outcomes by aligning with Part B2.3 of the RPS, particularly B2.3.1(1)(a) and 3, and Policies (1)(a).

In order to give effect to the levels of density required under the RMA, while continuing to meet Part B2.3 of the RPS, it is proposed to retain this standard for residential development in the MHU and THAB zones.

No changes are proposed to the operative standard. Accordingly, no changes are necessary to the relevant objectives, policies and assessment criteria.

The standard is currently not listed in the AUP(OP) as a 'standard to be complied with' (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone. The standard is listed as a matter of discretion for this activity. Within the MHU the standard is listed as a standard to be complied with in the activity table for the permitted activity of up to three dwellings per site. An effect of the plan change is to introduce the requirement as a standard to comply with in the activity table for dwelling activities, whether permitted or restricted discretionary.

## 13.2 Key Issues and Standard Development

### Background to the AUP(OP) Impervious Surface Standards

The Council's position during the IHP process was that a standard regarding maximum impervious surface area was required to manage the effects of residential development on infrastructure. This mainly relates to avoiding health and safety implications of an overwhelmed stormwater system (either onsite or the wider network), potentially leading to flooding and impacts on the safety and quality of the urban environment. Maximum impervious surface area is relevant for considering the development intent of the various zones and in the design and sizing of stormwater network solutions.

Dr. Claudia Hellberg provided evidence on behalf of Auckland Council on the level of coverage<sup>29</sup>. Relevantly, she noted that the 60 per cent and 70 per cent coverages proposed represent a smoothing/averaging of existing areas under the, then, operative district plans. She further expanded, that in conjunction with the restricted discretionary activity status, the proposed framework will enable effective management of stormwater runoff effects given Auckland's constraints.

### Impervious Surface Standards

The plan change proposes to retain the maximum impervious surface area standards to manage the planning effects outlined above.

The standard will continue to enable a minimum of 30 per cent (THAB) and 40 per cent (MHU and LDR) of relevant development sites to be pervious for stormwater management.

The impervious areas can be provided within the landscaped, amenity and paving areas (as long as pervious) required by other standards. As outlined in further detail in chapter 17 of this report this standard has been modelled cumulatively with other proposed standards to understand the impact of development yield and the delivery of the relevant intensities of development envisaged in the zones.

## 14.0 Daylight Standards

### 14.1 Proposed Amendments and Statutory Context

The following table provides a summary of the operative and retained daylight standard of the AUP(OP) within the identified zones.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
Residential – Mixed Housing Urban Zone	Any part of a building higher than 3m opposite buildings within the same site is limited in height to twice the horizontal distance.	No change	S77G(7)

<sup>29</sup> Statement of evidence of Claudia Hellberg on behalf of Auckland Council – 8 September 2015.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
Residential – Terrace Housing and Apartment Buildings Zone	Any part of a building higher than 3m opposite buildings within the same site is limited in height to twice the horizontal distance	No change.	S77G(7)

This standard is not currently provided for as a density standard in the RMA but is operative within the AUP(OP).

While the purpose statements for this standard vary between the THAB (Standard H6.6.14) and MHU (Standard H5.6.13) zones, the overall intent is to ensure habitable rooms have adequate daylight, outlook and a sense of space, while ensuring visual dominance effects are managed. The standard contributes to quality built environment outcomes by aligning with Part B2.3 of the RPS, particularly B2.3.1(1)(a) and (3), and Policies (1)(a).

In order to give effect to the levels of density envisaged by the intensification instruments of the RMA, while continuing to meet Part B2.3 of the RPS, it is proposed to retain this standard as a built form standard for residential development in the MHU and THAB zones. The standard is proposed to be applied restricted discretionary activities but not permitted development of 3 dwelling or less.

No changes are proposed to the operative standard. Accordingly, no changes are necessary to the relevant objectives, policies and assessment criteria.

The standard is currently not listed in the AUP(OP) as a ‘standard to be complied with’ (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone. The standard is listed as a matter of discretion for this activity. Within the MHU the standard is listed as a standard to be complied with in the activity table for the permitted activity of up to three dwellings per site. An effect of the plan change is to introduce the standards as one of compliance within the activity table for dwelling activities whether permitted or restricted discretionary in the MHU zone and restricted discretionary in the THAB zone.

## 14.2 Key Issues and Standard Development

Daylight plays a significant role in the overall amenity of a development. It contributes to people’s sense of wellbeing and offers connection to the outside environment. The importance of daylight for residential units is underscored in that it is a legal requirement under the New Zealand Building Code 1992 (Clause G7 Natural Light).

The purpose of the current daylight standard is, in combination with the outlook control, to manage effects and enable daylight to the habitable rooms of buildings on the same site. Nicholas Roberts, Council planning noted on this matter in his IHP evidence and with consideration of evidence submitted on the proposed standard that it is considered the ensuring adequate access to daylight is essential to achieve the quality living environment objectives of the residential zones, and to enable the consequential benefits to health and social wellbeing

(as set out in the RMA).<sup>30</sup> The proposed control provides flexibility in design responses, while also providing clarity to applicants about what is acceptable.

The retained daylight standard for 4+ restricted discretionary residential development acts alongside the proposed outlook space standard. The two standards together will ensure that a reasonable level of daylight is provided to habitable rooms and that those rooms have an outlook and sense of space, particularly at the upper levels.

Modelling has been undertaken to understand the effect of the retained daylight standards on the intensification provisions being brought forward in giving effect to NPS-UD policy. The following models depict a six storey development in the walkable catchment of the THAB zone with no daylight controls, and then the effect of applying the daylight standard in conjunction with the outlook space standard. The models assume the principal living spaces are located on the side elevation of the building. The scenario shown is two buildings located on the same site. This modelling results in a 10.5m separation between buildings in this scenario and internal arrangement as a demonstration of the potential effect of the retained daylight standard. This scenario could equally apply to two buildings on adjacent sites.



Figure 31: Potential adjoining six storey developments with no daylight controls.

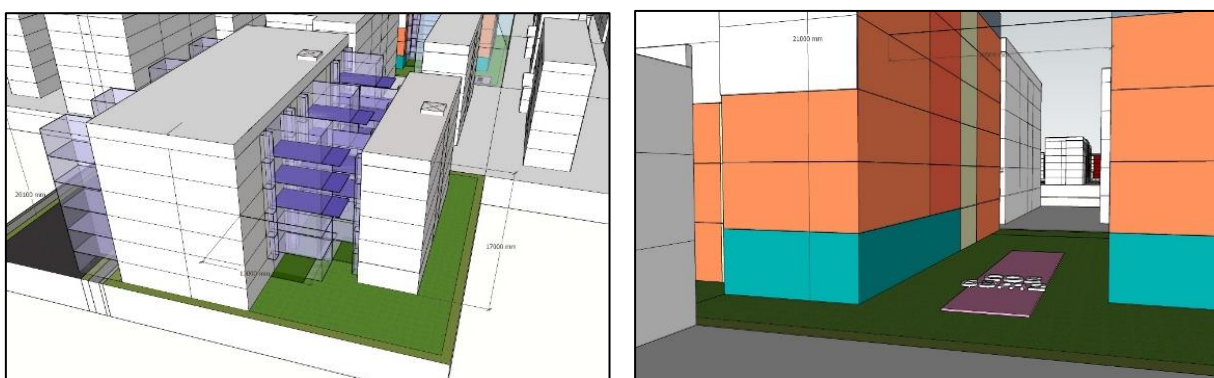


Figure 32: Modelled 6 storey development applying outlook space and daylight controls. Showing 10.5 m building separation provided in this.

<sup>30</sup> para 5.54(c). Statement of rebuttal evidence of Nicholas Roberts on behalf of Auckland Council planning – Residential Zones 6 October 2015

# 15.0 Minimum Dwelling Size Standards

## 15.1 Proposed Amendments and Statutory Context

The following table provides a summary of the operative and proposed minimum dwelling size standards of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
Residential – Mixed Housing Urban Zone	Dwellings must have a minimum net internal floor area as follows: (a) 30m <sup>2</sup> for studio dwellings. (b) 45m <sup>2</sup> for one or more bedroom dwellings.	No change	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	Dwellings must have a minimum net internal floor area as follows: (a) 30m <sup>2</sup> for studio dwellings. (b) 45m <sup>2</sup> for one or more bedroom dwellings.	No change.	Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

This standard is not currently provided for as a density standard in the RMA but is operative within the AUP(OP). s80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The purpose statements for this standard are the same for THAB (Standard H6.6.17) and MHU (Standard H5.6.16) zones where the overall intent is to ensure dwellings are designed to be functional and of a sufficient size as to provide for the needs of residents. The standard contributes to quality built environment outcomes by aligning with Part B2.3 of the RPS, particularly B2.3.1(1)(a) and (3), and Policies (1)(a) and (e).

In order to give effect to the levels of density required under the RMA, while continuing to meet Part B2.3 of the RPS, it is proposed to retain this standard as a built form standard for residential development in the MHU and THAB zones. The standard is proposed to be applied to residential restricted discretionary activities both within and outside of walkable catchments.

No changes are proposed to the operative standard. Accordingly, no changes are necessary to the relevant objectives, policies, and assessment criteria.

The standard is currently not listed in the AUP(OP) as a ‘standard to be complied with’ (as listed in the zone activity table) for four or more dwellings. As a restricted discretionary activity within the THAB and MHU zone. The standard is listed as a matter of discretion for this activity. An effect of the plan change is to introduce the standard as one to comply with in the activity table for dwelling activities where restricted discretionary in the MHU and THAB zone.

## 15.2 Key Issues and Standard Development

### Background to the AUP(OP) Minimum Dwellings



As identified in Nicholas Roberts Statement of Evidence in the IHP of the AUP minimum dwellings size controls were proposed to achieve objectives relating to quality living environments, providing dwellings that are functional and of a sufficient size to provide for the day to day needs of residents<sup>31</sup>.

Consideration through that process was given to other approaches than the standard to achieve these outcomes including relying on the building consent process. This was discounted on basis of lack of clarity for enforcement and importance of this aspect of the development as a consideration at resource consent stage.

The minimum dwelling size were reduced and amended during the IHP process to be established at 30m<sup>2</sup> for studios and 45m<sup>2</sup> requirement for one bedroom apartments. With balconies able to be internalised if an additional 5m<sup>2</sup> above these minimum levels is provided.

In the Council Decisions Report to the IHP recommendations it was noted that the Building Act does not address social or design quality effects associated with small dwellings, that living environments associated with such dwellings require internal living space which are functional and provide for amenity to meet day to day needs of residents<sup>32</sup>. The standard would assist with maintaining social wellbeing go the community, support social cohesion and thereby support further intensification within urban environments.

### **Current Performance**

The AUP(OP) is primarily market led in respect to building typologies, having the same package of provisions for different residential typologies in the residential zones.

The s35 monitoring report reviewed the internal area size of sampled residential units and found that over 90 per cent of dwellings were at least 50m<sup>2</sup> demonstrating a high level of compliance with the minimum dwelling's standard. Only 1 per cent of dwellings fell between 30m<sup>2</sup> – 40m<sup>2</sup>. In reviewing this level of compliance, it should be recognised that both a 1 bed or a 5 bedroom dwelling needs to achieve the same 40m<sup>2</sup> minimum dwelling standard<sup>33</sup>.

### **Proposed Standard**

In giving effect to RMA and the intensification provisions of the NPS-UD, the plan context is likely to lead to increasingly more intensive forms of housing including terraces but in particular higher density apartments which are expected to increase the proportion of smaller dwellings in Auckland's housing market. The current standard which it is proposed to retain has been successful in terms of compliance as evidenced in the s35 monitoring report and remains important to ensure that the baseline of amenity and function provided by the standard is maintained.

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<sup>31</sup> para 20.47. Statement of evidence of Nicholas Roberts on behalf of Auckland Council planning – Residential Zones 9 September 2015

<sup>32</sup> p50. Auckland Council Decisions Report

<sup>33</sup> p79. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council

## 16.0 Residential Waste Management

### 16.1 Proposed Amendments and Statutory Context

The following table provides a summary of the proposed residential waste collection standards of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
Residential – Mixed Housing Urban Zone	N/A	<u>On-site storage of individual or communal bins:</u> Individual = space 1.4m <sup>2</sup> Communal = solid waste calculator <u>Collection requirements:</u> If kerbside – 1m per dwelling clear/unobstructed If onsite - adequate manoeuvring area; and accessible for collection	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	N/A	<u>On-site storage of individual or communal bins:</u> Individual = space 1.4m <sup>2</sup> Communal = solid waste calculator <u>Collection requirements:</u> If kerbside – 1m per dwelling clear/unobstructed If onsite - adequate manoeuvring area; and accessible for collection	Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

This proposed standard is not provided for under Schedule 3A of the RMA or the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The overall intent of this standard is to ensure sufficient, accessible provision of space for the storage and collection of residential waste bins. The presence of rubbish and waste bins has the potential to generate adverse effects on amenity and to the health and safety of people.

Increased density as a result of giving effect to the RMA is anticipated to increase demand for waste collection. The proposed standard is considered necessary to ensure that in giving effect to the RMA, development continues to achieve quality built environment outcomes. Specifically, the proposed standard responds to RPS objectives B2.3.1(1)(a) and (3), and policies B2.3.2(1)(a), (b), (d), (e) and (5).

For the reasons discussed above and in the analysis below, the standard contributes to quality built environment outcomes, including RPS objectives B2.3.1(1)(a), (2) and (3), and policies B2.3.2(1)(a) and (5). It is proposed to be applied to both permitted and restricted discretionary activities as a built form standard in MHU, THAB and Walkable Catchment zones.

## 16.2 Key Issues and Standard Development

### Introduction

Every dwelling needs to be designed to ensure the efficient, storage, separation, collection and handling of domestic waste to maximise resource recovery and provide safe and healthy spaces for people to live. The current provisions within the Auckland Unitary Plan have failed to deliver this outcome, with multiple examples where inadequate provision of space for waste has led to negative consequences for future residents, the street network and the environment. Planning controls are required so that Auckland Council meets its basic legislative requirements as a territorial authority to ensure appropriate waste services are provided that also deliver on Auckland's commitments to zero waste and climate change mitigation. The controls need to cater and be responsive to different scales of developments.

### Current Performance

The Section 35 monitoring report findings showed waste management is a significant issue in terms of on-site storage, residents' access, amenity and the method of waste collection. There are also implications for the operational aspects of waste collection services (public and private), value for money (residents and council), and meeting waste reduction objectives to address climate change<sup>34</sup>.

The monitoring showed the AUP(OP) (reliance on one assessment criteria applying to developments of 4 or more dwelling) is not effectively to managing on-site waste or collections. Council's Waste Management and Minimisation Bylaw 2019 applies to developments of 10 or more dwellings and the NZ Building Code G15 – Solid Waste provide some rules and a strategic framework for managing waste. However, this needs to be complemented with appropriate management for the type, scale and location of the development in all scales of development. Every household needs to manage waste efficiently. This includes on-site bin storage space as well as access and space for either private or public collections (on-site or street kerb).

There are space, hygiene, safety, amenity and operational aspects of waste management that affect the quality and functionality of residential developments and urban environments. Consent plans and observations from site visits from the monitoring showed there is insufficient consideration for waste management in many developments. There is also a disparity between commitments to waste management in resource consents with waste management plans and a lack of implementation for access and facilities (including waste storage) on site.

The relevant recommendations from the s35 monitoring are<sup>35</sup>:

- Develop a new standard for managing residential waste on all residential zone sites – including but not limited to bin storage location, screening, hygiene, access and collection of waste bins.

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<sup>34</sup> p94. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

<sup>35</sup> p95. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

- Require a waste management plan for sites of four dwellings or more in residential zones and all residential developments in the Business – Mixed Use zone.

These recommendations have been considered and addressed in the standard proposed.

A standard is the most appropriate method to ensure residential waste management is provided in all residential developments, regardless of scale, or whether it is permitted or RD activity status. The standard will require developments containing 10 or more dwellings to provide and implement a waste management plan. This will manage the complexities of higher density developments.

### Achieving a compact urban environment

Provisions for collections within a site and from the kerbside are essential to achieve efficiency of private and public land as the storage space provided correlates directly to the ability of residents to efficiently separate waste materials. The type, provision and location of storage space directly affects the collection frequency and methods.

Inadequate waste storage provision directly impacts residents' ability to properly separate and divert their waste. Developments using individual bins require a total storage space of 1.4m<sup>2</sup>. This is equivalent to the maximum volume provided to each individual dwelling by the Auckland Council kerbside collection service for separated refuse, recycling and food scraps. Figure 33 shows the space requirements for three types of waste bins.

For developments using communal bins, developers will need to refer to the Auckland Council's Solid Waste Calculator<sup>36</sup> to determine the amount of storage space required. The space required will be different for each development depending on the number of dwellings and occupancy, bin sizes selected, and collection frequency.

Inadequate provision of waste storage areas can lead to arrangement for collections multiple times per week, costing more than the alternative weekly Council collection. As the number of times a site needs to be serviced each week increases, so does the risk of impacts on health, safety and amenity for the residents, waste collectors, neighbouring properties, and general road-users (both pedestrians and vehicles). High frequency collection which the proposed standards will ensure facilities are provided to avoid, also does not encourage waste minimisation.

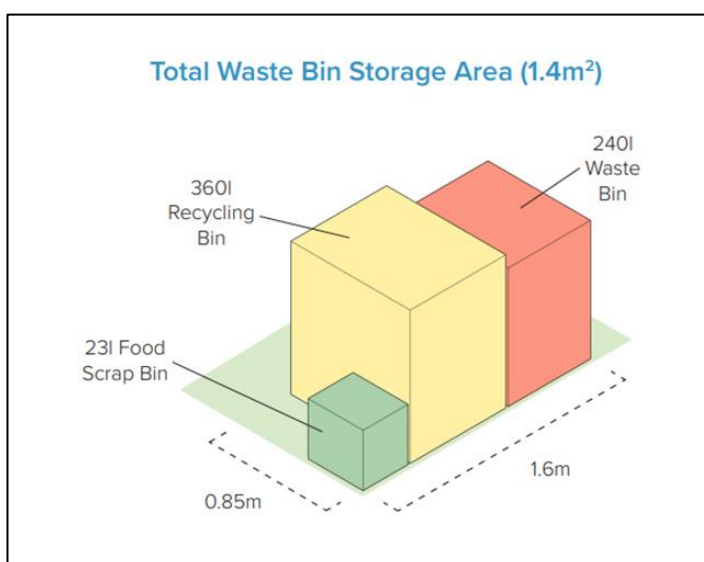


Figure 33: Space requirements for three types of waste bins.

<sup>36</sup> <https://www.aucklanddesignmanual.co.nz/resources/tools/swc>

Bin storage locations and collection points must be accessible and convenient for collectors and residents. They need to avoid access through dwellings, across unpaved surfaces, landscaped areas, steps or steep gradients which would make access and collection difficult.



*Figure 34: The first image (top left) shows waste bins stored on the public berm in the front of the property and in the side yard on the landscaped area adjacent to the primary pedestrian footpath for two further dwellings at the rear of the site. The second and third image show waste bins stored at the front of dwellings where they encroach on footpaths designed to provide safe pedestrian access and are visible to the street which detracts from the amenity of the site and urban environment. These locations illustrate poor outcomes when no spatial considerations are given to on-site waste storage from the S.35 monitoring site visits.*

The following images show the incorporation of effective waste storage arrangements which the standard seeks to secure from development moving forward. Waste bins should be visually screened from the street, pedestrian footpaths within the site, shared driveways, outlook spaces, outdoor living areas, adjacent sites and neighbouring dwellings. This ensures the

storage of waste bins is spatially provided for in locations that minimise visibility or/and can be physically screened so they are not visible within the site, street and adjacent sites.



Figure 35: The left image shows a white fenced enclosed area to the right of the property which visibly screens the waste bins from the street while maintaining convenient access for residents. This dwelling is in Hobsonville where developments comply with design requirements set by the Hobsonville Land Company (now Kainga Ora). This requires rubbish bins be sited so as not to compromise outdoor living courts, be visually obtrusive and to be out of the view from the street. The right image shows communal waste bins stored in a well designed, ventilated, easily accessible communal waste area with good access for residents and on-site waste collection.

The proposed standard aligns with the amenity aspects of waste storage and accessibility as specified in the Design Element R7 Design for Residential Waste<sup>37</sup> and the NZ Building Code (2004)<sup>38</sup>.

### Waste collection

Waste management needs to be well-functioning and meet operational requirements for both residents and collectors. One of the most significant issues for waste management is collection. The growth enabled by the intensification provisions will create even more pressure on street environments to accommodate waste bins for collection where a significant issue already exists. This will be through the cumulative impact of multi-unit developments requiring space on streets for kerbside collection.

To manage this issue, the amount of kerb space for waste bins on a street to enable council kerbside collection service is a key determinant of the type of waste collection possible for a site.

Waste servicing from private waste collectors has the potential to significantly impact the flows of traffic around the city. It is the experience of council's Waste Management team when assessing waste management plans required under the Waste Minimisation Bylaw that many developers opt for a private waste collection from the outset, assuming a private service provider will be more adaptable and less intrusive than a council collection. If the storage space is inadequate and requires more frequent collections or the storage area is inaccessible to

<sup>37</sup> [https://content.aucklanddesignmanual.co.nz/regulations/design-for-the-rules/Documents/Design\\_Element\\_R7\\_Design\\_for\\_Waste.pdf](https://content.aucklanddesignmanual.co.nz/regulations/design-for-the-rules/Documents/Design_Element_R7_Design_for_Waste.pdf)

<sup>38</sup> <https://www.building.govt.nz/assets/Uploads/building-code-compliance/g-services-and-facilities/g15-solid-waste/asvm/g15-solid-waste-amendment-3.pdf>

collection vehicles, private collectors will be required. There may also be extra costs to residents for this additional level of service.

There are options for different types of on-site collection:

- a collection vehicle entering the site with provision for a driveway, manoeuvring space for reversing and a loading area for a truck of an appropriate size to collect either individual or communal bins.
- a kerbside collection service where the collection service hand-wheel bins out to the waiting vehicle and then return them to the storage area.

Both options have implications for the spatial arrangement of the site and may affect the amount of development possible. The type of collection must be included in the site planning stage of developments as the spatial requirements for waste collection vehicles access, manoeuvring and loading can be significant

Waste storage areas need to be designed to hold a week's worth of refuse, food scraps and recycling. With respect to this, it is proposed that permitted collection methods should be limited to kerbside collections (individual bins placed out for collection on the kerbside) or on-site collections (individual or communal bins collected from within the site).



Figure 36: Shows waste management collection is becoming a significant issue for multi-dwelling developments. Waste bins for kerbside collections consume footpaths, forcing pedestrians onto the carriageway creating road safety risks.

## Waste Management and Minimisation Bylaw 2019<sup>39</sup>

The Waste Management and Minimisation Bylaw 2019 encourages a transformation in the way Aucklanders reduce, recycle, reuse and recover resources to help Auckland achieve a zero-waste future. The purpose of the bylaw is to manage and minimise waste, protect the public from health and safety risks and nuisance, and to manage the use of council-controlled public places by, among other things:

The current AUP(OP) provisions has resulted in frequent examples where waste storage is an afterthought, and then becomes a problem for both residents and collectors. Council's Compliance Monitoring team deals with ongoing site issues created by this failure to address

<sup>39</sup> <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/bylaws/docs/wasteminmgmtbylaw/waste-management-minimisation-bylaw-2019.pdf>

the spatial and operational requirements for waste management at the start of the development design process. This can lead to complaints from road users (pedestrians, cyclists and vehicles), site occupants, and neighbouring properties that their safety and amenity is being impacted. It is anticipated that the proposed residential waste management standards will provide much needed clarity on waste storage and collection responsibilities.

## Climate change resilience

Waste makes up 3.1 per cent of Auckland's greenhouse gas emissions profile, and heavy vehicle transport emissions a further 6.8 per cent<sup>40</sup>. The Government's first Emissions Reduction Plan (ERP) recognises the fundamental role waste reduction, in particular removing organic material such as food waste from landfill, will have in helping Aotearoa New Zealand achieve its 2050 emissions reduction target<sup>41</sup>. A ban on organic waste to landfill by 2030 is being explored as part of the ERP.

The C40 Cities Climate Leadership Group is a group of over 90 global cities that are committed to taking bold climate action, leading the way towards a healthier and more sustainable future.

Auckland has been recognised as an Innovator City within the C40 Cities network since 2015, and Auckland's Mayor has signed the C40 Cities Zero Waste Declaration, which commits to:

- cutting the amount of waste generated by each citizen by 15 per cent by 2030
- reducing the amount of waste sent to landfills and incineration by 50 per cent
- increasing the diversion rate to 70 per cent by 2030.

The Zero Waste Auckland programme is a key part of Te Tāruki a Tāwhiri: Auckland's Climate Plan commitments to reduce total emissions, by reducing waste to landfill by 30 per cent by 2027 and reach net zero waste by 2040.

On 8 June 2022 Auckland Council's Finance and Performance Committee approved a significant policy shift in the Waste Management and Minimisation Plan 2018 that will, among other things, significantly reduce refuse vehicle emissions by reducing the number of collection vehicles on Auckland roads. From 2025, for the properties serviced by the standard Auckland Council services, bin sizes, access and collection frequency are being carefully designed to optimise diversion behaviour and influence waste reduction. These efforts are at odds with - and risk being undermined by - developers who do not meet the same standards or provide equitable access for individual households to achieve optimum waste reduction and diversion opportunities.

Sites using the Auckland Council service may eventually be serviced as infrequently as once per fortnight or once per month, while multi-unit sites without minimum waste storage requirements may need to be serviced five or seven times per week, undermining Auckland Council's plan to reduce emissions refuse and recycling trucks.

From an emissions perspective, increasing the number of sites requiring daily collections or multiple collections per week could be calculated to estimate the tonnes of CO<sub>2</sub>-e produced by the additional collection vehicles required to be on Auckland's roads each day to service these sites.

For example, if an additional 66,000 multi-unit dwellings are constructed Auckland by 2031 were on a weekly rather than daily collection of their refuse, recycling and food scraps, Auckland

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<sup>40</sup> p42. Te Tāruke-ā-Tāwhiri: Auckland Climate Plan

<sup>41</sup> <https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf>



would be able to save 4,200 t CO<sub>2</sub>-e / year or the equivalent of removing 2,500 cars off the road.

Keeping food waste out of landfill and preventing methane emissions is a key part of Zero Waste Auckland. The importance of this work programme to climate mitigation has recently been recognised by central government through an announcement all households in New Zealand's urban centres will need to be provided with a kerbside food scraps collection by councils, and all businesses will be required to separate food waste from general waste.

Individual households also need to be provided with the best infrastructure to facilitate dry recycling. Avoided emissions from increasing household recycling rates is significant because it prevents the need to mine/harvest virgin materials (glass, paper, metal) and petrochemicals (plastics).

Poor waste diversion behaviours begin to present themselves when residents have to walk longer distances from their property to a communal waste bin, (currently only able to be controlled in the NZ Building Code 2004 which is too late in the development phase). Where communal bins are used, personal responsibility reduces, and Council's ability to enforce against bin contamination issues is reduced. Evidence shows that diversion rates drop if residents are not provided with a means to keep recycling, food and general waste separated from one another until they can deposit these three waste streams into the appropriate bins.

WRAP UK data shows that individual food scraps bins divert 57 per cent more food scraps than communal bins, and Auckland Council waste audits showed a 25 per cent increase in dry recycling diversion when households have individual bins over communal bins.

## 17.0 Development Yield from Proposed Standards

To assess the implications on development yield of the proposed standards and the ability to enable the intensification provisions sought by the RMA whilst having regard to the identified QBE outcomes, three dimensional design modelling has been undertaken. This is presented in detail within the following two reports:

- Terrace Housing Residential Development Study, produced by the Tamaki Makaurau Design Ope, Auckland Council.
- Apartment Residential Development Testing, produced by Jasmax.

The terrace housing study compares the operative and proposed yield of notional development models within the MHU and THAB zone. The apartment study compares the operative and proposed yield of apartment development models within the THAB zone which is a typology of housing and development particularly anticipated in this zone given the planned character and heights enabled.

These yield studies provide a comparison and understanding of the effect of the proposed changes on the development of a site where in both the operative and proposed modelled scenarios the zoning is the same. However, it is important to recognise that alongside these changes to zone provisions, geographic changes to the zoning of land within Auckland are also proposed. Notably the increase in MHU and THAB zoned land (including the introduction of walkable catchments) will in itself significantly increase the planned development capacity of Auckland, before considering the intensification amendments proposed to the zone chapters of the AUP within PPC78.

## Consideration of Proposed Plan Change 79: Transport

Alongside PPC78, the Council is advancing PPC79: Transport which proposes amendments and new standards which would be applicable to the residential development modelled in these yield studies. Notably the following PPC79 proposed standards have therefore been included within the modelling (where triggered) alongside the PPC78 standards.

- Residential Accessible Parking (10+ units).
- Residential Bike Parking.
- Vehicle Access and Manoeuvring Space (10+ units).

Given this context, including these relevant PPC79 standards within the modelling has been considered to provide a more robust position than undertaking modelling in isolation to PPC78. It is recognised that these standards are subject to a separate plan change. It is noted that if the modelling had been undertaken in isolation (only PPC78 standards) certain modelled development scenarios may see a minor increase in yield.

## **Terrace Housing Residential Development Study**

### **Key Assumptions**

Sites: Development of the following three site sizes are tested:

1. Typical site: 18m x 44.5 (site area 801m<sup>2</sup>).
2. Large site: 40m x 40m (site area 1600m<sup>2</sup>).
- 2b. Large site: 36m x 60m (site area 2100m<sup>2</sup>).
3. Small site: 10m x 30m (site area 300m<sup>2</sup>).

Site 2b has specifically been included for the MHU and THAB zone to demonstrate the effect on yield of additional requirements of proposed standards that are triggered at the provision of 20+ dwellings. These matters are more likely to be consistently relevant to apartment residential development.

Development Scenarios: For each of these site scenarios the following residential development/activity options are tested within the MHU and THAB zone:

1. Existing operative standard complying development (4+ dwellings restricted discretionary).
2. Proposed standard complying development (4+ dwellings restricted discretionary).

Site Access: The following scenarios for access site arrangements and site parking are tested.

1. Vehicle and pedestrian accessways.
2. Vehicle and pedestrian accessways (grouped central parking area).
3. Pedestrian only accessway (accessible parking and loading manoeuvre space provided as required by site size/dwelling numbers).

The report also provides modelling to demonstrate the effective incorporation of MDRS as a permitted activity within the zones. Modelling potential three unit terraced development on a typical site inclusive of the proposed standards.

### **Summary of Findings**

The below table compares the operative standards against the proposed standards for restricted discretionary dwellings in the MHU and THAB zone outlining the units, gross floor area and estimated occupancy arising across the different site sizes and accessway scenarios.

**Table 17.1 Terraced Housing MHU and THAB Zone: Comparison of yield arising from operative and proposed standards (RD 4+ Dwellings).**

			MHU ZONE						THAB ZONE					
AUP STATUS			MHU OPERATIVE			PROPOSED RD (4+)			THAB OPERATIVE			PROPOSED RD (4+)		
SITE SIZE	SITE ACCESS		UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY
TYPICAL SITE 18M X 44.5M	VEHICLE AND PEDESTRIAN ACCESSWAY	2 Bedroom	0			0			1					
		3 Bedroom	4			6			4			6		
		<b>Total Units</b>	<b>4</b>	<b>540m<sup>2</sup></b>	<b>15</b>	<b>6</b>	<b>810m<sup>2</sup></b>	<b>23</b>	<b>5</b>	<b>675m<sup>2</sup></b>	<b>19</b>	<b>6</b>	<b>810m<sup>2</sup></b>	<b>23</b>
	V & P ACCESWAYS (GROUPED PARKING)	2 Bedroom	4			1			3			1		
		3 Bedroom	2			5			3			5		
		<b>Total Units</b>	<b>6</b>	<b>476m<sup>2</sup></b>	<b>18</b>	<b>6</b>	<b>578m<sup>2</sup></b>	<b>21</b>	<b>6</b>	<b>510m<sup>2</sup></b>	<b>19</b>	<b>6</b>	<b>612m<sup>2</sup></b>	<b>23</b>
	PEDESTRIAN ONLY ACCESS	2 Bedroom	9			1			4			1		
		3 Bedroom	0			8			5			9		
		<b>Total Units</b>	<b>9</b>	<b>612m<sup>2</sup></b>	<b>23</b>	<b>9</b>	<b>884m<sup>2</sup></b>	<b>33</b>	<b>9</b>	<b>782m<sup>2</sup></b>	<b>29</b>	<b>9</b>	<b>918m<sup>2</sup></b>	<b>34</b>
			MHU OPERATIVE			PROPOSED RD (4+)			THAB OPERATIVE			PROPOSED RD (4+)		
SITE SIZE	SITE ACCESS		UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY
LARGE SITE 40M X 40M	VEHICLE AND PEDESTRIAN ACCESSWAY	2 Bedroom	0			0			0			0		
		3 Bedroom	14			14			14			14		
		<b>Total Units</b>	<b>14</b>	<b>1890m<sup>2</sup></b>	<b>53</b>	<b>14</b>	<b>1890m<sup>2</sup></b>	<b>53</b>	<b>14</b>	<b>1890m<sup>2</sup></b>	<b>53</b>	<b>14</b>	<b>1890m<sup>2</sup></b>	<b>53</b>
	V & P ACCESWAYS (GROUPED PARKING)	2 Bedroom	4			2			2			0		
		3 Bedroom	8			10			10			12		
		<b>Total Units</b>	<b>12</b>	<b>1088m<sup>2</sup></b>	<b>40</b>	<b>12</b>	<b>1156m<sup>2</sup></b>	<b>43</b>	<b>12</b>	<b>1156m<sup>2</sup></b>	<b>43</b>	<b>12</b>	<b>1224m<sup>2</sup></b>	<b>45</b>
	PEDESTRIAN ONLY ACCESS	2 Bedroom	0			0			0			0		
		3 Bedroom	14			14			14			14		
		<b>Total Units</b>	<b>14</b>	<b>1428m<sup>2</sup></b>	<b>53</b>	<b>14</b>	<b>1428m<sup>2</sup></b>	<b>53</b>	<b>14</b>	<b>1428m<sup>2</sup></b>	<b>53</b>	<b>14</b>	<b>1428m<sup>2</sup></b>	<b>53</b>
			MHU OPERATIVE			PROPOSED RD (4+)			THAB OPERATIVE			PROPOSED RD (4+)		
SITE SIZE	SITE ACCESS		UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY
LARGE SITE 2b 36M x 60M	VEHICLE AND PEDESTRIAN ACCESSWAY	2 Bedroom	0			0			0			0		
		3 Bedroom	14			17			18			17		
		<b>Total Units</b>	<b>14</b>	<b>1890m<sup>2</sup></b>	<b>53</b>	<b>17</b>	<b>2295m<sup>2</sup></b>	<b>64</b>	<b>18</b>	<b>2430m<sup>2</sup></b>	<b>68</b>	<b>17</b>	<b>2295m<sup>2</sup></b>	<b>64</b>
	V & P ACCESWAYS (GROUPED PARKING)	2 Bedroom	3			2			2			2		
		3 Bedroom	14			15			15			15		
		<b>Total Units</b>	<b>17</b>	<b>1632m<sup>2</sup></b>	<b>60</b>	<b>17</b>	<b>1666m<sup>2</sup></b>	<b>61</b>	<b>17</b>	<b>1666m<sup>2</sup></b>	<b>61</b>	<b>17</b>	<b>1734m<sup>2</sup></b>	<b>64</b>
	PEDESTRIAN ONLY ACCESS	2 Bedroom	2			0			2			0		
		3 Bedroom	22			22			22			22		
		<b>Total Units</b>	<b>24</b>	<b>2380m<sup>2</sup></b>	<b>88</b>	<b>22</b>	<b>2244m<sup>2</sup></b>	<b>83</b>	<b>24</b>	<b>2380m<sup>2</sup></b>	<b>88</b>	<b>22</b>	<b>2244m<sup>2</sup></b>	<b>83</b>
			MHU OPERATIVE			PROPOSED RD (4+)			THAB OPERATIVE			PROPOSED RD (4+)		
SITE SIZE	SITE ACCESS		UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY
		2 Bedroom	0			0			0			0		

SMALL SITE 10M X 30M	VEHICLE AND PEDESTRIAN ACCESSWAY	3 Bedroom	1			1			1			2		
		<b>Total Units</b>	<b>1</b>	<b>135m<sup>2</sup></b>	<b>4</b>	<b>1</b>	<b>135m<sup>2</sup></b>	<b>4</b>	<b>1</b>	<b>135m<sup>2</sup></b>	<b>4</b>	<b>2</b>	<b>270m<sup>2</sup></b>	<b>8</b>
	V & P ACCESWAYS (GROUPED PARKING)	2 Bedroom	1			1			0			0		
		3 Bedroom	0			1			1			2		
		<b>Total Units</b>	<b>1</b>	<b>68m<sup>2</sup></b>	<b>3</b>	<b>2</b>	<b>170m<sup>2</sup></b>	<b>6</b>	<b>1</b>	<b>102m<sup>2</sup></b>	<b>4</b>	<b>2</b>	<b>204m<sup>2</sup></b>	<b>8</b>
	PEDESTRIAN ONLY ACCESS	2 Bedroom	1			0			1			0		
		3 Bedroom	0			2			1			2		
		<b>Total Units</b>	<b>1</b>	<b>68m<sup>2</sup></b>	<b>3</b>	<b>2</b>	<b>204m<sup>2</sup></b>	<b>8</b>	<b>2</b>	<b>170m<sup>2</sup></b>	<b>6</b>	<b>2</b>	<b>204m<sup>2</sup></b>	<b>8</b>

### Discussion and Key Findings

The zones were selected for terraced housing yield testing as the zone where the majority of two to three level terraced houses are currently built and also given the size of these zones applying to most of Auckland's urban areas.

The study looks at both the MHU and THAB zone where the proposed density standards on building coverage, yards, outdoor living and landscaped areas which have a key role in determining building footprint and yield are the same for 4+ dwelling RD activities (within and outside walkable catchments). Whilst height and HIRB standards do diverge between these zones these are more likely to enable taller terraced houses rather than a very significant increase in the number provided on a site for this housing typology. It is therefore apparent as demonstrated in the yield information that if a site is developed with terraces rather than apartments in the THAB zone, the yield outcomes (particularly in relation to units) will likely be very similar as those in the MHU zone.

The results of the yield testing demonstrate that in each of the site access arrangements and site sizes tested, cumulatively the proposed standards either broadly retain a similar existing relatively higher intensity residential zoning and yield sought in these areas or see an increase on the yield. The following table demonstrates the comparative outcomes achieved and displayed in the modelling.

**Table 17.2 Terraced Housing MHU Zone: Summary comparison of yield arising from operative and proposed standards (RD 4+ Dwellings).**

	VEHICLE AND PEDESTRIAN ACCESSWAY			V & P ACCESWAYS (GROUPED PARKING)			PEDESTRIAN ONLY ACCESS		
	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE
UNIT INCREASE	2 (50%)	0%	0%	0%	0%	1 (100%)	0%	0%	1 (100%)
GFA INCREASE	50%	0%	0%	21.4%	6.2%	150%	44.4%	0%	200%
OCCUPANCY INCREASE	53.3%	0%	0%	16.7%	7.5%	100%	43.4%	0%	166%

**Table 17.3 Terraced Housing THAB Zone: Summary comparison of yield arising from operative and proposed standards (RD 4+ Dwellings).**

	VEHICLE AND PEDESTRIAN ACCESSWAY			V & P ACCESWAYS (GROUPED PARKING)			PEDESTRIAN ONLY ACCESS		
	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE
UNIT INCREASE	1 (20%)	0%	1 (50%)	0%	0%	1 (50%)	0%	0%	0%
GFA INCREASE	20%	0%	100%	20%	5.8%	100%	17.3%	0%	20%
OCCUPANCY INCREASE	21%	0%	100%	21%	4.6%	100%	17.3%	0%	33%

Key factors in achieving these results include the amended HIRB standard in both the MHU and THAB zone providing a more generous building envelope. In some scenarios, particularly in the MHU zone the proposed provisions enable the delivery of three storeys in parts of the site where the modelled development envelope under the operative standards would be limited to two storeys.

The amendments to the HIRB standards also provide a development envelope on sites which enables terraced homes that can be slightly deeper (longer in size). In some instances, this longer form will in comparison to the operative standards allow for additional units to be developed on the equivalent site.

## Conclusion

The report models and compares modelled development models as outputs from the operative and cumulatively applied proposed standards. This is provided across different site sizes and three potential accessway arrangements reflecting the differences that may be found across terraced housing developments. The proposed standards include density standards (as found in schedule 3A of the RMA or amended) and built form standards (retained or amended operative standards, or new standards).

The modelling and reports demonstrate how the standards have been developed as a package including overlapping provision as shown in the reports. It is noted that under the proposed standards additional requirements are triggered for a development of 20+ dwellings including visitor bike parking (PPC79) and communal open space provision, along with vehicle access/manoeuvring (PPC79) and accessible parking (PPC79) which are triggered at 10+ dwellings. The study therefore includes an additional modelled example (site 2b) of a site size sufficient to accommodate 20+ terrace houses (site 2b / pedestrian access scenario).

The modelling for this scenario shows a very similar, if minor reduction in yield when compared to the operative position as it meets the cumulative requirements triggered by the proposal consisting of 20+ dwellings. However, it should be recognised that for the THAB zone in particular these yield results do not reflect the amendments to height and HIRB standards to enable a greater yield given the 3 storey terrace form. The modelling undertaken on apartment developments (of development greater than 20+ dwellings) demonstrates the additional yield achieved when the proposed amendments to height and HIRB are maximised.

In conclusion the modelling demonstrates that the cumulative effect of the proposed standards in accordance with the identified provisions of the RMA leads to the current intensification objectives of the zone being met or a relative increase in the development potential provided. This is whilst giving effect to the RPS by achieving quality built environment outcomes sought by the proposed standards.

## Apartment - Residential Development Testing Study

### Key Assumptions

Sites: Development of the following three site sizes are tested:

1. Typical site - 18m x 44.5 (site area 801m<sup>2</sup>).
2. Large site - 40m x 40m (site area 1600m<sup>2</sup>).
3. Small site - 10m x 30m (site area 300m<sup>2</sup>).

Development Scenarios: For each of these three site arrangements the following three residential development/activity options are tested:

1. Existing operative standard complying (4+ dwellings restricted discretionary).
2. Proposed THAB standard complying development (4+ dwellings restricted discretionary).
3. Proposed THAB walkable Catchment standard complying development (4+dwellings restricted discretionary).

Site Access: The following scenario for access site arrangements is tested.

1. Provides accessible parking, vehicle access and on site manoeuvring required dependent on site size/dwelling number.

### Summary of Findings

The below table compares the operative standards against the proposed standards for restricted discretionary dwellings in the THAB zone (within and outside walkable catchments) outlining the units, gross floor area and estimated occupancy arising across different site sizes.

**Table 17.4 Apartments THAB Zone: Comparison of yield arising from operative and proposed standards (RD 4+ Dwellings) within and outside THAB Walkable Catchments.**

AUP STATUS										
SITE SIZE		OPERATIVE			PROPOSED THAB			PROPOSED THAB WC		
		UNITS	GFA	OCY	UNITS	GFA	OCY	UNITS	GFA	OCY
TYPICAL SITE 18M X 44.5M	1 Bedroom				2		3	6		8
	2 Bedroom	11		28	10		25	11		28
	3 Bedroom							2		8
	<b>Total Units</b>	<b>11</b>	<b>1000m<sup>2</sup></b>	<b>28</b>	<b>12</b>	<b>1,186m<sup>2</sup></b>	<b>28</b>	<b>19</b>	<b>1,603m<sup>2</sup></b>	<b>43</b>
LARGE SITE: 40M X 40M	1 Bedroom	20		50	9		11	8		10
	2 Bedroom	15		19	27		68	34		85
	3 Bedroom									
	<b>Total Units</b>	<b>35</b>	<b>2,833m<sup>2</sup></b>	<b>69</b>	<b>36</b>	<b>3,093m<sup>2</sup></b>	<b>79</b>	<b>42</b>	<b>3,623m<sup>2</sup></b>	<b>95</b>
SMALL SITE	1 Bedroom	4		5	5		6	8		10
	2 Bedroom									
	3 Bedroom									
	<b>Total Units</b>	<b>4</b>	<b>374m<sup>2</sup></b>	<b>5</b>	<b>5</b>	<b>395m<sup>2</sup></b>	<b>6</b>	<b>9</b>	<b>627m<sup>2</sup></b>	<b>10</b>

### Discussion and Key Findings

Within the THAB zone the operative standards 16m height control if followed generally limits development to four storeys and the HIRB (3m+45 degrees) and to lesser extent AHIRB (8m+60 degrees and 8m then inset 2m+60 degrees) controls the scale and form of the building in particular at upper levels alongside this.

The proposed standards for development within the THAB outside walkable catchments notably provide an amended HIRB of 8m+60 degrees across the whole depth of the site boundaries. This provides, inclusive of other cumulative proposed standards, the opportunity for an increased building envelope which in turn retains or delivers an increased yield in modelling and generally provides a more efficient floorplate to encourage multi-level development.

Within THAB walkable catchments the height and HIRB standards are being significantly increased (21m and 19m+60 degrees and 8m+60 degrees) with the effect and uplift in yield being more significant. Demonstrating the effect that has been given to policy 3c of the NPS-UD within the walkable catchments.

The following tables identify the key comparable effect on development potential and yield between the proposed and the operative standard positions:

**Table 17.5 Apartments THAB Zone: Summary comparison of yield arising from operative and proposed standards (RD 4+ Dwellings) THAB zone (outside and within Walkable Catchments).**

	THAB			THAB WALKABLE CATCHMENT		
	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE
UNIT INCREASE	1 (9%)	1 (3%)	5 (22%)	8 (73%)	14 (41%)	4 (100%)
GFA INCREASE	16%	9%	5%	60%	29%	68%
OCCUPANCY INCREASE	0%	14%	20%	54%	38%	100%

The modelling applies all new standards that have been introduced to ensure the on-site living environments remain of a reasonable standard and to manage effects on the site and on adjacent properties. This includes additional standards which are required for development of more than 20 dwellings.

## Conclusion

The report models and compares notional development models as outputs from the operative and cumulatively applied proposed standards for both THAB and THAB walkable catchment development. Key differences between the proposed THAB and THAB walkable catchment standards effecting the modelling results relate firstly to the height standard retained at 16m within the THAB, increased to the 21m within walkable catchments. Also, the differences in the proposed HIRB standards. The proposed standards include, dependent on the development scenario, density standards (as found in schedule 3A RMA or amended) and built form standards (retained or amended operative standards, or new standards).

The modelling and reports demonstrate how the standards have been developed as a interrelated package including overlapping provision to enable efficient use of land whilst balancing and maximising QBE outcomes. For example, increased height and HIRB and the resulting development uplift require changes to outlook space, privacy and certain onsite amenity standards. This is necessary to ensure adequate daylight, privacy, landscaping and open space will cumulatively provide a reasonable standard of amenity both for the residents and adjacent sites given the increase in yield possible.

Within the THAB zone the effect of the proposed standards sees an increase in the yield output in comparison to the operative standards. It is however in the walkable catchments, in line with the identified intensification objectives of the RMA that the most significant increase in yield is experienced in comparison to that modelled under the operative standards. The relative increases in intensification expected as a result of the proposed standards are also considered important in retaining the sought effective transition of built form and scales between these areas of the wider zone, whilst also aligning with the zone descriptions as stated.

The modelling demonstrates that in all cases the cumulative effect of the proposed standards working as a whole retain or lead to a relative increase in the development potential provided.



## 18.0 References

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# Proposed Plan Change 78 – Intensification Technical Background Report Appendices

10 August 2022

## Appendices

Appendix 1: Boffa Miskell (2022). 6 Storey Apartment Buildings – Auckland Case Studies; Auckland: Boffa Miskell

Appendix 2: Jasmax (2022). Apartment – Residential Development Testing; Auckland: Jasmax

Appendix 3: Auckland Council (2022). Terrace Housing- Residential Development Study; Tamaki Makaurau Design Ope, Plans & Places, Auckland Council

Appendix 4: Jasmax (2022). Building Height Memo; Auckland: Jasmax

Appendix 5: Auckland Council. Width of an average of 'typical' residential site within walkable catchment in Auckland; UDU Research, October 2021

Appendix 6: Auckland Council. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

# 6 STOREY APARTMENT BUILDINGS

## AUCKLAND CASE STUDIES

21 JULY 2022



# EXECUTIVE SUMMARY

## STUDY PURPOSE

This document contains case studies of six storey apartment buildings in Auckland. Nine buildings are surveyed. The purpose of the document is to gain an understanding of typical heights for six storey apartment buildings. This is to inform drafting of height related provisions for Auckland Council's proposed Plan Change required to incorporate the National Policy Statement on Urban Development ('NPS-UD') into the Auckland Unitary Plan – Operative in Part ('AUP(OP)'), with a focus on NPS-UD Policy 3c.

Relevant information in each case study that relates to building elements that comprise total building height are also recorded. These include:

- Floor to floor height at ground level
- Floor to floor height at upper levels
- Height of interfloor structure
- Height of roof form
- Height of above ground basement structure.

While the case studies may be helpful to gain an overall understanding of the broader bulk and massing of six storey apartment buildings, and therefore inform potential bulk and massing related controls, that is not their primary purpose.

## CASE STUDY SELECTION

Case studies were selected by a combination of desk top analysis of aerial photos and the study team's knowledge of the Auckland area. Approved resource consent plans and decisions for each building were then obtained. The assessment did not include checking of approved building consent drawings.

Total building heights were obtained from resource consent decisions (as a primary source) or from annotations on approved drawing elevations. Where not stated in either source, building elevations were measured from drawings, relying on the stated scale of the drawings for accuracy. Some buildings required consent for height infringements while others did not. This was not the basis for case study selection.

All case study buildings have been consented since 2014. AUP(OP) zonings that relate to the case study buildings are Terrace Housing and Apartment Buildings ('THAB') zone and Business Mixed Use ('MU') zone. Within these zones, potential case study buildings were canvassed in areas with height controls considered more likely to result in a six storey apartment building. These were:

- THAB zone sites subject to a 19.5m Height Variation Control; and
- MU zone sites with a 21m height control (19m occupiable and 2m for roof form).

These were supplemented by canvassing appropriate case studies from:

- THAB zone sites with a standard 16m height control; and
- MU zone sites with a 18m height control (16m occupiable + 2m for roof form).

Two selected buildings have a total of seven storeys. These buildings were considered appropriate for assessment as they have a building form with a partly or fully strongly expressed six storeys (due to factors including, for example, a recessed seventh storey).

## DEFINITION OF TERMS

The following defines two terms used in the case study records:

- 'Roof form height' refers to non-occupiable space above the top habitable floor of the building. Where cross sections were available in approved resource consent plans, roof form height was measured vertically from the ceiling of the top habitable floor to the highest point of the roof structure.
- 'Interfloor structure' refers to all non-occupiable space between floors. It includes the floor slab, ceiling cavity and ceiling lining. Where recorded, the information was taken from cross sections in approved resource consent plans. The interfloor structures shown in these cross sections are likely to be indicative only. Reference would need to be made to approved building consent drawings for more specific information.

## OVERVIEW COMMENTS

From the desk top analysis of aerials and the study team's knowledge of consented developments, sites for six storey apartment buildings in Auckland appear to share the following general characteristics:

- Corner sites are common;
- Sites in the THAB zone which have constructed/ consented six storey apartment buildings are generally larger. Consent drawings show that sites are often amalgamated from smaller lots and that buildings may form part of larger masterplanned blocks.

- Sites in the MU zone are a range of sizes, including small lots – likely reflecting the more permissive bulk and location standards in that zone.

Of the nine selected buildings:

- **Total height** for six storeys ranged from **19.55m** (19 Dunn Road) to **23m** (10-12 Exmouth Street). The lower height Dunn Road example resulted from lower floor to floor heights (3m) than the study average, the generally low height of basement and roof form structures, and the flat nature of the site.
- **Ground floor to floor heights** (excluding foundation and basement structures) varied widely, from **3m** to **5.1m**, depending on responses to site slope and (for buildings on MU zoned sites) whether ground floor commercial space was proposed.
- **Upper floor to floor heights** ranged from **3m** to approximately **3.6m**, with most falling in the **3.2m – 3.3m** range.
- The heights of **interfloor structures** ranged from **0.5m to 0.7m**.
- The heights of **basement structures** varied widely, from **0.9m to 4m**, again appearing to respond to site slope.
- The height of **roof forms** was generally in the range of **0.5m to 1.5m**.
- Some sites were essentially flat or had minimal slope, while **sites with slope** across their depth from **1.5m to 2.5m** were not uncommon.



# 19 DUNN ROAD, MT WELLINGTON

BUN603227 - SEPTEMBER 2018  
 TERRACE HOUSING & APARTMENT BUILDING ZONE  
 19.5M HEIGHT VARIATION CONTROL AREA

## BUILDING

6 storeys. No basement car parking. Parking for 4 cars at ground floor to rear.

## HEIGHT DETAILS

<b>Total height:</b>	19.55m
<b>Ground floor to floor height:</b>	3m
<b>Upper floors - floor to floor height:</b>	3m
<b>Roof form height:</b>	1.1m max
<b>Interfloor structure:</b>	0.6m approx
<b>Basement structure (above ground):</b>	0.9m approx
<b>Roof slope:</b>	3 degrees. Single pitch. No parapet structure

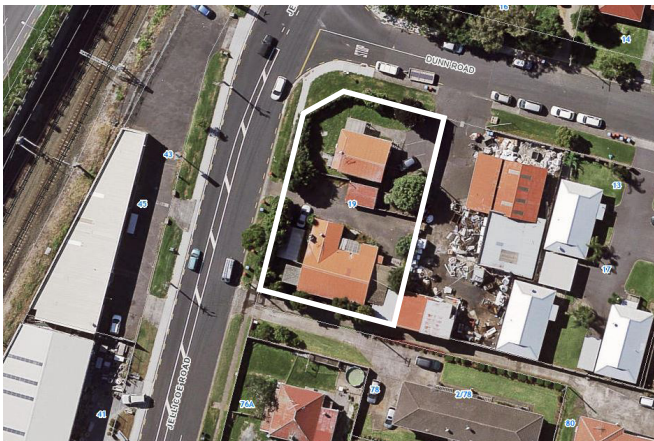
## SITE INFORMATION

<b>Area:</b>	1038m <sup>2</sup>
<b>Depth:</b>	26.47m
<b>Width:</b>	39.21m

## COMMENT

Corner site with two road frontages: Dunn Road and Jellicoe Road.

Flat/minimal slope.



1 Longitudinal Section  
 Scale: 1:100

# 28 KILLARNEY ST, TAKAPUNA

LUC60026716 - NOVEMBER 2014  
 TERRACE HOUSING & APARTMENT BUILDING ZONE  
 19.5M HEIGHT VARIATION CONTROL AREA

## BUILDING

6 storeys + 2 floor full basement for parking.

## HEIGHT DETAILS

<b>Total height:</b>	20.92m
<b>Ground floor to floor height:</b>	3.3m
<b>Upper floors - floor to floor height:</b>	3.3m
<b>Roof form height:</b>	0.5m max
<b>Interfloor structure:</b>	0.5m approx
<b>Basement structure (above ground):</b>	1.2m approx
<b>Roof slope:</b>	No information on RC plans

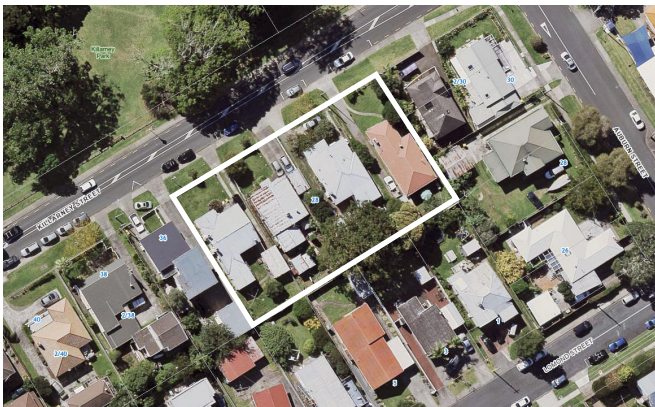
## SITE INFORMATION

<b>Area:</b>	1947m <sup>2</sup>
<b>Depth:</b>	35.8m
<b>Width:</b>	56m

## COMMENT

Consented against the Residential 8 zone of the Auckland Council District Plan (North Shore Section) that permitted a maximum 6 storeys in 21m height.

Minimal slope site.



# 74-80 ANZAC ST, TAKAPUNA

LUC60027906 - MARCH 2016  
 TERRACE HOUSING & APARTMENT BUILDING ZONE  
 19.5M HEIGHT VARIATION CONTROL AREA

## BUILDING

2 buildings of 6 storeys + 1 floor full basement for parking.

## HEIGHT DETAILS

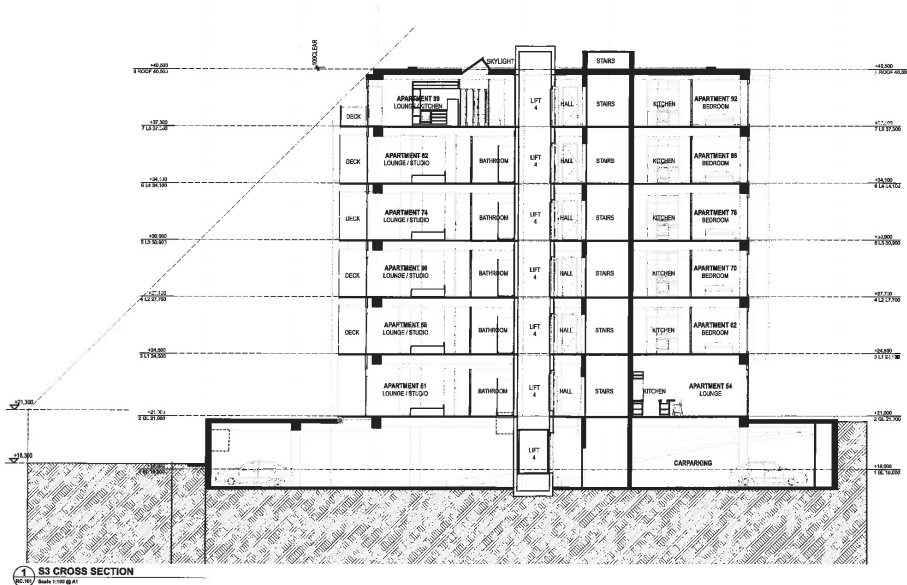
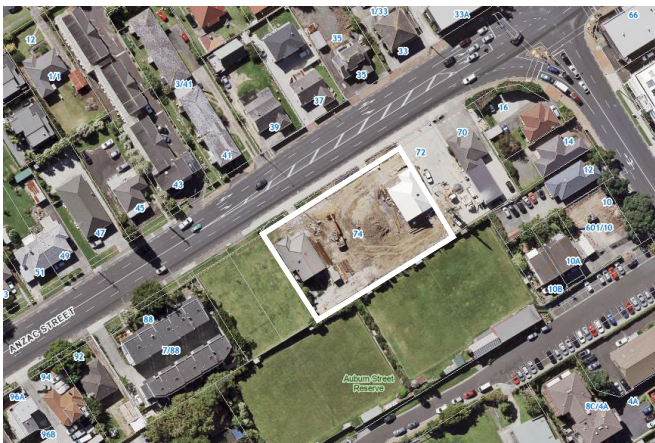
<b>Total height:</b>	20m (measured from RC long section)
<b>Ground floor to floor height:</b>	3.5m
<b>Upper floors - floor to floor height:</b>	3.2m
<b>Roof form height:</b>	0.5m max
<b>Interfloor structure:</b>	0.5m approx
<b>Basement structure (above ground):</b>	2.5m approx
<b>Roof slope:</b>	No information on RC plans

## SITE INFORMATION

<b>Area:</b>	1947m <sup>2</sup>
<b>Depth:</b>	35.8m
<b>Width:</b>	56m

## COMMENT

Approximate 1.8m fall from front to rear of site (1:20 gradient / 5 percent slope) results in basement structure above ground to rear.



# 24-40 CADNESS ST, NORTHCOTE

BUN60392209 - JUNE 2022  
 TERRACE HOUSING & APARTMENT BUILDING ZONE  
 19.5M HEIGHT VARIATION CONTROL AREA

## BUILDING

6 storeys. Part of complex of 3 apartment buildings and a terrace house block. Half floor of parking at ground level.

## HEIGHT DETAILS

<b>Total height:</b>	21.1m up to a max of 24.6m for architectural feature (parapet)
<b>Ground floor to floor height:</b>	3.15m
<b>Upper floors - floor to floor height:</b>	3.15m
<b>Roof form height:</b>	1.2m max
<b>Interfloor structure:</b>	0.6m approx
<b>Basement structure (above ground):</b>	1.5m approx
<b>Roof slope:</b>	5 degree slope down to central gully, screened by parapet around edge.

## SITE INFORMATION

<b>Area:</b>	4842m <sup>2</sup>
<b>Characteristics:</b>	Part of wider comprehensive development block.

## COMMENT

Kainga Ora development site. Consented but not yet built.  
 Corner site with building adjoining planned new street.  
 Approximate 1:13 gradient / 7.5 percent slope over depth of site.



# 11 AKEPIRO, KINGSLAND

LUC60117572-A - OCTOBER 2015

BUSINESS - MIXED USE ZONE

21M HEIGHT CONTROL (19M OCCUPIABLE + 2M ROOF)

## BUILDING

6 storeys + 1 floor full basement for bike parking / general storage. 2 car park spaces at ground level.

## HEIGHT DETAILS

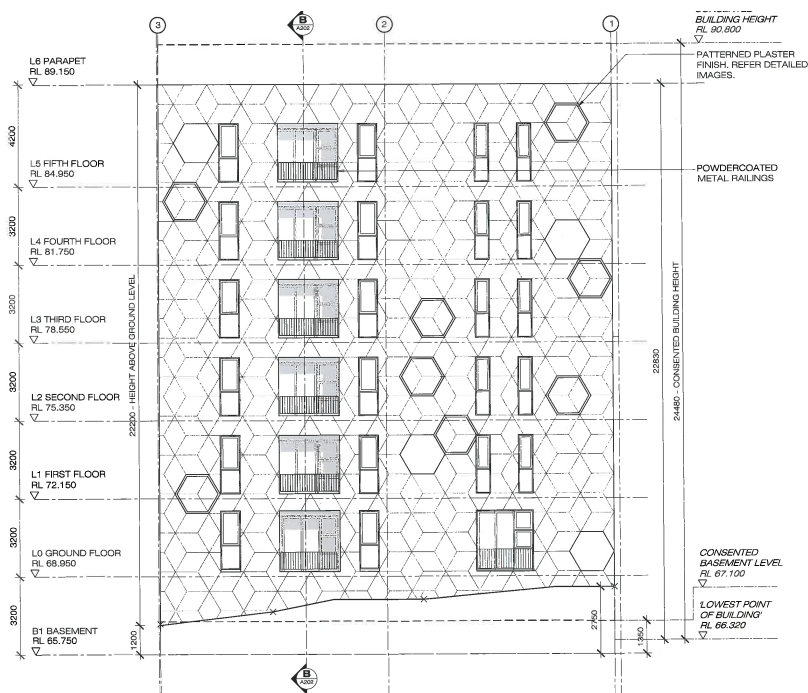
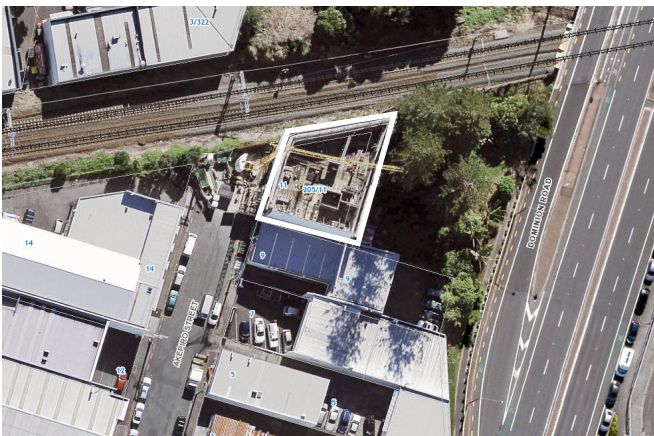
<b>Total height:</b>	22.83m
<b>Ground floor to floor height:</b>	3.2m
<b>Upper floors - floor to floor height:</b>	3.2m
<b>Roof form height:</b>	1.5m max
<b>Interfloor structure:</b>	0.5m approx
<b>Basement structure (above ground):</b>	2.0m approx
<b>Roof slope:</b>	5 degree slope down to central gully, screened by parapet around edge.

## SITE INFORMATION

<b>Area:</b>	321m <sup>2</sup>
<b>Depth:</b>	16.8m
<b>Width:</b>	14.6m

## COMMENT

Approximate 1:10 gradient / 11 percent slope over depth of site.



# 10-12 EXMOUTH ST, EDEN TERRACE

LUC60119795-B - MARCH 2018

BUSINESS - MIXED USE ZONE

21M HEIGHT CONTROL (19M OCCUPIABLE + 2M ROOF)

## BUILDING

6 storeys to Dundonald St and 7 storeys to Exmouth St + 1.5 floors basement car parking.

## HEIGHT DETAILS

<b>Total height:</b>	27.54m total height. 23m height to top of 6th storey, measured along Dundonald St frontage.
<b>Ground floor to floor height:</b>	4.28m (Dundonald); 4.08m (Exmouth)
<b>Upper floors - floor to floor height:</b>	Varies - 4.53m (lower floors); 3.575m upper floors
<b>Roof form height:</b>	1.0m max
<b>Interfloor structure:</b>	0.7m approx
<b>Basement structure (above ground):</b>	4.0m approx
<b>Roof slope:</b>	3 degrees. Hip roof rising to central ridge. No parapet.

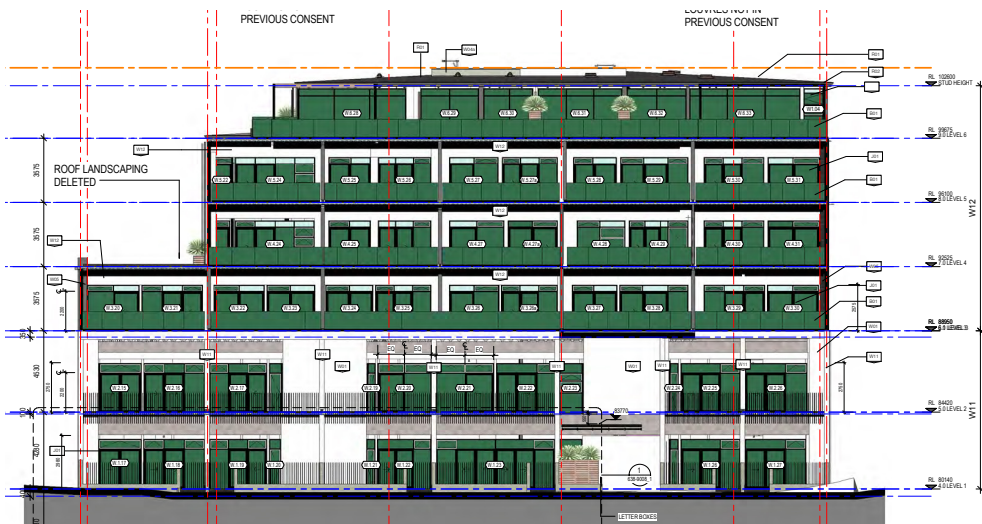
## SITE INFORMATION

<b>Area:</b>	2,200m <sup>2</sup>
<b>Depth:</b>	60.8m
<b>Width:</b>	30.1m (Exmouth); 42.1m (Dundonald)

## COMMENT

Two street frontages to either end of the site: Dundonald St and Exmouth St.

5.3m fall from Dundonald to Exmouth Streets is an approximate 1:11.5 gradient / 9 percent slope over depth of site.



# 6 NIXON ST, GREY LYNN

LUC60351146 - FEBRUARY 2020

BUSINESS - MIXED USE ZONE

18M HEIGHT CONTROL (16M OCCUPIABLE + 2M ROOF)

## BUILDING

7 storey building - 6 main storeys, with setback top floor for communal area. Ground floor commercial and bike storage. No on-site parking.

## HEIGHT DETAILS

<b>Total height:</b>	19.75m to top of 6th storey. 22.9m total building height.
<b>Ground floor to floor height:</b>	3.5m
<b>Upper floors - floor to floor height:</b>	3.2m
<b>Roof form height:</b>	1.0m max
<b>Interfloor structure:</b>	0.5m approx
<b>Basement structure (above ground):</b>	0.9m approx
<b>Roof slope:</b>	No information on RC plans.

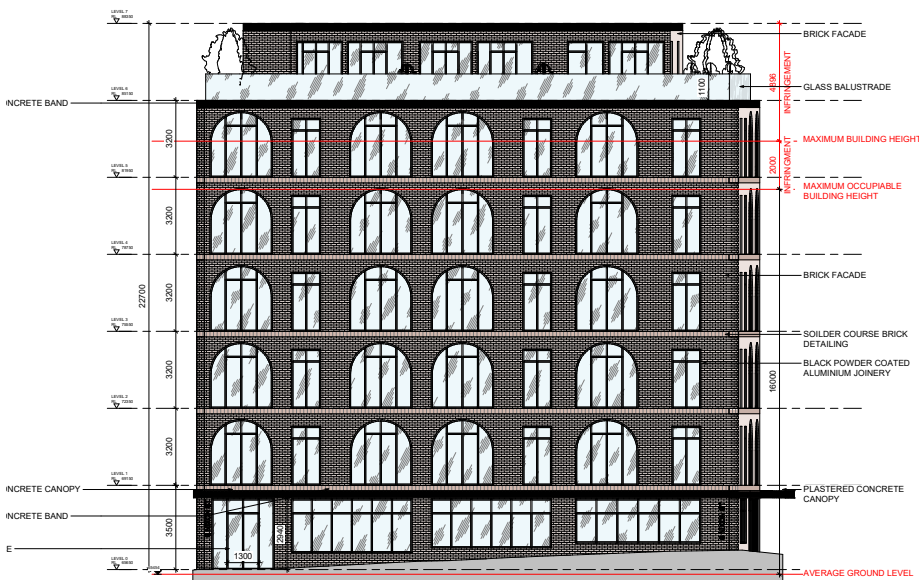
## SITE INFORMATION

<b>Area:</b>	345m <sup>2</sup>
<b>Depth:</b>	21.1m
<b>Width:</b>	15.4m

## COMMENT

Corner site with two street frontages: Chapman St and Nixon St.

Flat / minimal slope site.



# 193-197 GREAT NORTH RD, GREY LYNN

BUN60075571 - MAY 2015  
 BUSINESS - MIXED USE ZONE  
 18M HEIGHT CONTROL (16M OCCUPIABLE + 2M ROOF)

## BUILDING

6 storey building with commercial ground floor + 1 floor of basement car parking.

## HEIGHT DETAILS

Total height:	23.21m
Ground floor to floor height:	5.1m
Upper floors - floor to floor height:	3.2m
Roof form height:	1.0m max
Interfloor structure:	0.5m approx
Basement structure (above ground):	2.7m approx
Roof slope:	3% slope up to central ridge.

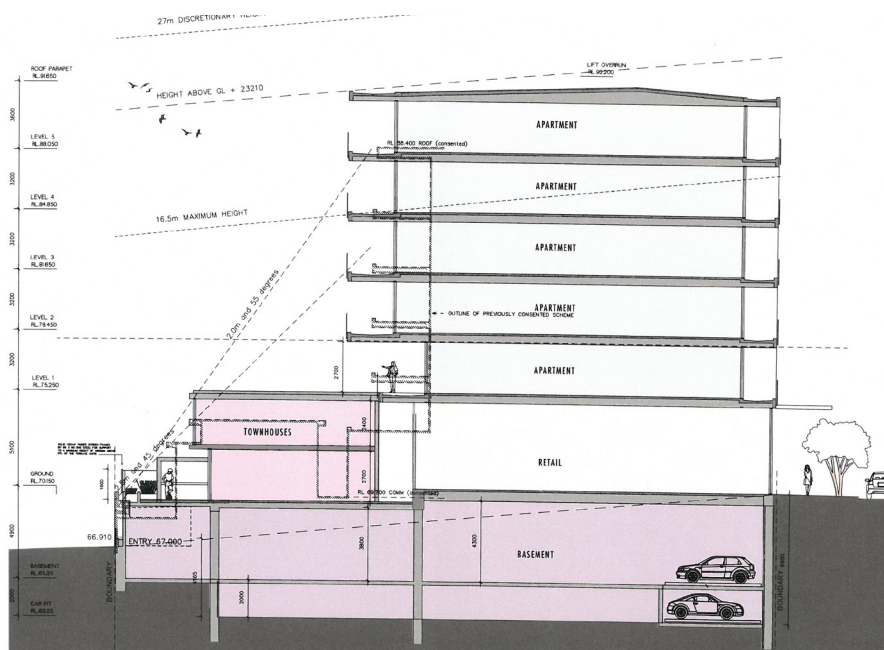
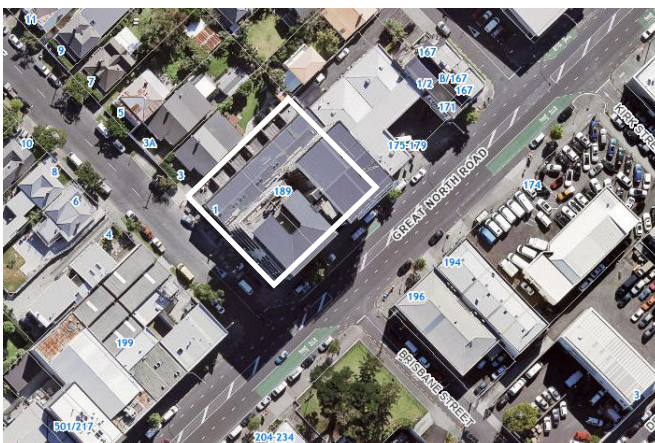
## SITE INFORMATION

Area:	1,382m <sup>2</sup>
Depth:	39.5m
Width:	35m

## COMMENT

Corner site with two street frontages: Great North Road and Turakina Street.

2.5m fall across depth of site is an approximate 1:16 gradient / 6.33 percent slope over depth of site.



APPROVED  
 RESOURCE CONSENTS  
 20 MAY 2015  
 AUCKLAND COUNCIL



# 57 MAPOU RD, HOBSONVILLE

BUN30574251 - AUGUST 2016  
 TERRACE HOUSING AND APARTMENT BUILDING ZONE  
 16M HEIGHT CONTROL

## BUILDING

6 storey building + 1 floor of basement car parking.

## HEIGHT DETAILS

<b>Total height:</b>	22.8m
<b>Ground floor to floor height:</b>	3.3m
<b>Upper floors - floor to floor height:</b>	3.3m
<b>Roof form height:</b>	1.4m max
<b>Interfloor structure:</b>	No information
<b>Basement structure (above ground):</b>	1.5m approx
<b>Roof slope:</b>	Low pitched roof partly screened by parapet. Slope information not available on RC plans.

## SITE INFORMATION

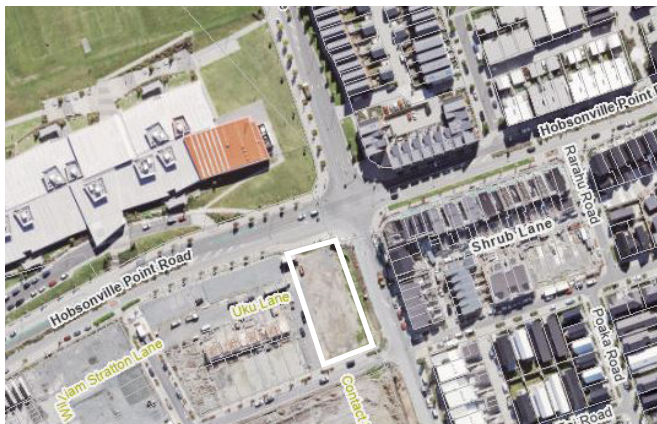
<b>Area:</b>	1,819m <sup>2</sup>
<b>Depth:</b>	28m
<b>Width:</b>	65m
<b>Characteristics:</b>	

## COMMENT

Referred to as 'Stage 4' on approved plans. Part of larger consented masterplanned block, including terraces.

Corner site with three street frontages: Hobsonville Point Rd, Squadron Drive and Mapou Rd. All measurements above refer to Stage 4 land parcel.

Consent decision refers to site having Mixed Housing Urban zoning, while zoning maps show THAB zoning.



Appendix 2: Jasmox (2022).  
Apartment – Residential Development Testing;  
Auckland: Jasmox

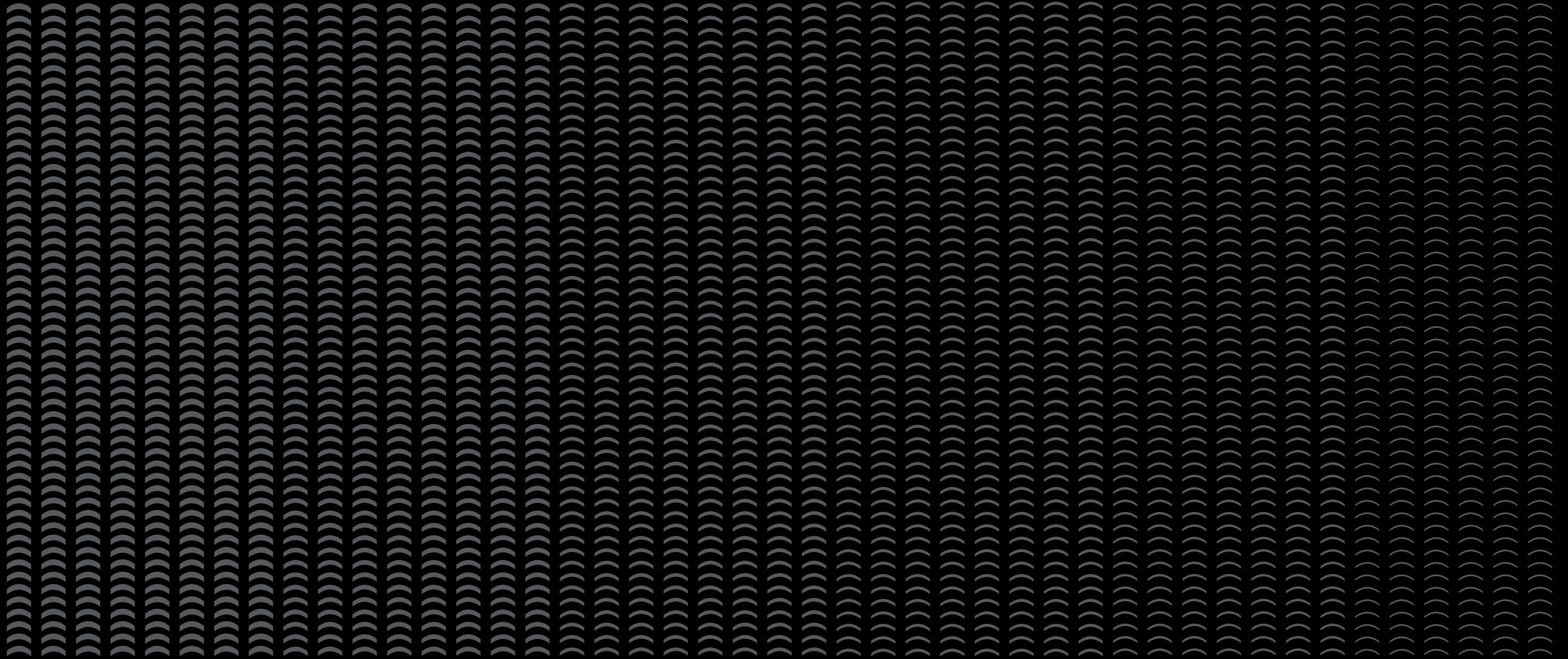
# Apartments - Residential Development Testing

Technical Evidence for Section 32

Document Prepared by Jasmax for  
Auckland Council  
Project number 221209  
July 2022

Rev F

**JASMAX**



# Revision history

Date	Revision	Description
10/6/2022	Rev A	Yield analysis and uplift for technical draft -
12/07/2022	Rev B	Yield analysis and height summaries
20/07/2022	Rev C	Yield analysis and control summaries for height and HIRB
25/07/2022	Rev D	Yield analysis and control summaries for height, HIRB and outlooks
25/07/2022	Rev E	Yield analysis and control summaries for height, HIRB and outlooks update
28/07/2022	Rev F	Yield analysis update with accessible parking requirements- July version

# 1. Methodology

## 1.1 Purpose

The purpose of this report is to provide evidence to help to determine potential outcomes that arise with different development standards .

- Outcome 1: Enable 6+ storey buildings on a standard site
- Outcome 2: Ensure good on-site amenity for residents
- Outcome 3: Manage dominance and shading effects on the street
- Outcome 4: Manage privacy, building dominance and shading effects on adjoining sites (including buildings less than 6 storeys)
- Outcome 5: Responding to climate change

## 1.2 Scope

This report provides a summary of testing undertaken as part of the Quality Built Environment work stream where Jasmox were including in a working group from October 2021 through to August 2022. Our scope included specifically;

Testing of apartment typologies within a typical, small and large site within THAB operative, THAB walkable catchments proposed and THAB outside walkable catchments proposed. Some additional testing for height was undertaken in BMU. The number of dwellings within these scenarios meant that testing fell into a 4+ category within the proposed. Additionally we tested height for BMU Walkable Catchment.

A key move agreed out of early stages of modelling and testing was to encourage bulk and mass and outlook over the street rather than to neighbours.

## 1.3 Method

### Yield Studies

Yield studies as shown in the following pages are to show a possible outcome within the proposed provisions and compare development capacity against operative standards.

Design assumptions for this testing is shown on following pages.

### Development standard tests

This section shows specific development standards and testing which have given rise to the proposed standards.

1. Standard site was tested first and if necessary, testing was pursued on small and larger sites.
2. In some instances massing has disregarded apartment layouts and so don't take into account some standards such as outlook to demonstrate worst case scenarios. Informed by these findings the yield study schemes have been developed and progressed considering all core standards and other development considerations.
3. Sketchup was used to create models and undertake sunlight analysis.
4. At the time of undertaking stage three, Transport changes to the plan had not been finalised. Testing in the following pages does not take transportation changes into account unless specifically noted.

### Appendix

Other testing which has taken place.

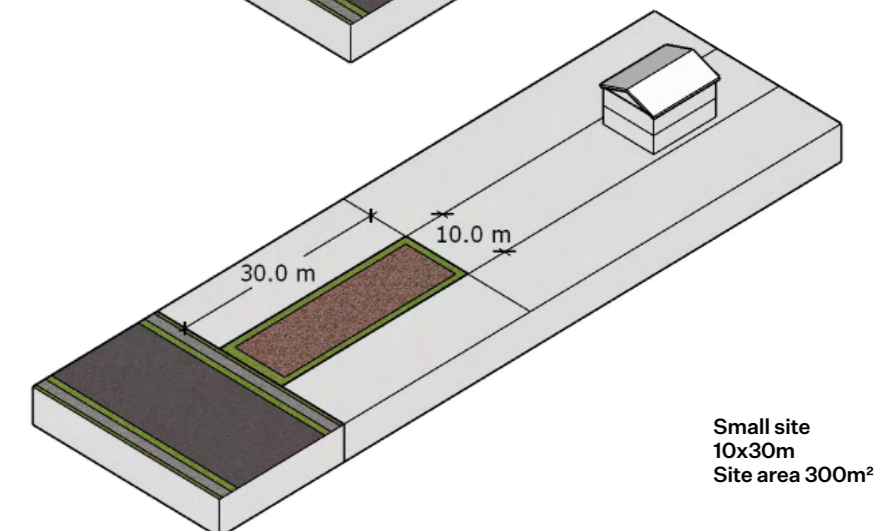
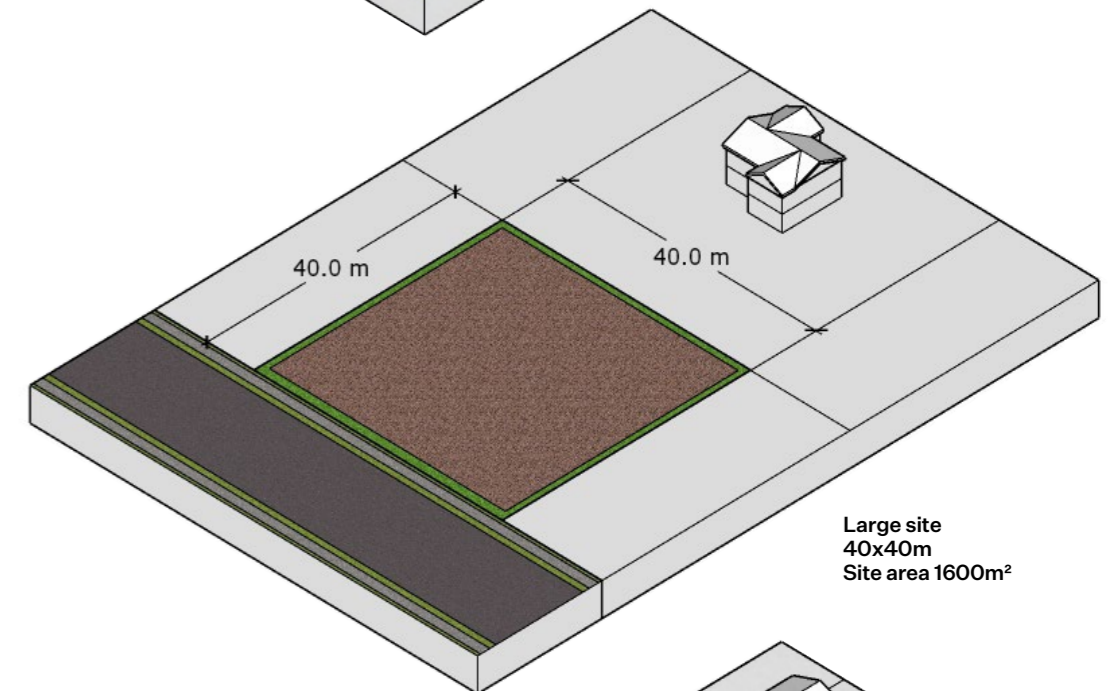
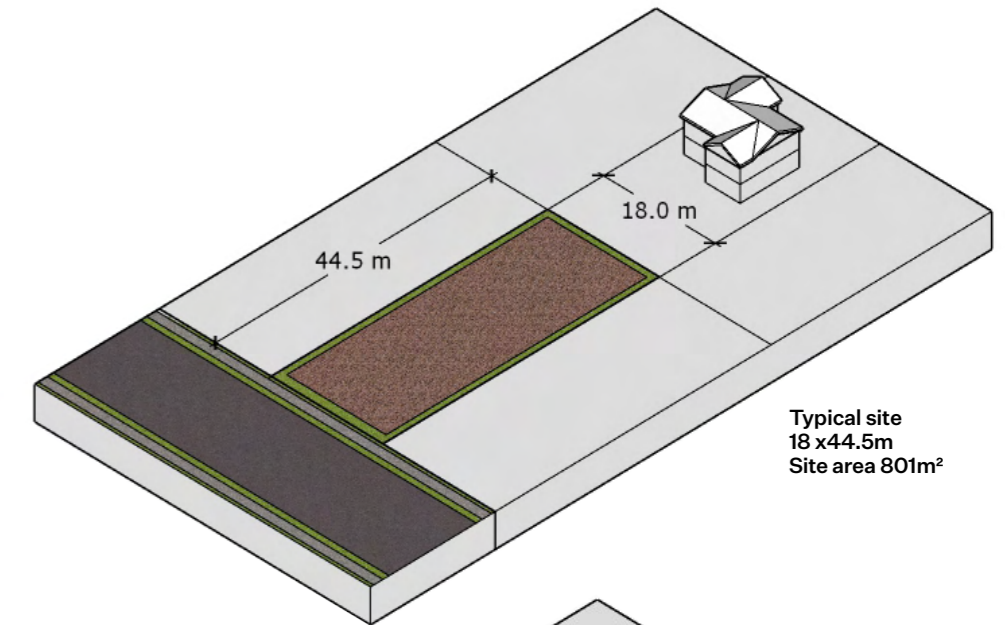
## 1.4 Assumptions

- Adjacent properties assumed as same planning zone
- Site assumed as flat with good ground conditions
- No existing site constraints such as trees or underground assets
- Lifted typology with egress stair & efficient circulation
- No private parking or basement
- Roof build up - 0-3 degree flat roof build up of 0.5 - 1.5 m
- Floor to floor height of 3.1m except for ground level within walkable catchments where 4m has been allowed
- Occupancy calculated at 1.25 persons per 1 bedroom unit & 2.5 persons per 2 bedroom unit
- Vehicle access and on site manoeuvring required for large site (8m truck) and standard site (6.3m van) vehicles must enter and exit in forward direction
- Private waste collection
- Bike storage allocation assumes 1m<sup>2</sup> per bicycle with double stacked parking
- Apartments are restricted to reduced set of typologies repeated through testing
- Simple structural outcomes are prioritised (vertically stacked structure)
- Wherever practicable, apartments are double-loaded off a central corridor with the assumption this is an efficient solution
- Bike and waste storage have been allowed for within the footprint of the building at ground level.

**Dwellings are based on representative market gross floor areas of:**

1 beds	50-55	m <sup>2</sup>
2 beds	65-75	m <sup>2</sup>

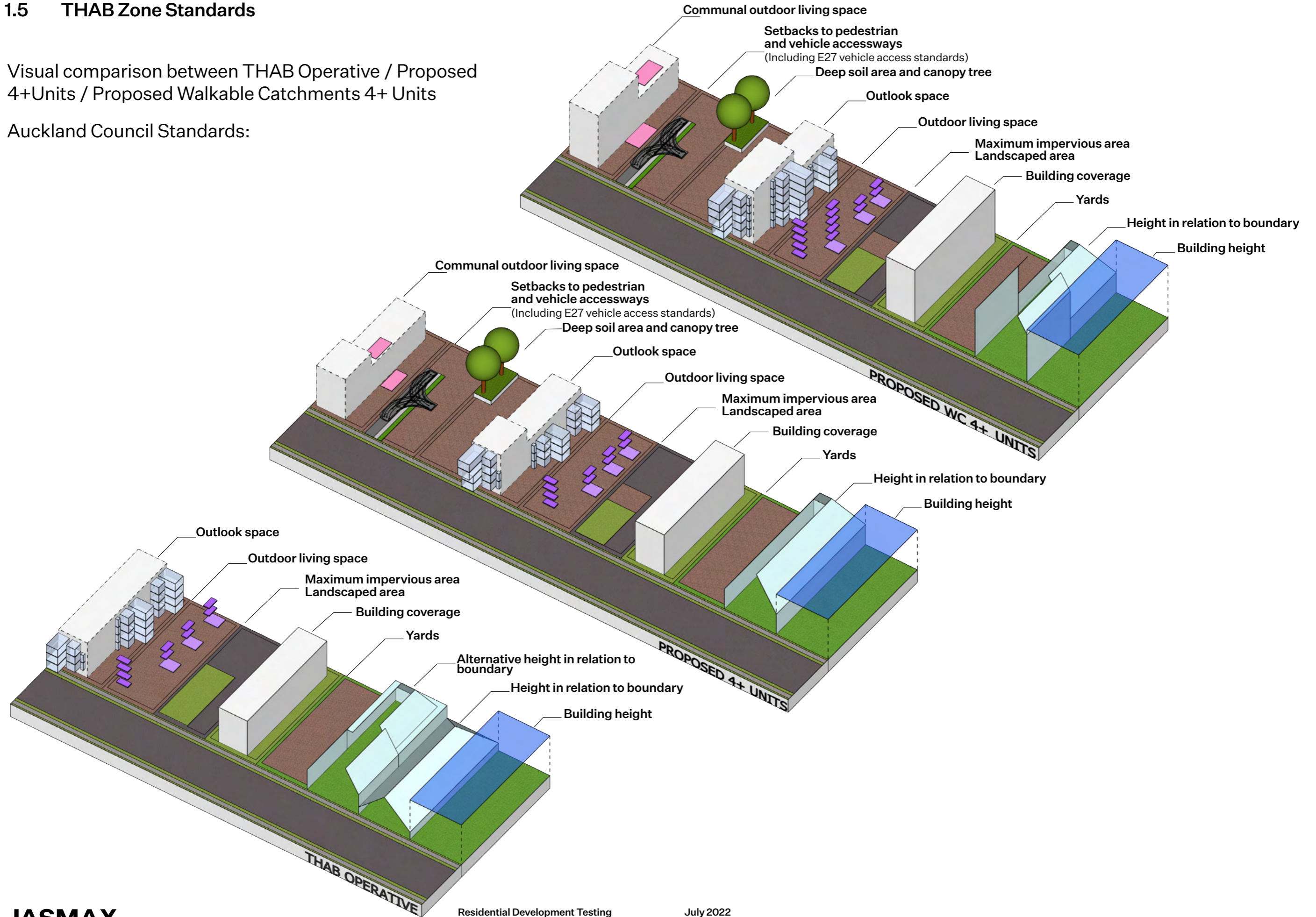
\*Areas do not include balconies.



# 1.5 THAB Zone Standards

Visual comparison between THAB Operative / Proposed 4+Units / Proposed Walkable Catchments 4+ Units

Auckland Council Standards:



## 2. Yield studies:

The effect in THAB Zones between current standards and proposed changes



## 2.1 Effect in THAB zones Typical site 18 x 44.5 m

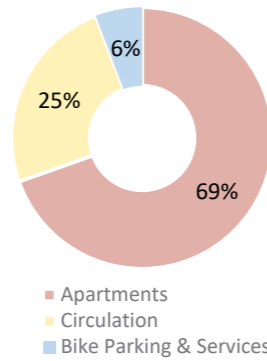
Site Area 801m<sup>2</sup>

### Baseline - Operative THAB

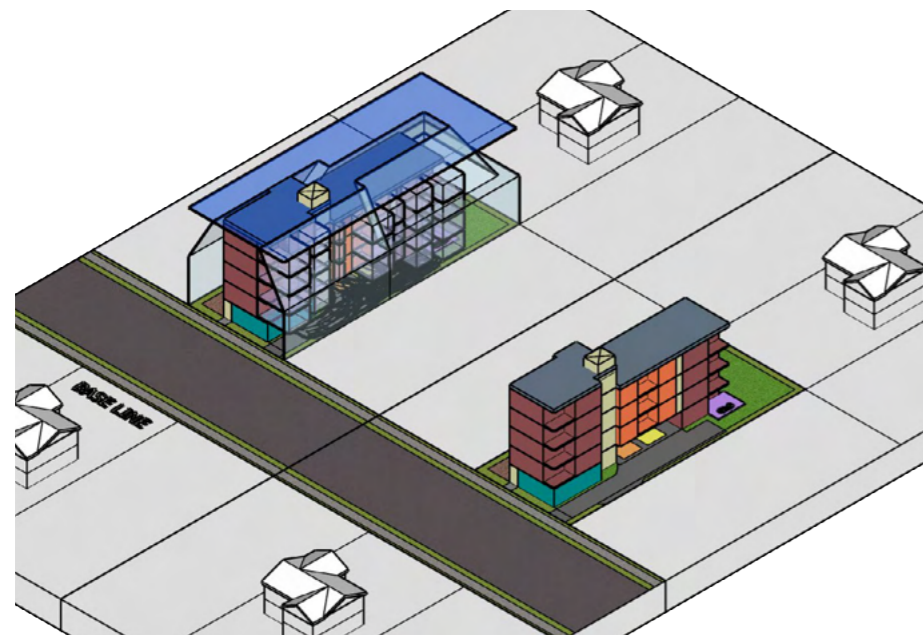
Compliance	Target	Achieved	
50% Max. Building Coverage:	401 m <sup>2</sup>	274 m <sup>2</sup>	34%
70% Max. Impervious area:	561 m <sup>2</sup>	410 m <sup>2</sup>	51%
30% Min. Landscape area:	240 m <sup>2</sup>	391 m <sup>2</sup>	49%

Unit Type	Dwellings	%	Bedrooms	People
2 Bedroom 1 Bathroom	11	100%	22	28
<b>Totals</b>	<b>11</b>	<b>100%</b>	<b>22</b>	<b>28</b>

Apartments	718 m <sup>2</sup>
Circulation	254 m <sup>2</sup>
Bike Parking & Services	60 m <sup>2</sup>
<b>Total GFA</b>	<b>1,032 m<sup>2</sup></b>



Roof area	274 m <sup>2</sup>
Dwellings / hectare	137
People / hectare	343
FAR (Floor area Ratio)	1.29
<b>Apartment GFA / 70m<sup>2</sup></b>	<b>10 units</b>

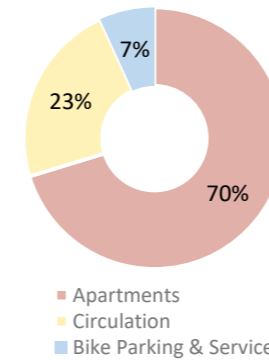


### 4+ Units Outside Walkable Catchments

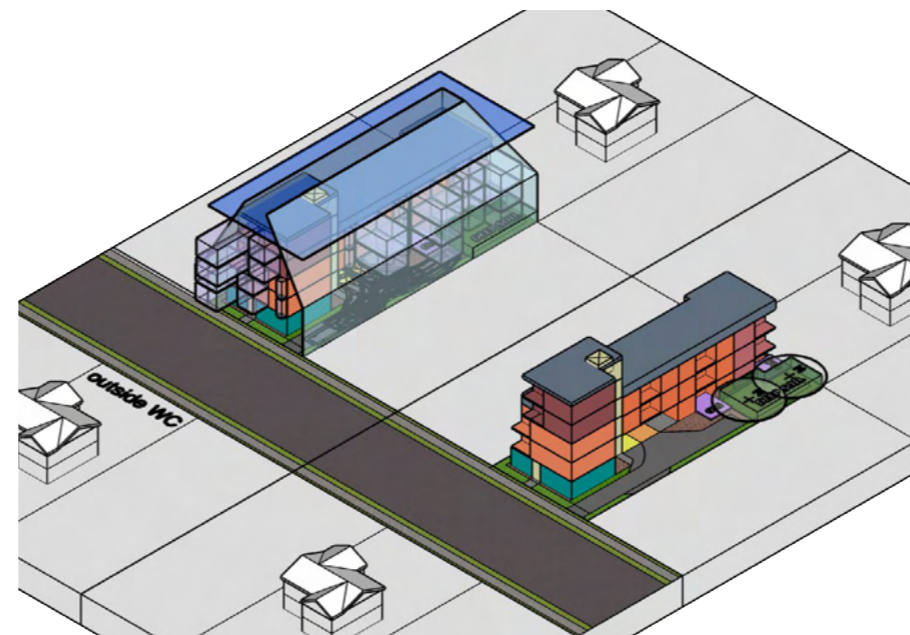
Compliance	Target	Achieved	
50% Max. Building Coverage:	401 m <sup>2</sup>	370 m <sup>2</sup>	46%
70% Max. Impervious area:	561 m <sup>2</sup>	539 m <sup>2</sup>	67%
20% Min. Landscape area:	160 m <sup>2</sup>	262 m <sup>2</sup>	33%
10% Min. Deep Soil Area	80	80 m <sup>2</sup>	10%

Unit Type	Dwellings	%	Bedrooms	People
2 Bedroom 1 Bathroom	10	83%	20	25
1 Bedroom 1 Bathroom	2	17%	2	3
<b>Totals</b>	<b>12</b>	<b>100%</b>	<b>22</b>	<b>28</b>

Apartments	833 m <sup>2</sup>
Circulation	272 m <sup>2</sup>
Bike Parking & Services	81 m <sup>2</sup>
<b>Total GFA</b>	<b>1,186 m<sup>2</sup></b>



Roof area	370 m <sup>2</sup>
Dwellings / hectare	150
People / hectare	343
FAR (Floor area Ratio)	1.48
<b>Apartment GFA / 70m<sup>2</sup></b>	<b>12 units</b>



## Effect summary

Baseline THAB operative vs proposed 4+ within Walkable Catchment

- GFA 36% increase with Walkable Catchments
- No. of units/dwellings 42% increase with Walkable Catchments
- People/occupancy 35% increase with Walkable Catchments

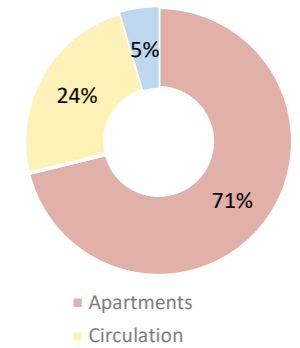
### 4+ Units Inside Walkable Catchments

Compliance	Target	Achieved	
50% Max. Building Coverage:	401 m <sup>2</sup>	387 m <sup>2</sup>	48%
70% Max. Impervious area:	561 m <sup>2</sup>	564 m <sup>2</sup>	70%
20% Min. Landscape area:	160 m <sup>2</sup>	237 m <sup>2</sup>	30%
10% Min. Deep Soil Area	80 m <sup>2</sup>	81 m <sup>2</sup>	10%

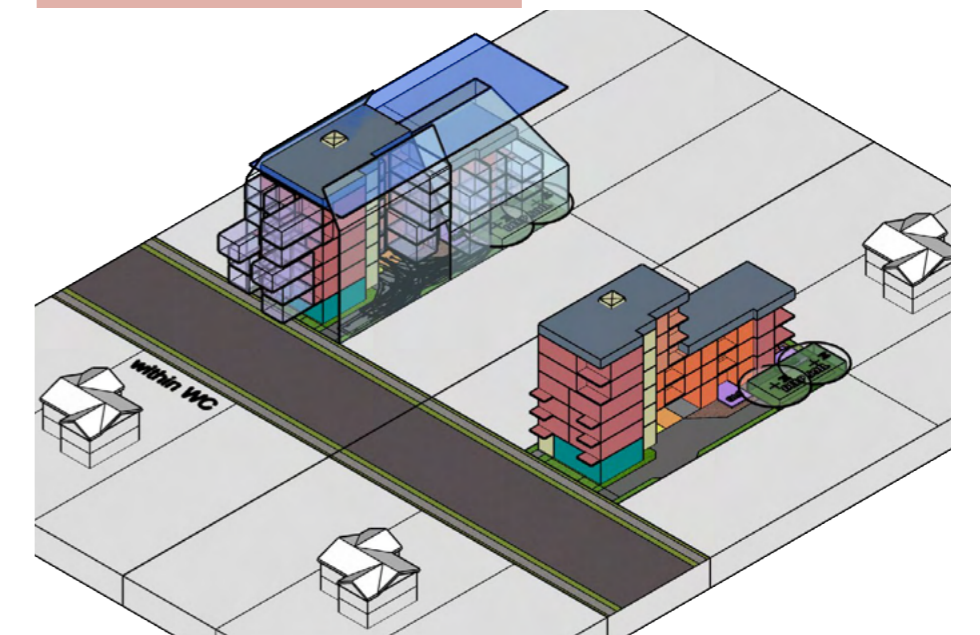
COLS not required under 20 units

Unit Type	Dwellings	%	Bedrooms	People
3 Bedroom 2 Bathroom	2	11%	6	8
2 Bedroom 1 Bathroom	11	58%	22	28
1 Bedroom 1 Bathroom	6	32%	6	8
<b>Totals</b>	<b>19</b>	<b>100%</b>	<b>34</b>	<b>43</b>

Apartments	1,141 m <sup>2</sup>
Circulation	388 m <sup>2</sup>
Bike Parking & Services	74 m <sup>2</sup>
<b>Total GFA</b>	<b>1,603 m<sup>2</sup></b>



Roof area	387 m <sup>2</sup>
Dwellings / hectare	237
People / hectare	531
FAR (Floor area Ratio)	2.00
<b>Apartment GFA / 70m<sup>2</sup></b>	<b>16 units</b>



## 2.2 Effect in THAB zones Large site 40x 40 m

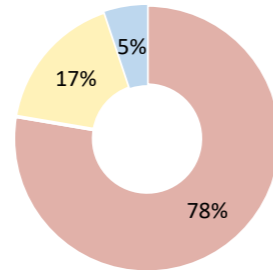
Site Area 1600m<sup>2</sup>

### Baseline Operative THAB

Compliance	Target	Achieved	
50% Max. Building Coverage:	800 m <sup>2</sup>	729 m <sup>2</sup>	46%
70% Max. Impervious area:	1120 m <sup>2</sup>	1,123 m <sup>2</sup>	70%
30% Min. Landscape area:	480 m <sup>2</sup>	775 m <sup>2</sup>	48%

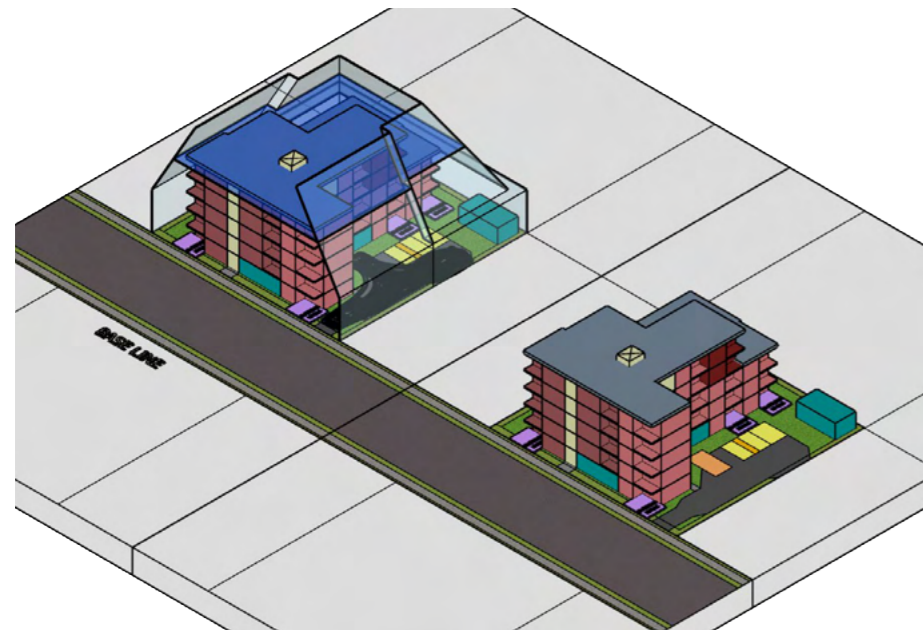
Unit Type	Dwellings	%	Bedrooms	People
2 Bedroom 1 Bathroom	20	57%	40	50
1 Bedroom 1 Bathroom	15	43%	15	19
<b>Totals</b>	<b>35</b>	<b>100%</b>	<b>55</b>	<b>69</b>

Apartments	2,220 m <sup>2</sup>
Circulation	491 m <sup>2</sup>
Bike Parking & Services	147 m <sup>2</sup>
<b>Total GFA</b>	<b>2,858 m<sup>2</sup></b>



Roof area	729 m <sup>2</sup>
Dwellings / hectare	219
People / hectare	430
FAR (Floor area Ratio)	1.79
Apartment GFA / 70m <sup>2</sup>	32 units

■ Apartments  
■ Circulation  
■ Bike Parking & Services

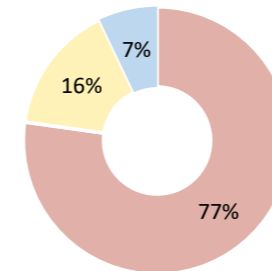


### 4+ Units Outside Walkable Catchments

Compliance	Target	Achieved	
50% Max. Building Coverage:	800 m <sup>2</sup>	717 m <sup>2</sup>	45%
70% Max. Impervious area:	1120 m <sup>2</sup>	1,008 m <sup>2</sup>	63%
20% Min. Landscape area:	320 m <sup>2</sup>	835 m <sup>2</sup>	52%
10% Min. Deep Soil Area	160 m <sup>2</sup>	160 m <sup>2</sup>	10%
10m <sup>2</sup> / 5 units Min. COLS:	70 m <sup>2</sup>	70 m <sup>2</sup>	4%

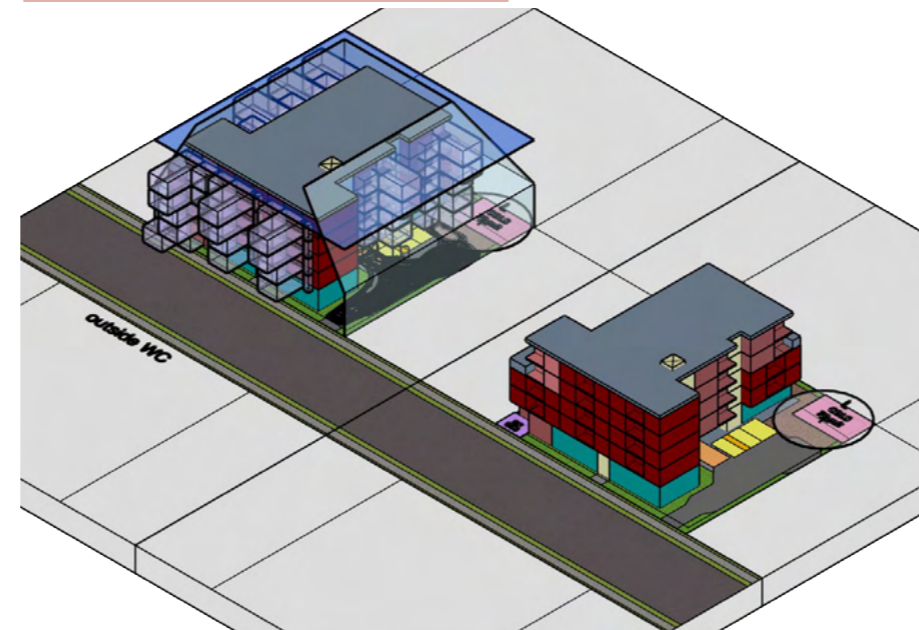
Unit Type	Dwellings	%	Bedrooms	People
2 Bedroom 2 Bathroom	12	33%	24	30
2 Bedroom 1 Bathroom	15	42%	30	38
1 Bedroom 1 Bathroom	9	25%	9	11
<b>Totals</b>	<b>36</b>	<b>100%</b>	<b>63</b>	<b>79</b>

Apartments	2,388 m <sup>2</sup>
Circulation	486 m <sup>2</sup>
Bike Parking & Services	219 m <sup>2</sup>
<b>Total GFA</b>	<b>3,093 m<sup>2</sup></b>



Roof area	717 m <sup>2</sup>
Dwellings / hectare	225
People / hectare	492
FAR (Floor area Ratio)	1.93
Apartment GFA / 70m <sup>2</sup>	34 units

■ Apartments  
■ Circulation  
■ Bike Parking & Services



## Effect summary

Baseline THAB operative vs proposed 4+ within Walkable Catchment

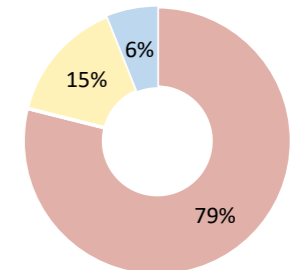
- GFA 21% increase with Walkable Catchments
- No. of units/dwellings 17% increase with Walkable Catchments
- People/occupancy 27% increase with Walkable Catchments

### 4+ Units Inside Walkable Catchments

Compliance	Target	Achieved	
50% Max. Building Coverage:	800 m <sup>2</sup>	752 m <sup>2</sup>	47%
70% Max. Impervious area:	1120 m <sup>2</sup>	1,069 m <sup>2</sup>	67%
20% Min. Landscape area:	160 m <sup>2</sup>	531 m <sup>2</sup>	33%
10% Min. Deep Soil Area	160 m <sup>2</sup>	160 m <sup>2</sup>	10%
10m <sup>2</sup> / 5 units Min. COLS:	80 m <sup>2</sup>	80 m <sup>2</sup>	5%

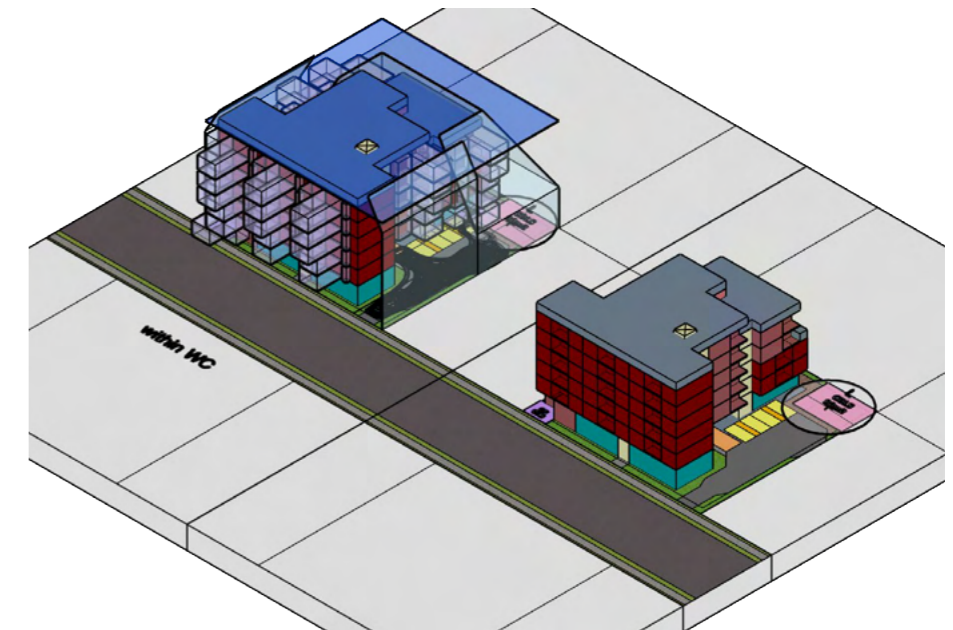
Unit Type	Dwellings	%	Bedrooms	People
2 Bedroom 1 Bathroom S	34	81%	68	85
1 Bedroom 1 Bathroom	8	19%	8	10
<b>Totals</b>	<b>42</b>	<b>100%</b>	<b>76</b>	<b>95</b>

Apartments	2,859 m <sup>2</sup>
Circulation	545 m <sup>2</sup>
Bike Parking & Services	219 m <sup>2</sup>
<b>Total GFA</b>	<b>3,623 m<sup>2</sup></b>



Roof area	752 m <sup>2</sup>
Dwellings / hectare	263
People / hectare	594
FAR (Floor area Ratio)	2.26
Apartment GFA / 70m <sup>2</sup>	41 units

■ Apartments  
■ Circulation  
■ Bike Parking & Services



## 2.3 Effect in THAB zones Small site 10x 30 m

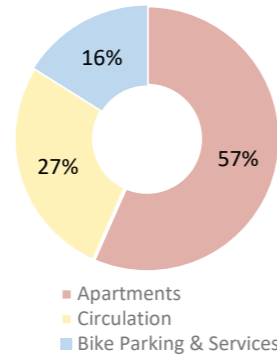
Site Area 300m<sup>2</sup>

### Baseline Operative THAB

Compliance	Target	Achieved	
50% Max. Building Coverage:	150 m <sup>2</sup>	154 m <sup>2</sup>	51%
70% Max. Impervious area:	210 m <sup>2</sup>	158 m <sup>2</sup>	53%
30% Min. Landscape area:	90 m <sup>2</sup>	134 m <sup>2</sup>	45%

Unit Type	Dwellings	%	Bedrooms	People
1 Bedroom 1 Bathroom	4	100%	4	5
<b>Totals</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>5</b>

Apartments	211 m <sup>2</sup>
Circulation	102 m <sup>2</sup>
Bike Parking & Services	60 m <sup>2</sup>
<b>Total GFA</b>	<b>374 m<sup>2</sup></b>



Roof area	154 m <sup>2</sup>
Dwellings / hectare	133
People / hectare	167
FAR (Floor area Ratio)	1.25
Apartment GFA / 70m <sup>2</sup>	3 units

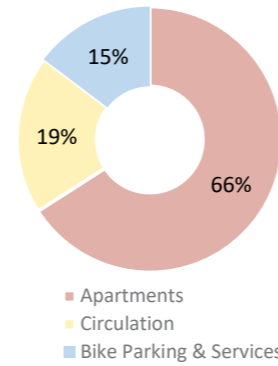
### 4+ Units Outside Walkable Catchments

Compliance	Target	Achieved	
50% Max. Building Coverage:	150 m <sup>2</sup>	141 m <sup>2</sup>	47%
70% Max. Impervious area:	210 m <sup>2</sup>	179 m <sup>2</sup>	60%
20% Min. Landscape area:	60 m <sup>2</sup>	139 m <sup>2</sup>	46%
10% Min. Deep Soil Area	30 m <sup>2</sup>	30 m <sup>2</sup>	10%

COLS not required under 20 units

Unit Type	Dwellings	%	Bedrooms	People
1 Bedroom 1 Bathroom	5	100%	5	6
<b>Totals</b>	<b>5</b>	<b>100%</b>	<b>5</b>	<b>6</b>

Apartments	260 m <sup>2</sup>
Circulation	77 m <sup>2</sup>
Bike Parking & Services	58 m <sup>2</sup>
<b>Total GFA</b>	<b>395 m<sup>2</sup></b>



Roof area	141 m <sup>2</sup>
Dwellings / hectare	167
People / hectare	208
FAR (Floor area Ratio)	1.32
Apartment GFA / 70m <sup>2</sup>	4 units

## Effect summary

Baseline THAB operative vs proposed 4+ within Walkable Catchment

- GFA 42% increase with Walkable Catchments
- No. of units/dwellings 40% increase with Walkable Catchments

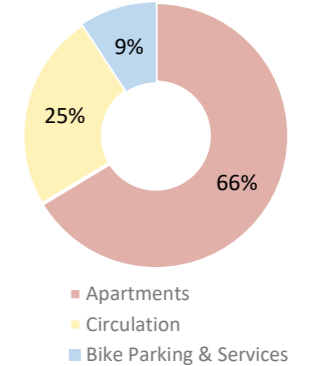
### 4+ Units Inside Walkable Catchments

Compliance	Target	Achieved	
50% Max. Building Coverage:	150 m <sup>2</sup>	141 m <sup>2</sup>	47%
70% Max. Impervious area:	210 m <sup>2</sup>	179 m <sup>2</sup>	60%
20% Min. Landscape area:	60 m <sup>2</sup>	139 m <sup>2</sup>	46%
10% Min. Deep Soil Area	30 m <sup>2</sup>	30 m <sup>2</sup>	10%

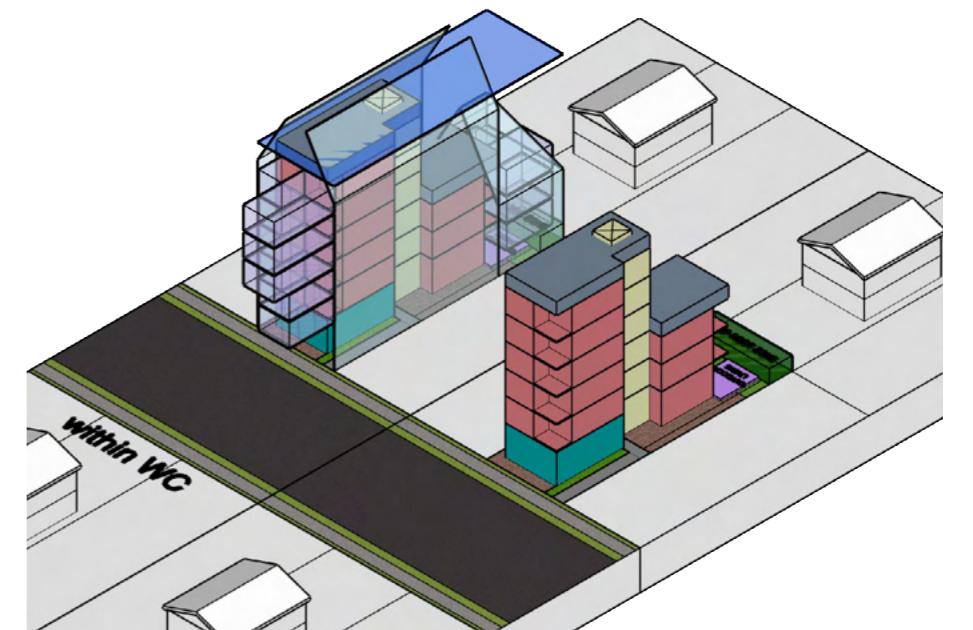
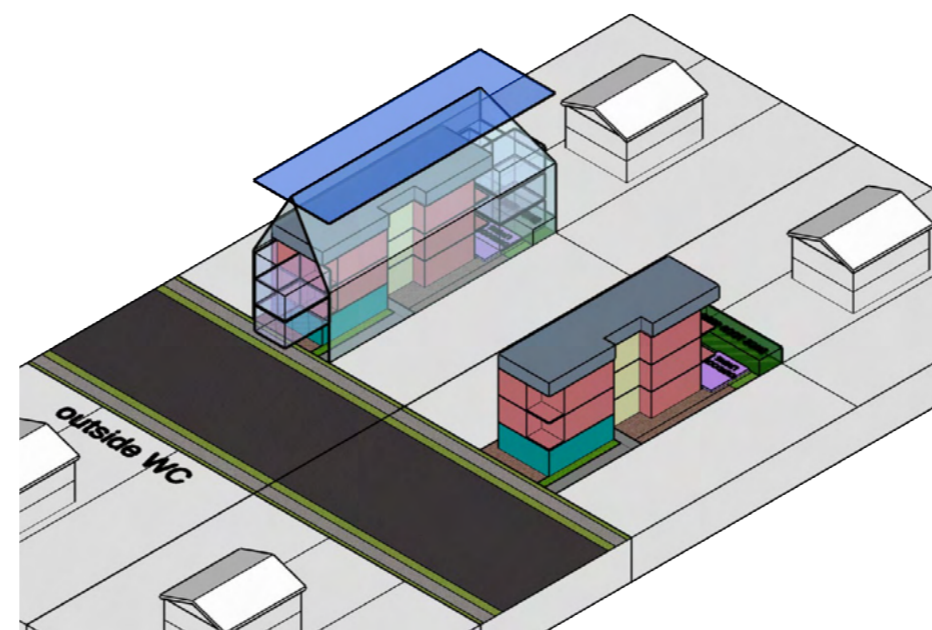
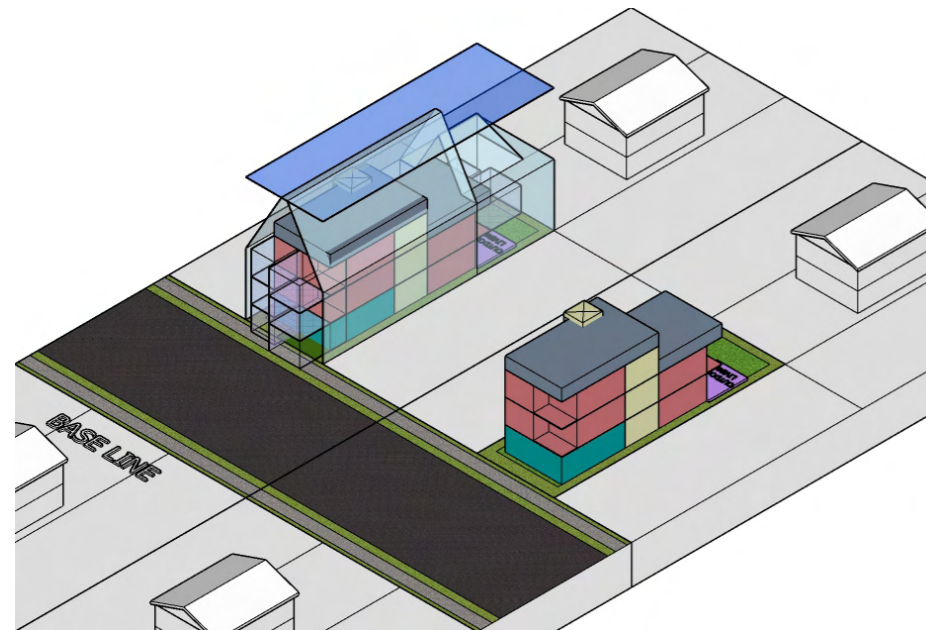
COLS not required under 20 units

Unit Type	Dwellings	%	Bedrooms	People
1 Bedroom 1 Bathroom	8	100%	8	10
<b>Totals</b>	<b>8</b>	<b>100%</b>	<b>8</b>	<b>10</b>

Apartments	416 m <sup>2</sup>
Circulation	153 m <sup>2</sup>
Bike Parking & Services	58 m <sup>2</sup>
<b>Total GFA</b>	<b>627 m<sup>2</sup></b>



Roof area	141 m <sup>2</sup>
Dwellings / hectare	267
People / hectare	333
FAR (Floor area Ratio)	2.09
Apartment GFA / 70m <sup>2</sup>	6 units



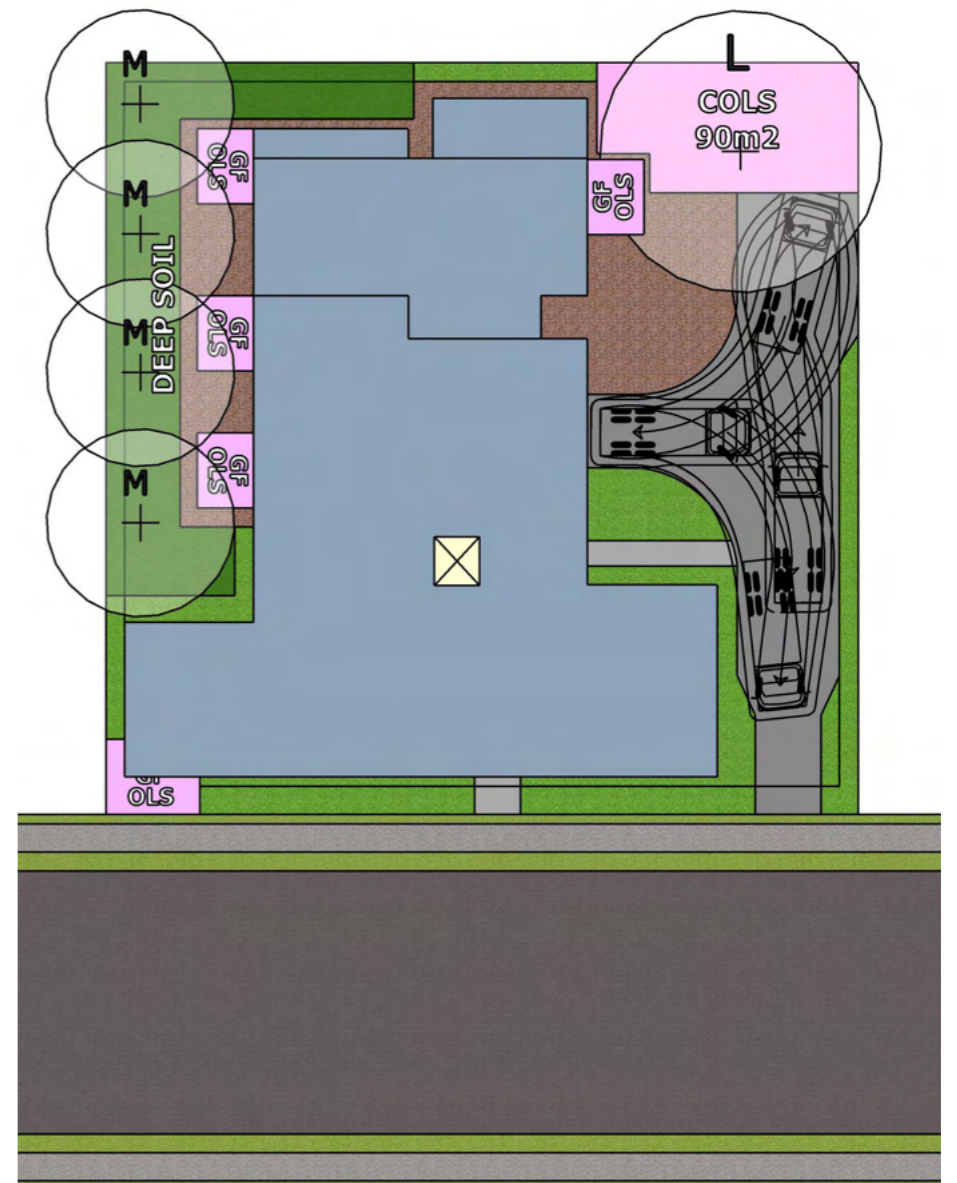
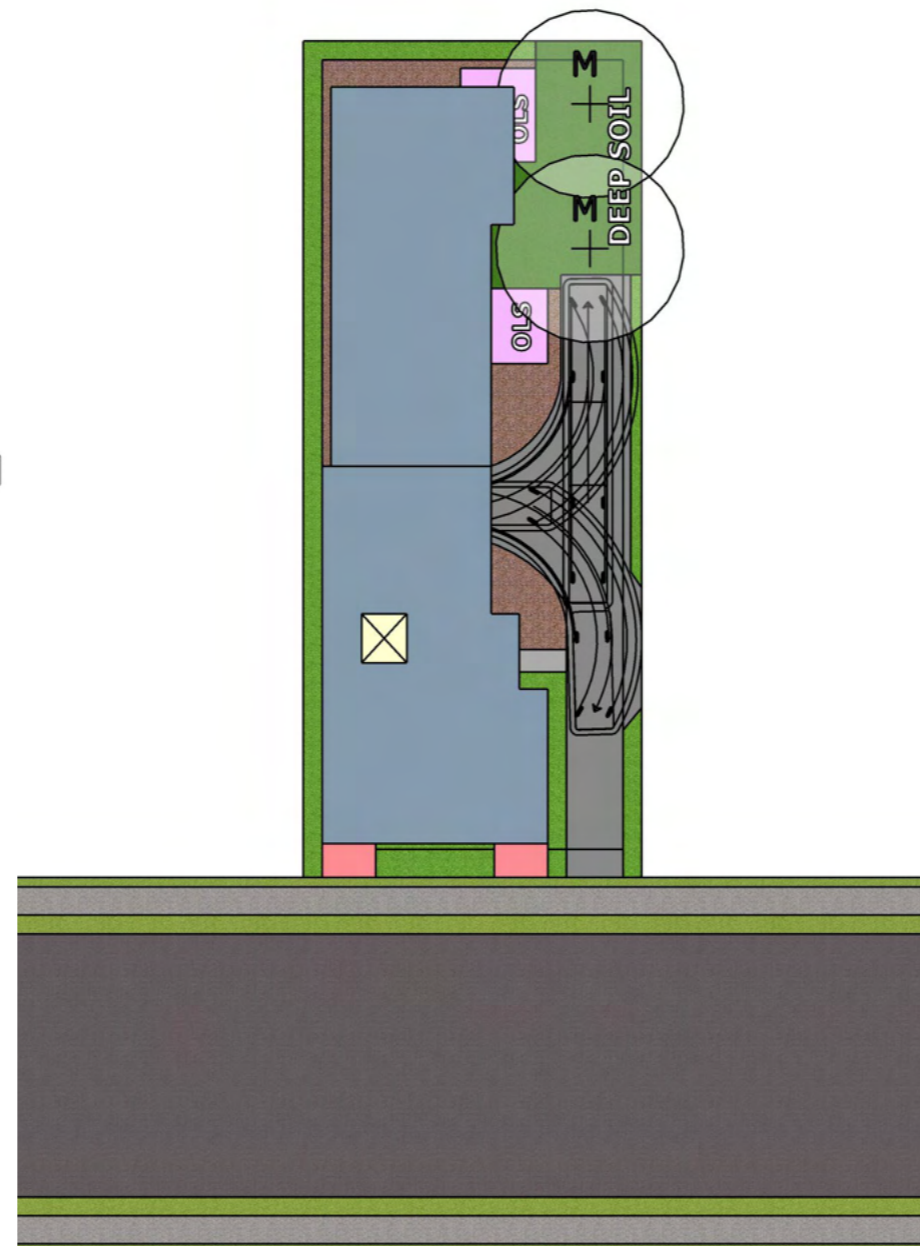
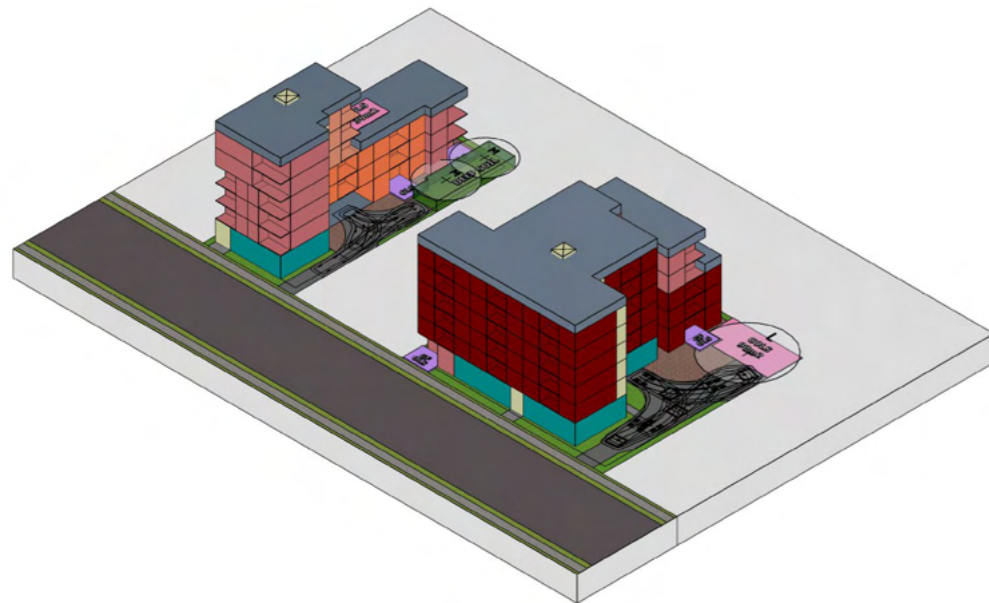
## 2.4 Compliance Plans for THAB WC Standard and Large

Typical site 18 x 44.5 m

Compliance	Target	Achieved	
50% Max. Building Coverage:	401 m <sup>2</sup>	401 m <sup>2</sup>	50%
70% Max. Impervious area:	561 m <sup>2</sup>	556 m <sup>2</sup>	69%
20% Min. Landscape area:	160 m <sup>2</sup>	245 m <sup>2</sup>	31%
10% Min. Deep Soil Area	80 m <sup>2</sup>	81 m <sup>2</sup>	10%
COLS not required under 20 units			

Large site 40 x 40 m

Compliance	Target	Achieved	
50% Max. Building Coverage:	800 m <sup>2</sup>	745 m <sup>2</sup>	47%
70% Max. Impervious area:	1120 m <sup>2</sup>	1,040 m <sup>2</sup>	65%
20% Min. Landscape area:	160 m <sup>2</sup>	575 m <sup>2</sup>	36%
10% Min. Deep Soil Area	160 m <sup>2</sup>	160 m <sup>2</sup>	10%
10m <sup>2</sup> / 5 units Min. COLS:	90 m <sup>2</sup>	90 m <sup>2</sup>	6%



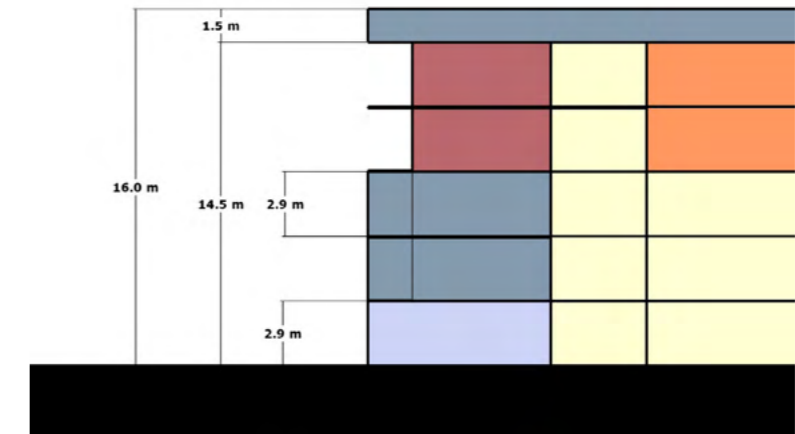
# 3. Development standard tests

### 3.1 Height Standard THAB

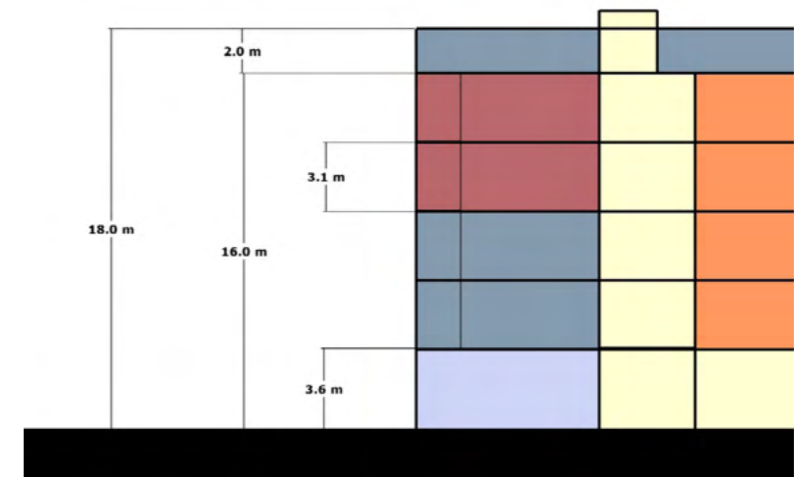
Maximum Height Standards testing to allow for Apartment Buildings in THAB.

4+ residential dwellings within THAB. The following maximum heights were tested. The assumption was made that ground floor would be for residential (entry, amenity and dwellings) and upper floors for residential.

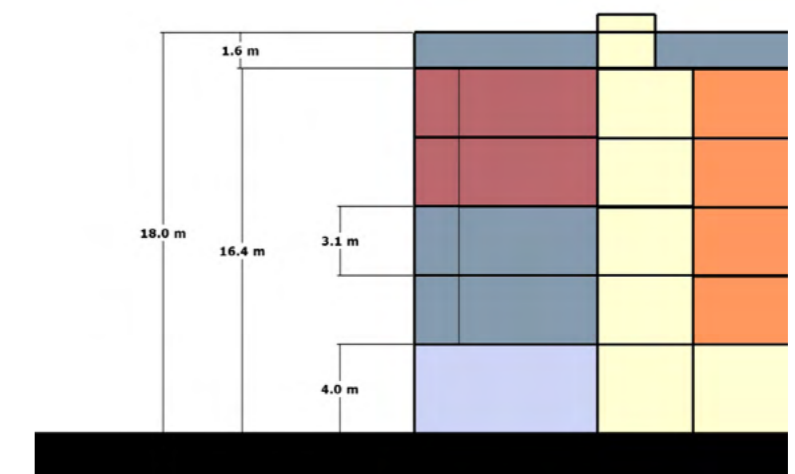
Testing	Findings
<p>1 Architectural outcomes in height when aiming for 5 storeys within different maximum height standards</p> <p>A - 16m</p> <p>B - 16m + 2m roof form</p> <p>C - 18m</p>	<p>A floor to floor height of 3.1m and 4m ground floor is not achievable in test A. If a 1.5m roof build up is assumed, Test A would need to achieve 2.9m floor to floor for all levels, an outcome which would limit good design outcomes for 5 storeys and is not aligned with outcome 2</p> <p>Test B enables a higher ground floor of 3.6 to level 1 and a floor to floor height of 3.1m for levels above.</p> <p>Test C enables a more flexible and adaptable ground floor of 4m and 3.1m residential levels above. Test C is recommended as aligning with the sought outcomes and would be very unlikely to allow 6 storeys within the same height.</p>
<p>2 Testing effect on building height on a typical (18 x 44.5m) site when MDRS HIRB standards applied (4m + 60 degrees)</p>	<p>3 level building form enabled. Max height of 16m not possible on a typical site width.</p>
<p>3 Testing effect on building height on a typical (18 x 44.5m) site when other HIRB standards applied (8m + 60 degrees)</p>	<p>16m height for building form enabled to approximately 50% of frontage to site (9m). This would enable a single apartment to address the street using the sample typologies</p>
<p>Additional commentary:</p>	<p>Flexibility, greater amenity and cost efficiency would be allowed for in a 18m or greater maximum height to enable 5 storeys. This would add an allowance for site slope. Apartment buildings with lifts do not lend themselves to stepping with the topography. Consistent levels are desired regardless of topography.</p>



Test A Section



Test B Section



Test C Section

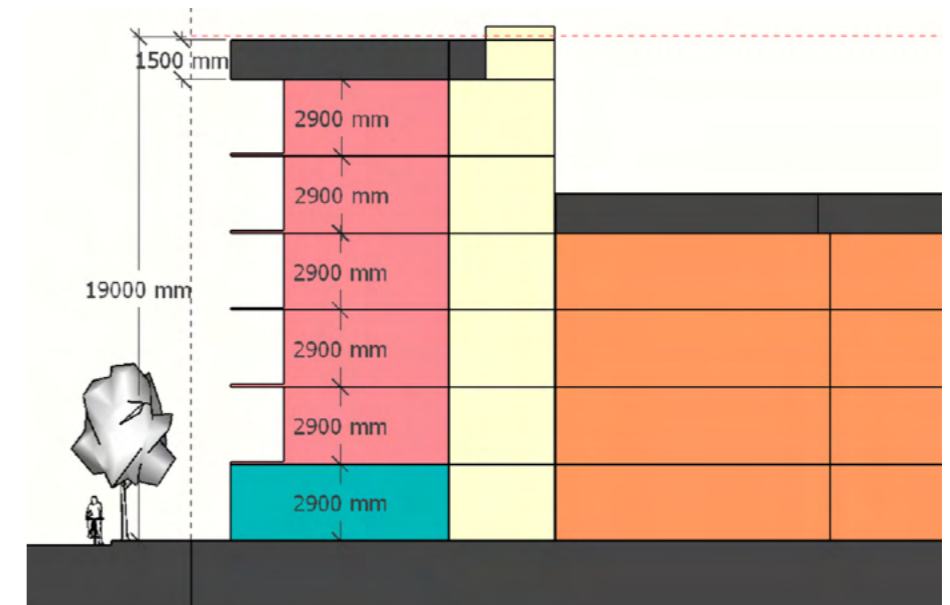
- Outcome 1:** – Enable 6+ storey buildings on a standard site
- Outcome 2:** – Ensure good on-site amenity for residents
- Outcome 3:** – Manage dominance and shading effects on the street
- Outcome 4:** – Manage privacy, building dominance and shading effects on adjoining sites (including buildings less than 6 storeys)
- Outcome 5:** – Responding to climate change

### 3.2 Height Standard THAB Walkable Catchment

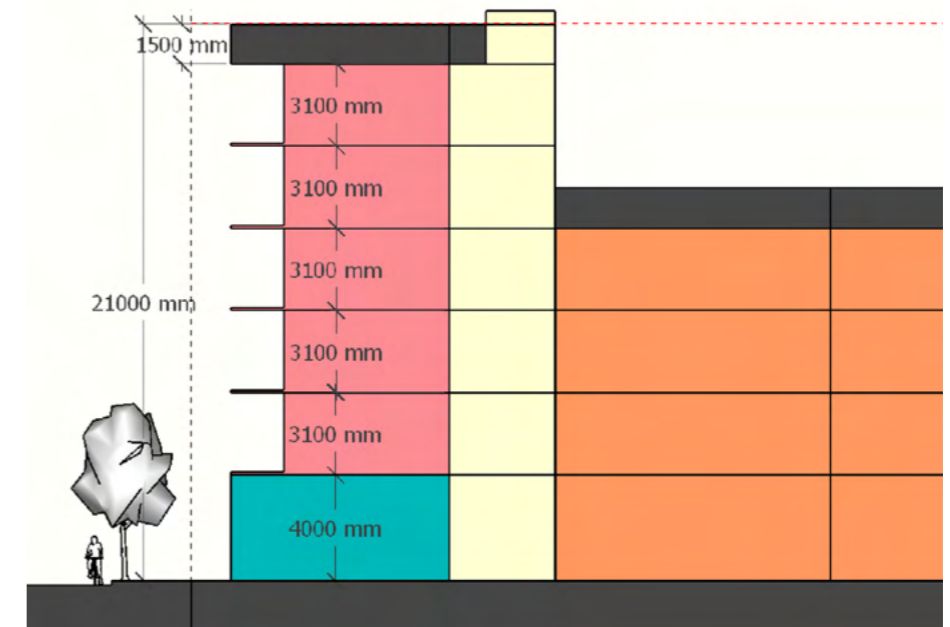
Maximum height testing to allow for apartment buildings in THAB Walkable Catchment

4+ residential dwellings within THAB Walkable Catchment. The following maximum heights were tested. The assumption was made that ground floor would be for residential (entry, amenity and dwellings) and upper floors for residential.

Testing	Findings
<p>1 Architectural outcomes in height when aiming for 6 storeys within different maximum height standards</p> <p>A - 19m total height</p> <p>B - 19m + 2 roof</p> <p>C - 21 m</p> <p>D- 22.5m</p>	<p>A standard floor to floor height of 3.1m is not achievable in test A.</p> <p>Test B allows for 3.1m floor to floor for 6 storeys.</p> <p>Test A and B do not allow for a greater ground floor height of 4m.</p> <p>Test C could enable 4m ground floor and 3.1m floor to floor heights for level 1 to level 5.</p> <p>Test D would enable greater floor to floor heights and/or more than 1.5m roof form.</p>
2 Typical (single) site testing - with 19 + 60 degrees HIRB standards	21m building form enabled to 15.7m width of 18m site. 42m building depth enabled on a 44.5m depth site. That depth of building form not to aligned with outcome 2 or 4.
3 Large (double) site testing - with 19 + 60 degrees HIRB standards	21m building form enabled to 37.7m width of 40m site. Building height to 21m enabled to 37m depth on a 40m deep site. That depth of building form not to aligned with outcome 2 or 4 or desire to encourage building bulk towards street edge.
4 Adding HIRB standards of 8m and 60 degrees on a typical site beyond 21m from street boundary.	Restricts development to 3 or 4 storeys on a typical site where adjacent to that HIRB control. With this HIRB on a typical site a maximum height standard is no longer the determinant of building height. On a larger site HIRB standards do not restrict building height reaching maximum.
Additional commentary:	Flexibility, greater amenity and cost efficiency would be allowed for in a 22.5m total maximum height to enable 6 storeys. This would add an allowance for site slope. Apartment buildings with lifts do not lend themselves to stepping with the topography. Consistent levels are desired regardless of topography.
<b>Outcome 1:</b>	- Enable 6+ storey buildings on a standard site
<b>Outcome 2:</b>	- Ensure good on-site amenity for residents
<b>Outcome 3:</b>	- Manage dominance and shading effects on the street
<b>Outcome 4:</b>	- Manage privacy, building dominance and shading effects on adjoining sites (including buildings less than 6 storeys)
<b>Outcome 5:</b>	- Responding to climate change



Test A Section



Test C Section

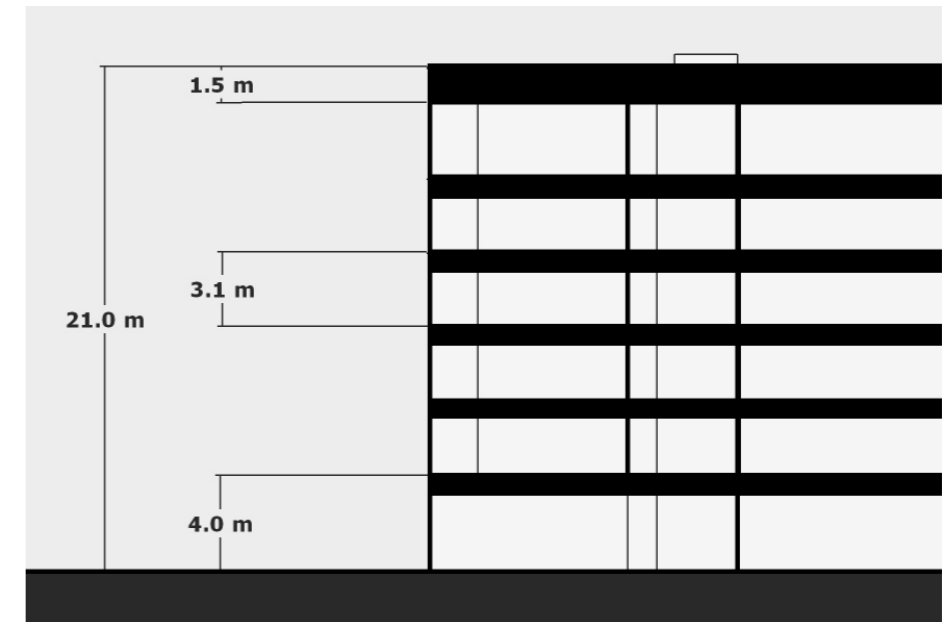
### 3.3 Height Standard BMU Walkable Catchment

Maximum height testing to allow for mixed use apartment buildings in Business Mixed Use Zone within Walkable Catchments

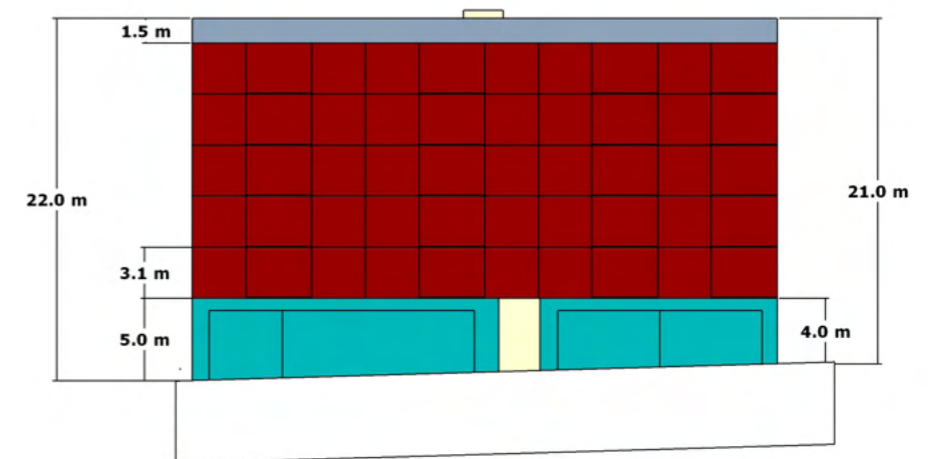
4+ residential mixed use within BMU. The following maximum heights were tested. The assumption was made that ground floor would be for commercial / retail use and upper floors for residential.

Testing	Findings
1 A - 19m occupied +2m roof form B - 21.0m C - 22.0m	<p>A - A residential floor to floor height of 3.1m and ground floor of 4m is not achievable in Test A. More than 19m is required in occupied levels.</p> <p>B - 21m overall height is acceptable to accommodate 4m ground floor to level 1 and 3.1m standard levels above.</p> <p>C - 22m allows for greater adaptability, flexibility, topography and options around cost effective structural solutions.</p>
Additional commentary:	<p>4m is an acceptable ground floor to level 1 dimension. A recommended adaptive ground floor is 4.5 - 5m to level 1. This is for the following reasons:</p> <ul style="list-style-type: none"> <li>- Main street retail shop front glazing requires 3.6m from the street to reach market leasing expectations.</li> <li>- The area required above the internal ceiling to the floor above is expected to be approximately 1m due to structure, additional plant and fire rating are taken into account.</li> <li>- The structure is often thicker than upper floors to transfer loads and minimise columns and structure in the commercial / retail tenancy.</li> <li>- The ground floor needs to allow for the accessible access (as per building code requirements) from the adjacent footpath to commercial tenancies at multiple locations across the frontage so needs to allow for the rise up or drop away of the footpath. On sloping sites the ground floor may then vary in height, starting at 5m or more and reducing over the frontage to accommodate site slope. (Test C)</li> </ul>

<b>Outcome 1:</b>	- Enable 6+ storey buildings on a standard site
<b>Outcome 2:</b>	- Ensure good on-site amenity for residents
<b>Outcome 3:</b>	- Manage dominance and shading effects on the street
<b>Outcome 4:</b>	- Manage privacy, building dominance and shading effects on adjoining sites (including buildings less than 6 storeys)
<b>Outcome 5:</b>	- Responding to climate change



Test B Section



Test C Elevation

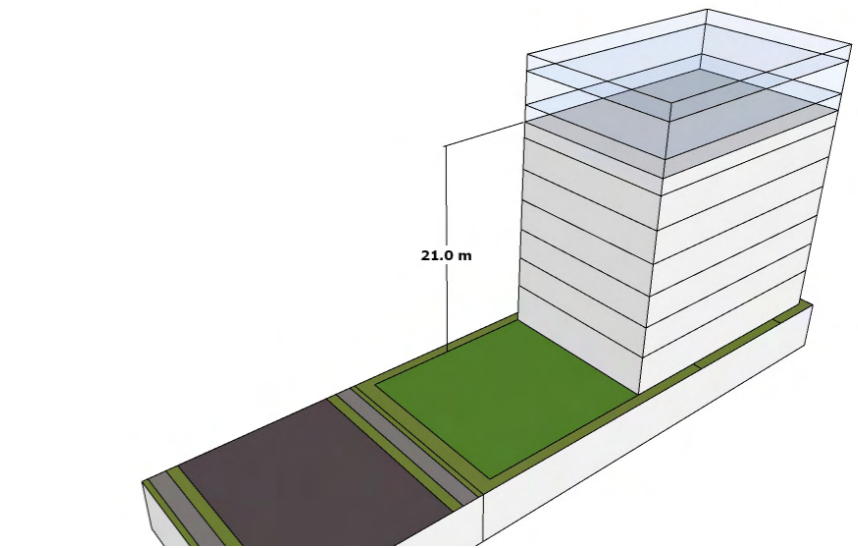


### 3.4 Height in Relation to Boundary Standards

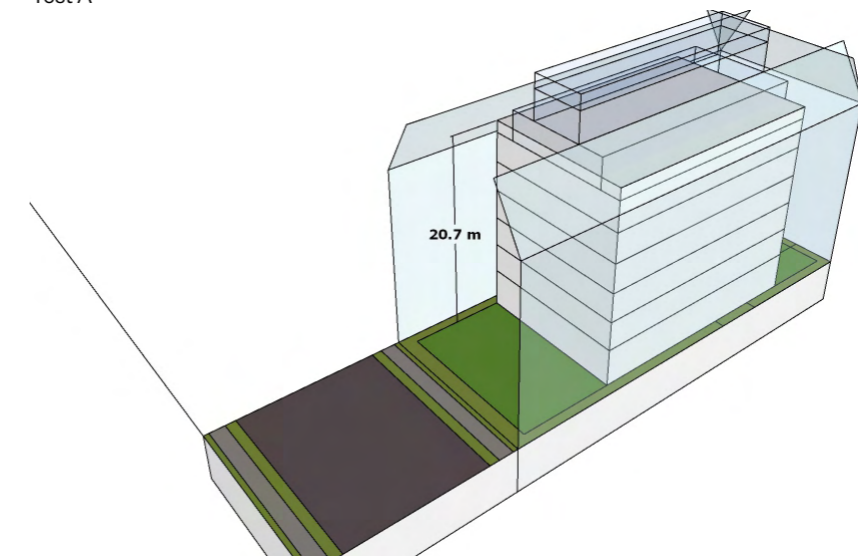
Various height in relation to boundary options have been tested in the following modelling. These are compared using the key standards of building coverage, outlook space and height. Informed by these findings the yield study schemes (within chapter 2) have then been developed and progressed considering other standards applicable in the zone and development considerations.

4+ residential dwellings within THAB. Floor to floor height of 3.1m except for ground level within walkable catchments where 4m has been allowed

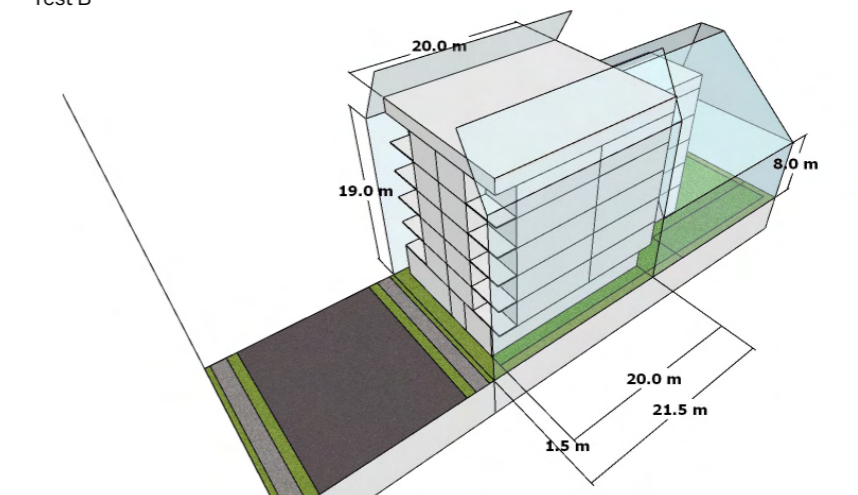
Testing	Findings
<p>1 HIRB standards to test 6 storey outcomes on typical site (THAB WC)</p> <p>A - No HIRB</p> <p>B - 19m +60 degrees</p> <p>C - 19m +60 degrees -for first 21.5m and 8m +60 degrees there after</p>	<p>A - 6 storeys available to full depth of site minus yards to 50% building coverage. 6 storeys to full depth of site does not reach Outcome 4. Max height control along with outlook controls would determine vertical bulk and location.</p> <p>B - 6 storeys available to full depth of site (minus yards). 6 storeys to full depth of site does not reach Outcome 4. Ignoring max height control, HIRB allows 7 Storeys to 80% of frontage and 8 storeys to 63% frontage. Building coverage becomes standard that limits building mass.</p> <p>C - 19m +60 degrees enables 6 storeys considering side yard on typical site. 20m building depth enabled to 6 storeys for full width of the site. Likely to encourage mass development towards the street. Height limited to 3-4 storeys at rear when outlook controls added.</p>
<p>2 HIRB standards to test 6 storey outcomes on large site (THAB WC)</p> <p>D - 19m +60 degrees</p> <p>E - 19m +60 degrees -for first 21.5m and 8m +60 degrees there after</p>	<p>D - 6 storeys available to full depth of site (minus yards). Outcome 4 issues would arise mainly if 2 buildings on the same site were applied, thus pushing mass closer to boundaries. Max height control along with outlook controls would determine vertical bulk and location. Building coverage becomes standard that limits building mass.</p> <p>E - 6 storeys still available to full depth of site (minus yards) but not full width. Outcome 4 strengthened.</p>
<p>3 HIRB standards to test 5 storey outcomes on typical site (THAB - 3.1m floor to floor throughout)</p> <p>F -AHIRB - operative</p> <p>G - 8m +60 degrees</p>	<p>F - 5 Storeys available to 50% of frontage but restricted depth. Makes 5 storeys less likely due to lack of GFA available at that level.</p> <p>G - 8m +60 degrees enables 5 storeys for 50% of width to typical site.</p> <p>At the rear of the site, combined with outlook standards and when providing for access this standard is unlikely to yield 5 storeys. Any 'tail' of building into the depth of the site is likely to sit to one side not in the middle of the site where it would need to be to yield 5 storeys.</p>
<p>4 HIRB standards to test 5 storey outcomes on large site (THAB - 3.1m floor to floor throughout)</p> <p>H -AHIRB - operative</p> <p>I - 8m +60 degrees</p>	<p>H - 5 Storeys available to 75% of frontage but restricted depth. Makes 5 storeys less likely due to lack of GFA available at that level.</p> <p>I - 8m +60 degrees enables 5 storeys for 75% of width to large site.</p> <p>At the rear of the site, combined with outlook standards and when providing for access this standard is able to yield 5 storeys. Any 'tail' of building into the depth of the site is likely to sit in the middle of the site. Although this standard can achieve 5 storeys on a larger site, it would not benefit a standard or small site which are more likely in the Auckland area.</p>



Test A



Test B



Test C

## Height in Relation to Boundary Standards

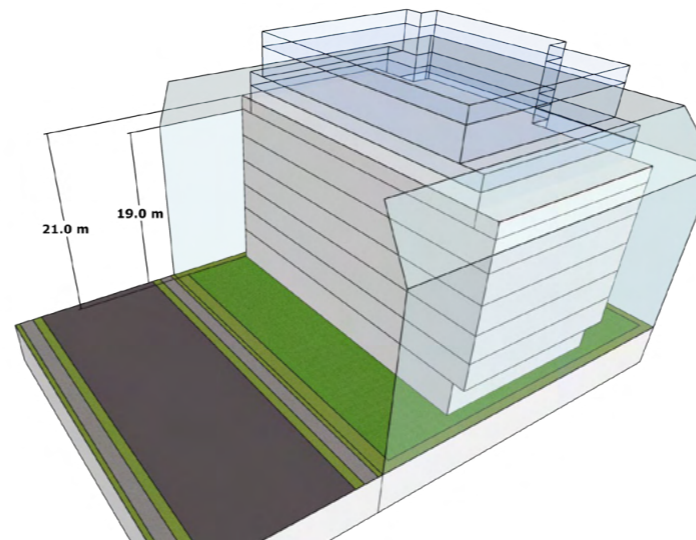
Various height in relation to boundary options have been tested in the following modelling. These are compared using the key standards of building coverage, outlook space and height. Informed by these findings the yield study schemes (within chapter 2) have then been developed and progressed considering other standards applicable in the zone and development considerations.

Additional commentary:

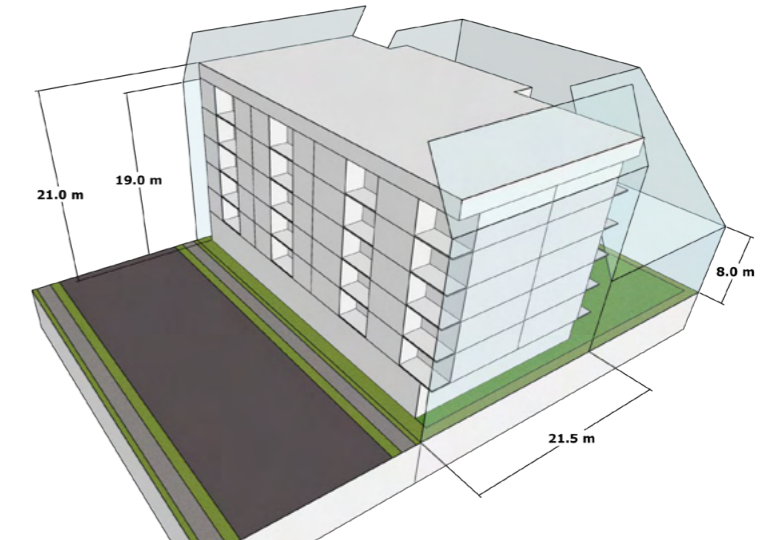
HIRB is a dominant/strong constraint/enabling factor to development height and form, especially on a typical site width.

Rear site outcomes could expect 3-5 storey outcomes depending on site width. Again outlook standards would dynamically interact with HIRB to effect mass and vertical bulk.

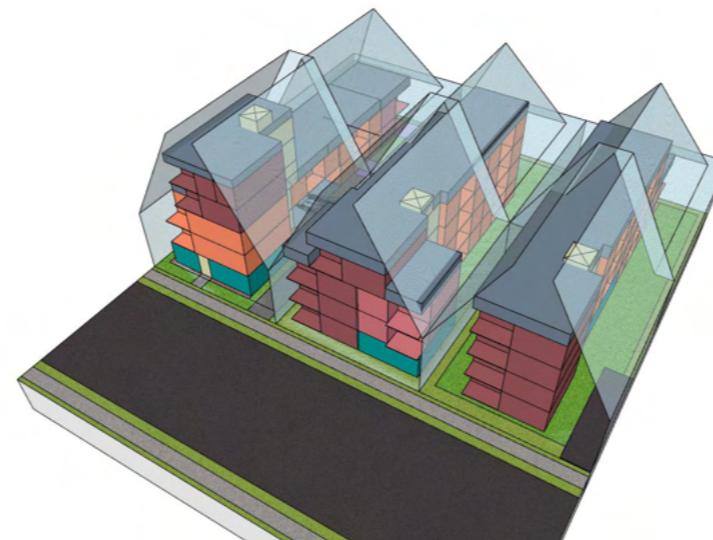
HIRB between zones and at interfaces with QMs was not undertaken by Jasmx



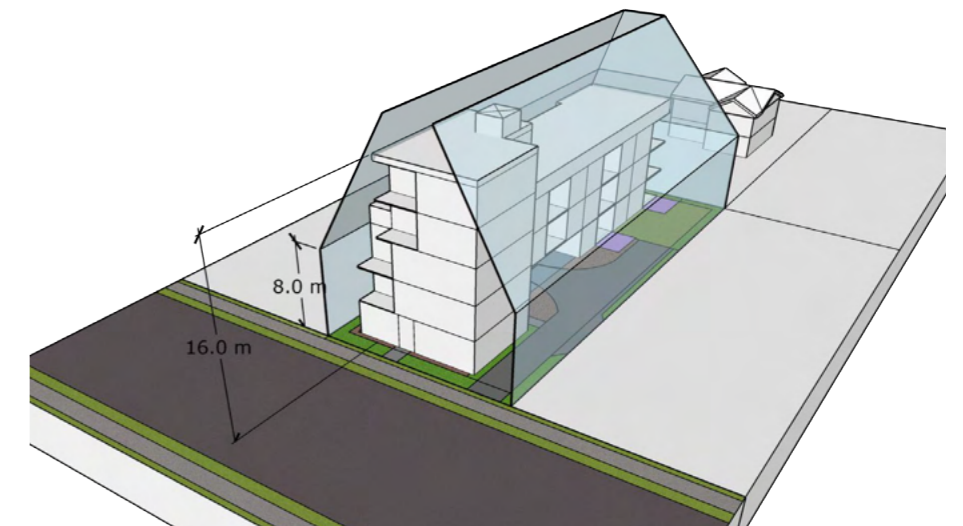
Test D



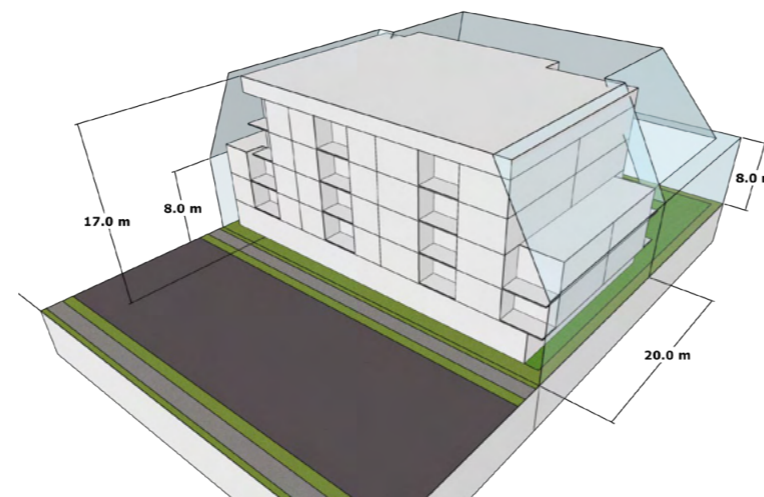
Test E



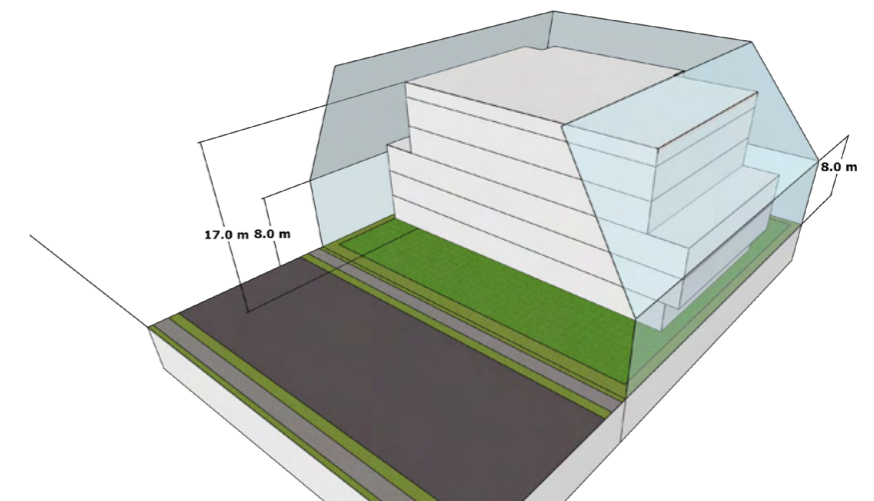
Test F



Test G



Test H



Test I

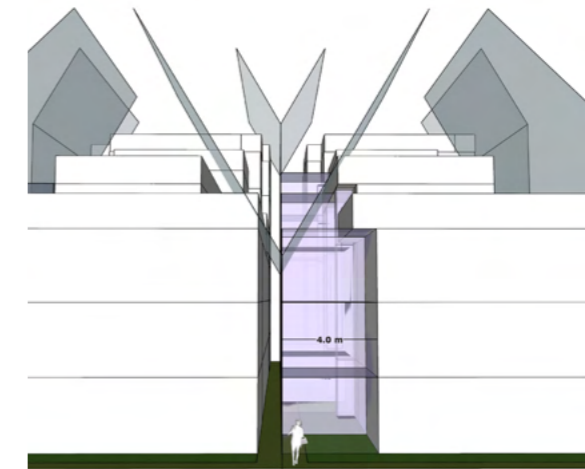
### 3.5 Outlook Space

Various outlook space options have been tested in the following modelling. These are compared using the key standards of building coverage, height in relation to boundary and height. Informed by these findings the yield study schemes (within chapter 2) have then been developed and progressed considering other standards applicable in the zone and development considerations.

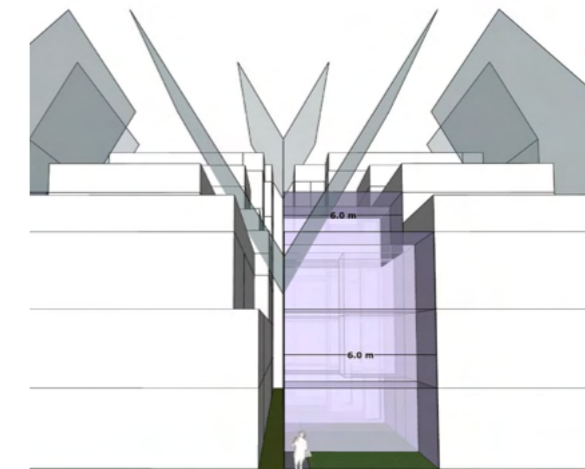
4+ residential dwellings within THAB Walkable Catchment. The following outlooks were tested with assessment made as to whether they encouraged or minimised privacy and overlooking. The assumption was made that ground floor would be for residential (entry, amenity and dwellings) and upper floors for residential. The neighbouring site is assumed to have worst case scenario development at 1m from boundary to full height with outlook space addressing other boundaries.

Testing	Findings
1 Test A - MDRS 4 x 4 outlooks Test B - Operative 6 x 4 outlooks Test C - 8 x 4 above 3 storeys - 6 x 4 at level 1 and 2 - 5 x 4 at ground level	A - Yields minimum building separation of 5m - expected overlooking and other side boundary sensitivities to neighbouring properties. Units receive limited sunlight especially with outboard balconies. Effects would be exacerbated at higher levels  B - Yields better building separation however it still would have overlooking and other side boundary sensitivities to neighbouring properties. As the building height increases, access to sunlight is reduced for units as well as outdoor living areas. Effects would be exacerbated at higher levels  C - Yields better building separation which responds to the increase in building height and thus manages the privacy and overlooking to neighbour effects.
2 Method of measurement: glazing vs balcony edge Test D - 6 x 4 outlooks measured from glazing Test E - 6 x 4 outlooks measured from balcony edge	May have effect of more 'inboarding' of balconies. Meaning the main mass and windows to bedrooms will have similar distance to the boundary as edge of balcony and private outdoor living space.
3 Outlook at GF with boundary/fence condition Test F - Worst case outcome of building form close to boundary	Ground floor balcony edge condition does not exist. So measurements will likely start from glazing to comply. Ground floor units can therefore be closer to the boundary than upper floor dwellings.

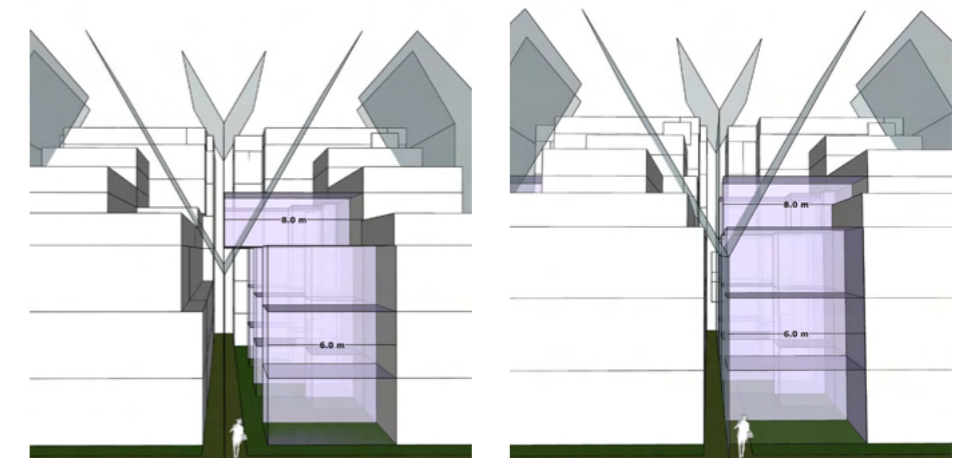
- Outcome 1:** – Enable 6 storeys on a standard site
- Outcome 2:** – Ensure good on-site amenity for residents
- Outcome 3:** – Manage dominance and shading effects on the street
- Outcome 4:** – Manage privacy, building dominance and shading effects on adjoining sites (including buildings less than 6 storeys)
- Outcome 5:** – Responding to climate change



Test A



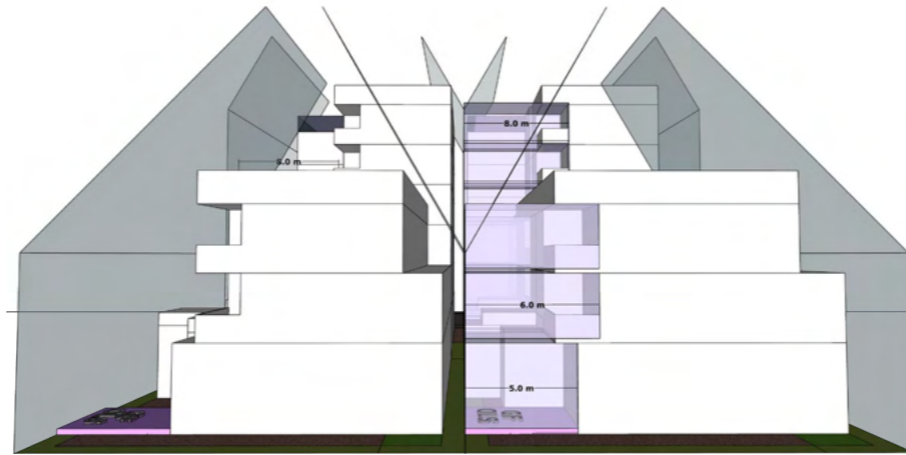
Test B



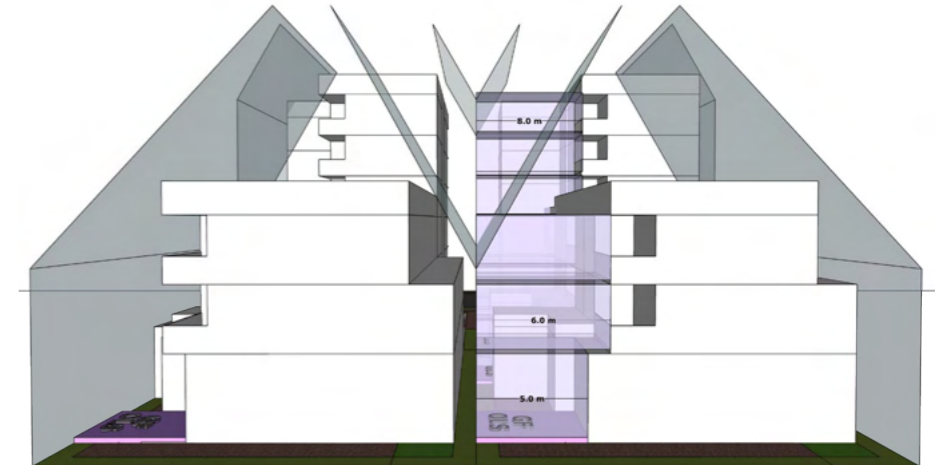
Test C

## Outlook Space

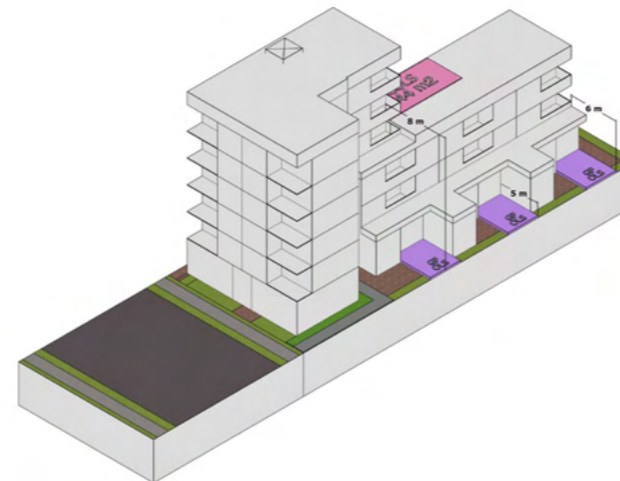
Various outlook space options have been tested in the following modelling. These are compared using the key standards of building coverage, height in relation to boundary and height. Informed by these findings the yield study schemes (within chapter 2) have then been developed and progressed considering other standards applicable in the zone and development considerations.



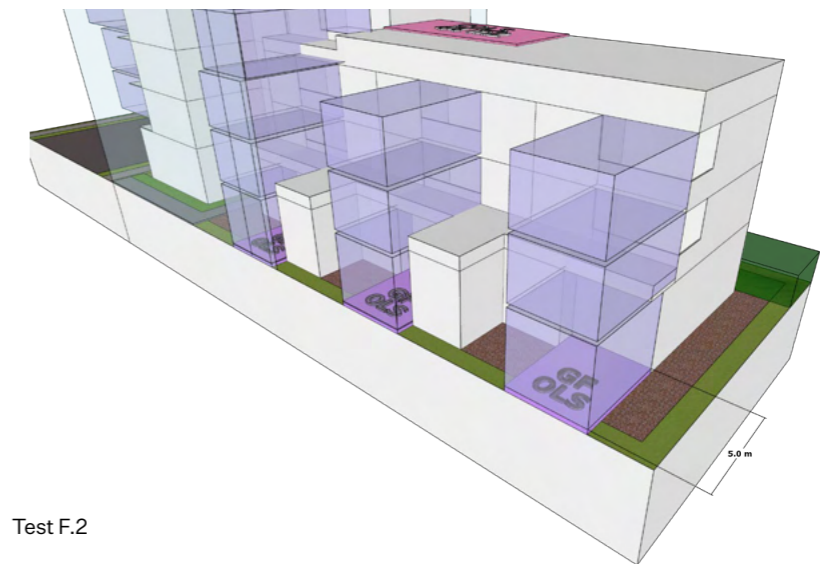
Test D



Test E



Test F.1



Test F.2

## **ATTACHMENT 1: PART 2**

**\_APPENDIX 3: Auckland Council (2022). Terrace Housing- Residential Development Study**

**\_APPENDIX 4: Jasmx (2022). Building Height Memo**

**\_APPENDIX 5: Auckland Council. Width of an average of 'typical' residential site within walkable catchment in Auckland**

**\_APPENDIX 6: Auckland Council (2022). Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11**

# Proposed Plan Change 78 – Intensification Technical Background Report Appendices

10 August 2022

## Appendices

Appendix 1: Boffa Miskell (2022). 6 Storey Apartment Buildings – Auckland Case Studies; Auckland: Boffa Miskell

Appendix 2: Jasmax (2022). Apartment – Residential Development Testing; Auckland: Jasmax

Appendix 3: Auckland Council (2022). Terrace Housing- Residential Development Study; Tamaki Makaurau Design Ope, Plans & Places, Auckland Council

Appendix 4: Jasmax (2022). Building Height Memo; Auckland: Jasmax

Appendix 5: Auckland Council. Width of an average of 'typical' residential site within walkable catchment in Auckland; UDU Research, October 2021

Appendix 6: Auckland Council. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

Appendix 3: Auckland Council (2022).  
Terrace Housing- Residential Development Study;  
Tamaki Makaurau Design Ope, Plans & Places,  
Auckland Council

# Terrace Housing - Residential Development Study

Tāmaki Makaurau Design Ope, Plans & Places, Auckland Council

August 2022

## Objective:

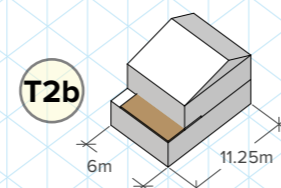
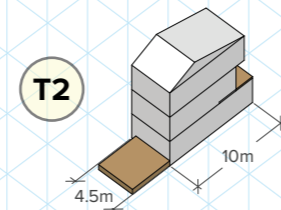
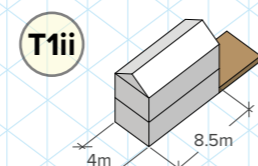
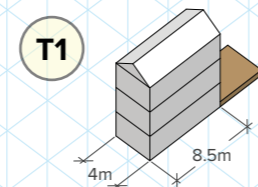
Two Terrace typologies - Typical Terrace (**T1**) and Terrace with Garage (**T2**) are modelled and tested using the existing are modelled and testing using the existing (operative) MHU and THAB, and proposed MHU and THAB Unitary Plan standards on three different site conditions in order to test and inform implications of the standards.

An alternative height (**T1ii, T2ii**) version was required due to HiRB and alternative length (**T2a, T2iia**) version due to limitations of a 10m Terrace on 18m site. An alternative (**T2b**) was required to enable one Terrace House on a 10m site and (**T1a, T1iia**) to enable two Terrace Houses.

## Terrace House Typologies:

Floor to Floor 3.1m

3 Bedroom (with exception of **T1ii, T1iia**)



Type:	Description:	Dimensions (W) x (L):	Building Coverage:	GFA:
<b>T1:</b>	<b>Typical Terrace</b>	4m x 8.5m	34m <sup>2</sup>	102m <sup>2</sup>
<b>T1a:</b>	Alt Length	5m x 6.7m	34m <sup>2</sup>	102m <sup>2</sup>
<b>T1ii:</b>	2 Level <b>2 Bedroom</b>	4m x 8.5m	34m <sup>2</sup>	68m <sup>2</sup>
<b>T1iia:</b>	Alt Width 2 Level <b>2 Bedroom</b>	5m x 6.7m	34m <sup>2</sup>	68m <sup>2</sup>
<b>T2:</b>	<b>Terrace with Garage</b>	4.5m x 10m	45m <sup>2</sup>	135m <sup>2</sup>
<b>T2a:</b>	Alt Length	5.6m x 8m	45m <sup>2</sup>	135m <sup>2</sup>
<b>T2ii:</b>	2 Level	6.75m x 10m	67.5m <sup>2</sup>	135m <sup>2</sup>
<b>T2iia:</b>	Alt Length 2 Level	8.45m x 8m	67.5m <sup>2</sup>	135m <sup>2</sup>
<b>T2b:</b>	Alt Width 2 Level	6m x 11.25m	67.5m <sup>2</sup>	135m <sup>2</sup>



# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

### Method/Standards:

Tests were conducted using the following metrics and assumptions:

- **Outlook Space**  
Primary: MHU/THAB Existing 6x4m,  
MHU/THAB Proposed 5x4m on Ground Floor
  - **Private Outdoor Living Space - (POLs) = 20m<sup>2</sup>**
  - **Landscape Area**  
MHU Existing 35% & MHU/THAB Proposed 20%
  - **Landscape Area in POLs**  
MHU Existing enables LA in POLs,  
MHU Proposed enables 1m buffer if required
  - **Non-vegetated Landscape Area**  
MHU Existing enables <9% of LA to be non-vegetated
  - **Landscape Buffer**  
1m on side of Pedestrian Access way, free of services
  - **Deep Soil + Canopy Tree Area**  
10% - 1 Tree p/300m<sup>2</sup>, min dim 3m
  - **Communal Outdoor Living Space**  
20+ units: 10m<sup>2</sup> p/5units
  - **Bike Parking**  
20+ units: Double Stacked Parking - 11 Spaces p/carspace
  - **6.3m Van Loading & Manoeuvring**  
10+ units - located at front of site
  - **Waste Storage**  
Individual 1.4m<sup>2</sup> p/unit, 10+ Communally located,  
20+ Communal Storage (.7m<sup>2</sup> p/unit)
  - **Accessible Parking**  
1 space for 10-19 units / 2 spaces for 20-29 units
- Adjacent properties assumed as same planning zone
  - Site assumed flat with good ground conditions
  - No existing site constraints such as trees or underground assets
  - Studies apply a 3 storey maximum terrace house height as would be anticipated for this typology. This is therefore below the operative and proposed height standards (THAB zone).
  - Study applies proposed standards within the THAB zone (outside of walkable catchments). Results however are considered relevant for the THAB zone within walkable catchments given that the 3 storey terrace typology would not utilise the increased Height and HIRB proposed standards within the walkable catchment.:
  - Where the HiRB standard has limited parts of the modelled schemes to a 2 storey terrace height this is highlighted on the model summary sheets by a pink coloured recessive plane.

# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

### Site & Scenario:

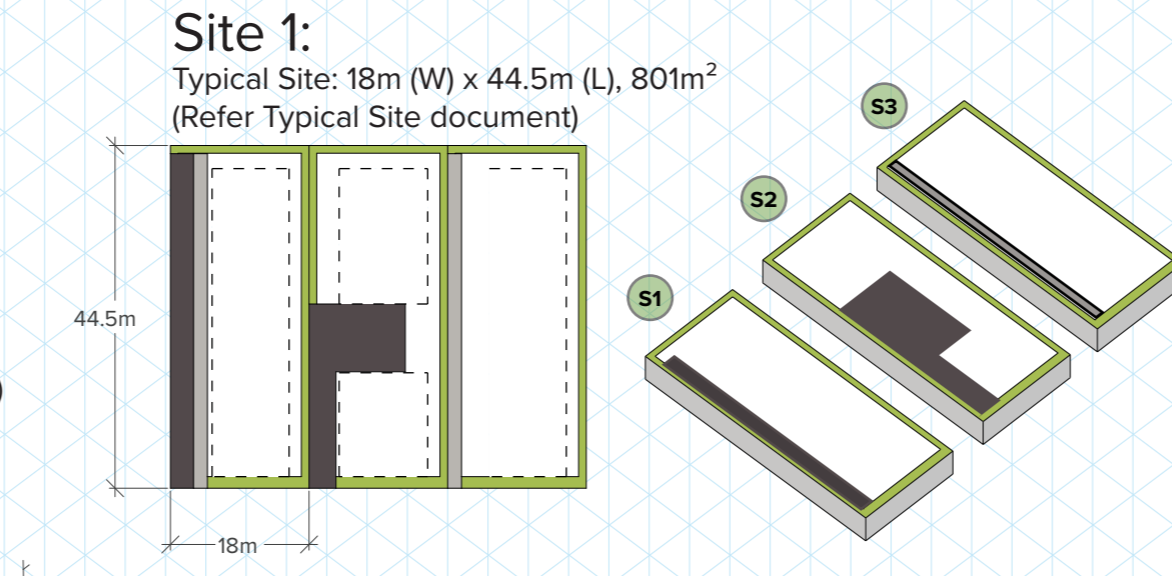
The sites are;

**Site 1:** standard 18m (W) x 44.5m (L) 801m<sup>2</sup> flat sites based on assumptions on average site sizes within the walkable catchments in Auckland.

**Site 2a:** large site - double area 1600m<sup>2</sup>  
40m (W) x 40m (L)

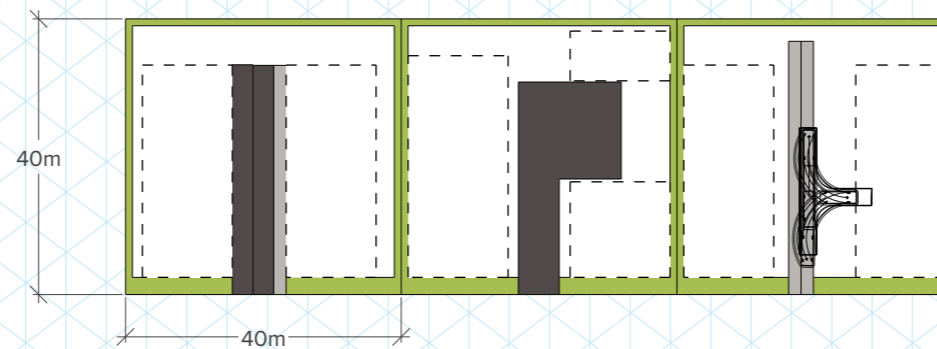
**Site 2b:** large site - double width 36m (W) x 60m (L)  
2160m<sup>2</sup> to enable testing of 20+ Terraces

**Site 3:** small site -  
10m (W) x 30m (L) 300m<sup>2</sup>



### Site 2a:

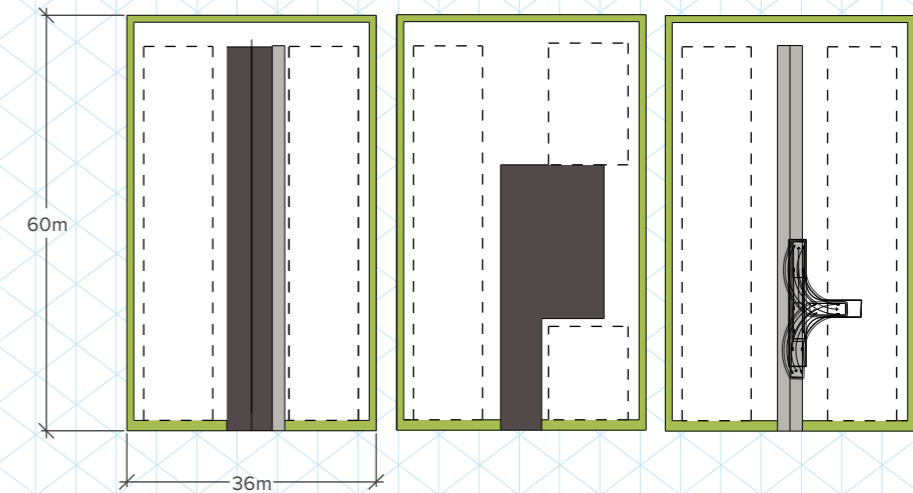
Large Site: 40 (W) x 40m (L), 1600m<sup>2</sup>



### Site 2b:

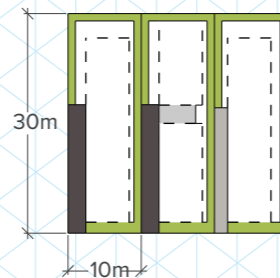
Large Site: 36m (W) x 60m (L), 2160m<sup>2</sup>

Two x Typical Site width amalgamated, 60m to enable/test 20+ units.



### Site 3:

Small Site: 10m (W) x 30m (L), 300m<sup>2</sup>



### Environment:

Three scenarios based on common site arrangements seen in Auckland.

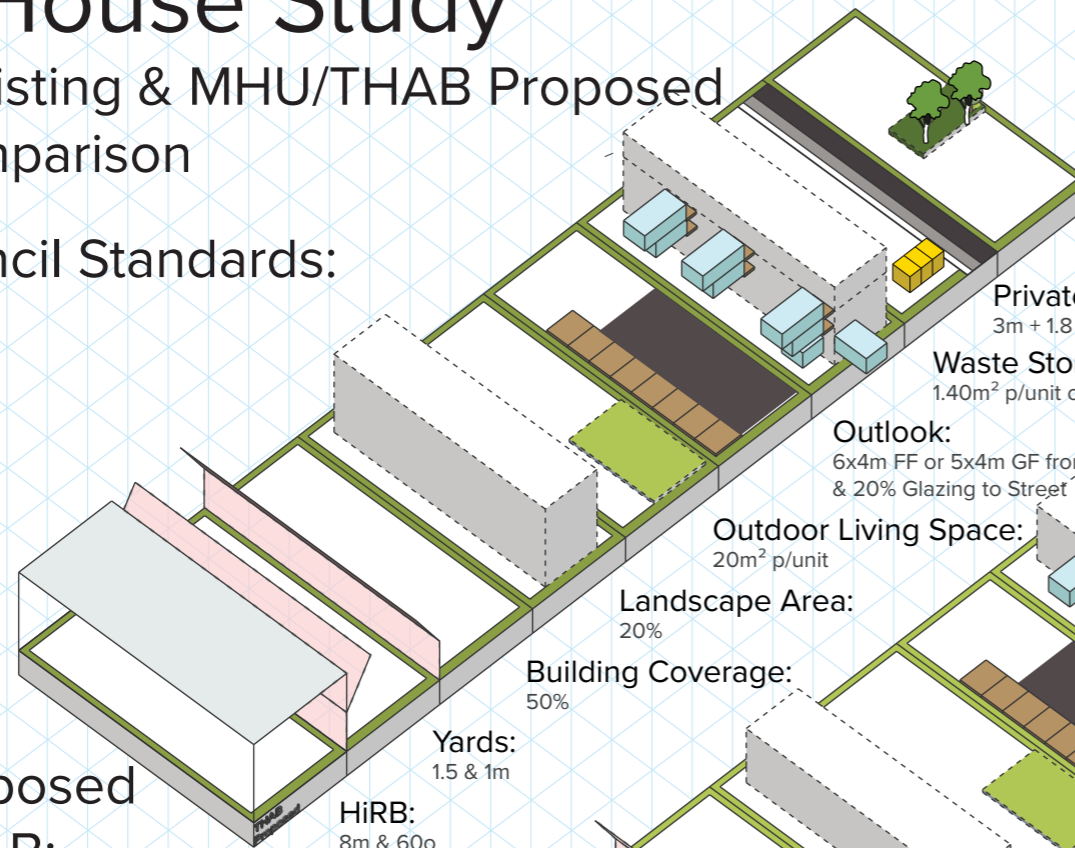
- S1 Scenario 1**  
Vehicle Accessway + Footpath
- S2 Scenario 2**  
Grouped Car Parking
- S3 Scenario 3**  
Pedestrian Only Access

# Terrace House Study

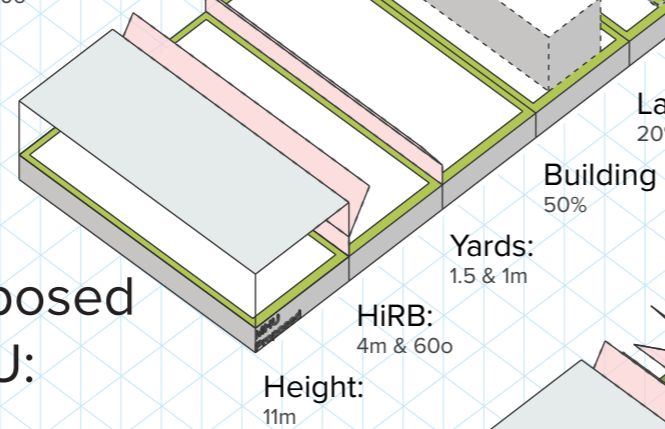
## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

### Auckland Council Standards:

Proposed THAB:



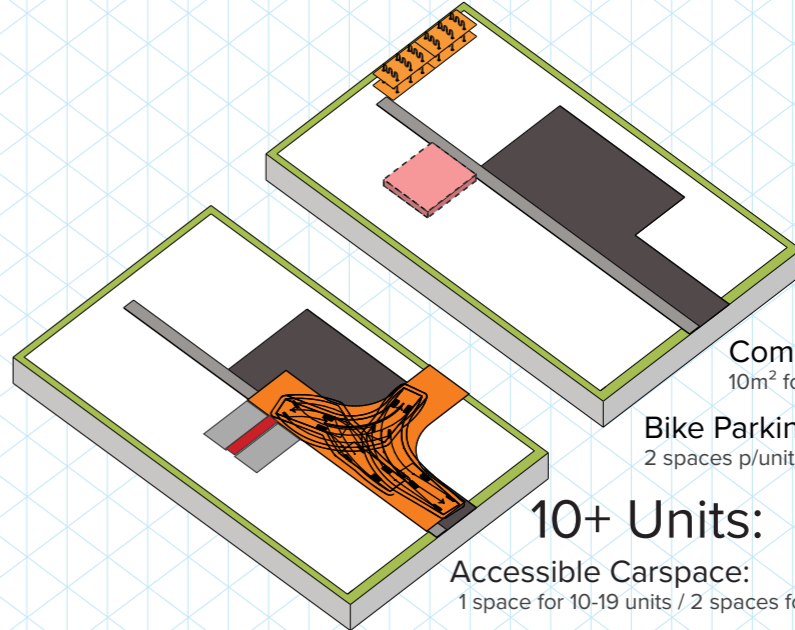
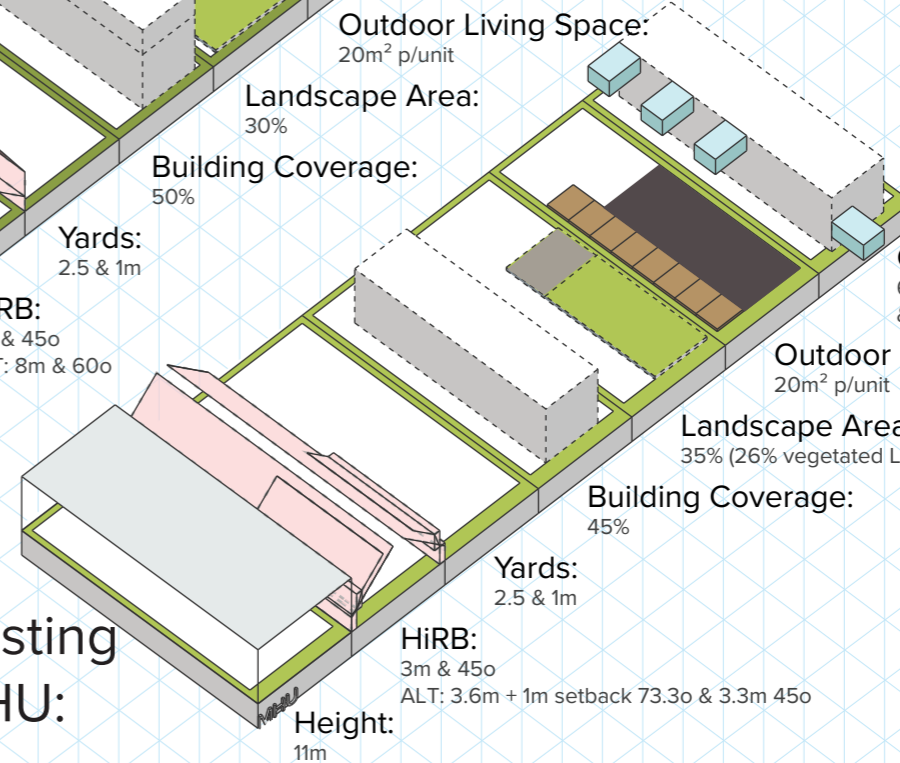
Proposed MHU:



Existing THAB:



Existing MHU:



### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 space for 10-19 units / 2 spaces for 20-29 units)

# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Yield Analysis

### Site 1 (18x44.5m) Summary:

- S1 Scenario 1**  
Vehicle Accessway + Footpath
- S2 Scenario 2**  
Grouped Car Parking
- S3 Scenario 3**  
Pedestrian Only Access

### Proposed THAB:

- Scenario 1: 6 Units**  
Terrace Type: 6xT2a (GFA: 810m<sup>2</sup>)
- Scenario 2: 6 Units**  
Terrace Type: 6xT1 (GFA: 612m<sup>2</sup>)
- Scenario 3: 9 Units**  
Terrace Type: 9xT1 (GFA: 918m<sup>2</sup>)

### Proposed MHU:

- Scenario 1: 6 Units**  
Terrace Type: 6xT2a (GFA: 810m<sup>2</sup>)
- Scenario 2: 6 Units**  
Terrace Type: 5xT1, 1xT1ii (GFA: 578m<sup>2</sup>)
- Scenario 3: 9 Units**  
Terrace Type: 8xT1, 1xT1ii (GFA: 884m<sup>2</sup>)

### Existing THAB:

- Scenario 1: 5 Units**  
Terrace Type: 4xT2a, 1xT2iia (GFA: 675m<sup>2</sup>)
- Scenario 2: 6 Units**  
Terrace Type: 3xT1, 3xT1ii (GFA: 510m<sup>2</sup>)
- Scenario 3: 9 Units**  
Terrace Type: 5xT1, 4xT1ii (GFA: 782m<sup>2</sup>)

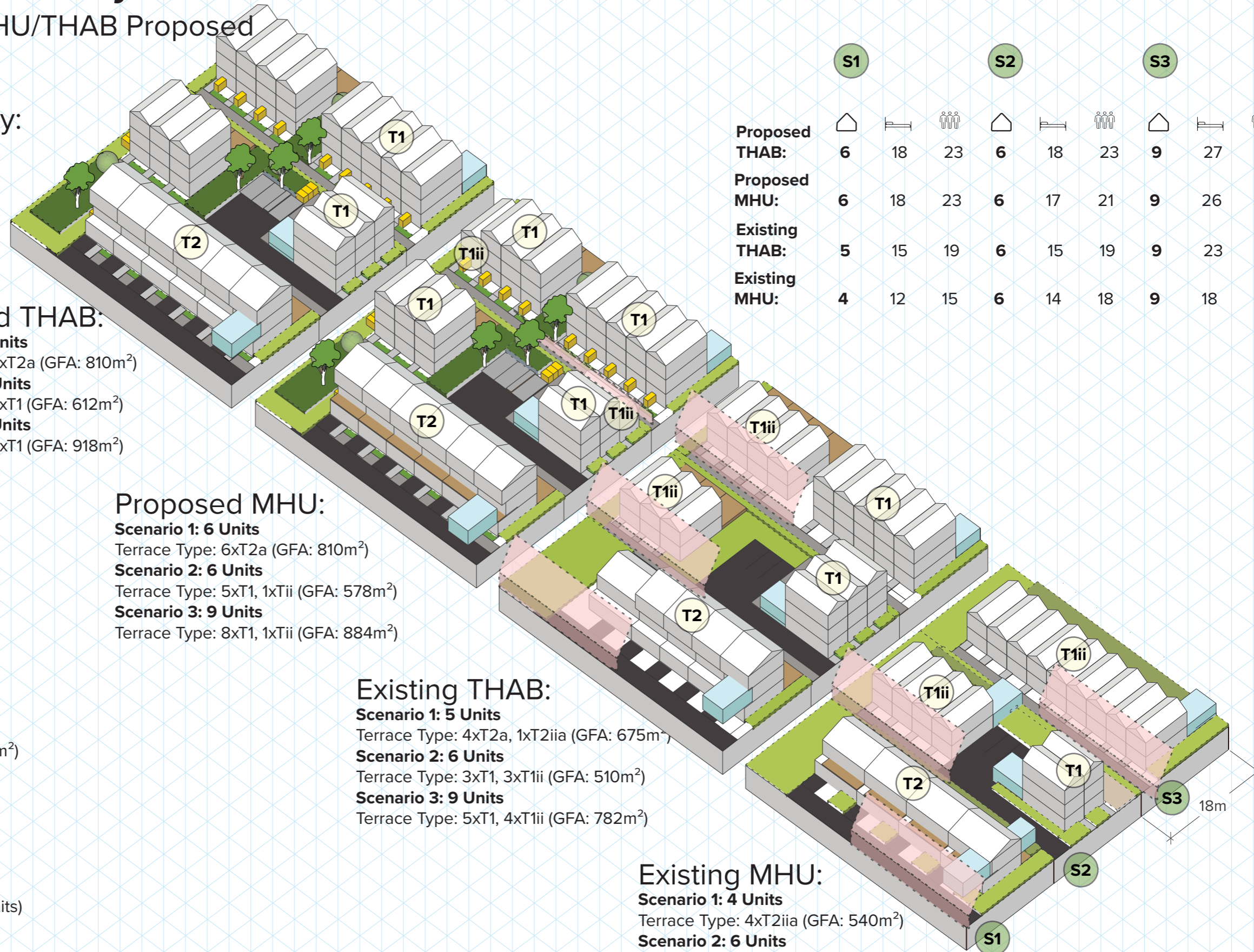
### Existing MHU:

- Scenario 1: 4 Units**  
Terrace Type: 4xT2iia (GFA: 540m<sup>2</sup>)
- Scenario 2: 6 Units**  
Terrace Type: 2xT1, 4xT1ii (GFA: 476m<sup>2</sup>)
- Scenario 3: 9 Units**  
Terrace Type: 9xT1ii (GFA: 612m<sup>2</sup>)

	S1			S2			S3		
	House	Car	Person	House	Car	Person	House	Car	Person
<b>Proposed THAB:</b>	6	18	23	6	18	23	9	27	34
<b>Proposed MHU:</b>	6	18	23	6	17	21	9	26	33
<b>Existing THAB:</b>	5	15	19	6	15	19	9	23	29
<b>Existing MHU:</b>	4	12	15	6	14	18	9	18	23

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)



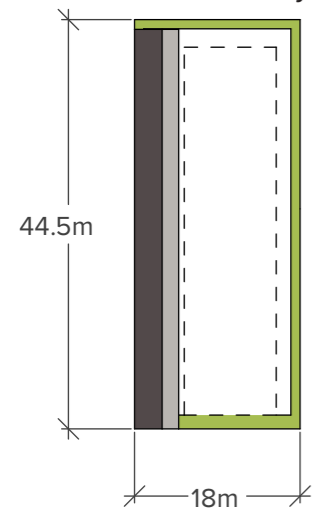
# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

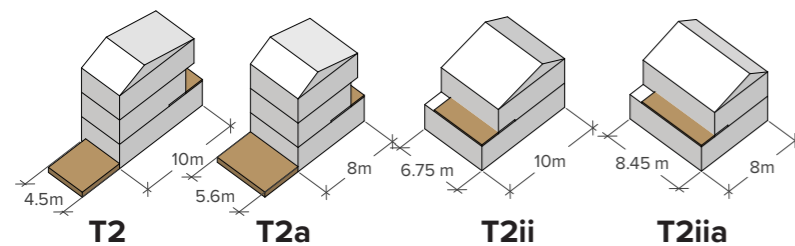
### Site 1 + Scenario 1:

Typical Site: 18x44.5m, 801m<sup>2</sup>

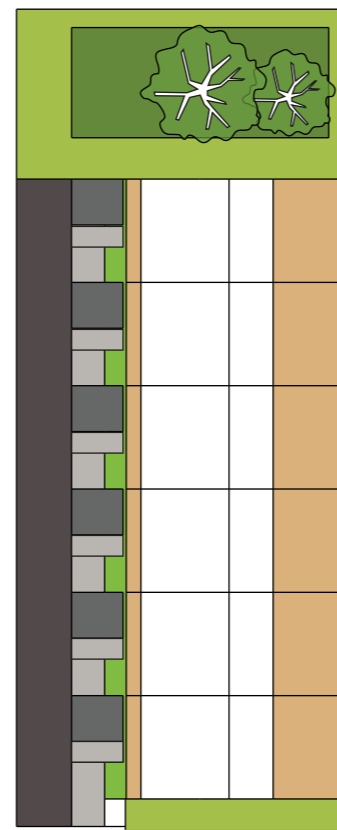
Vehicle Accessway + Footpath Scenario



### Terrace House Typologies:



### THAB Proposed:

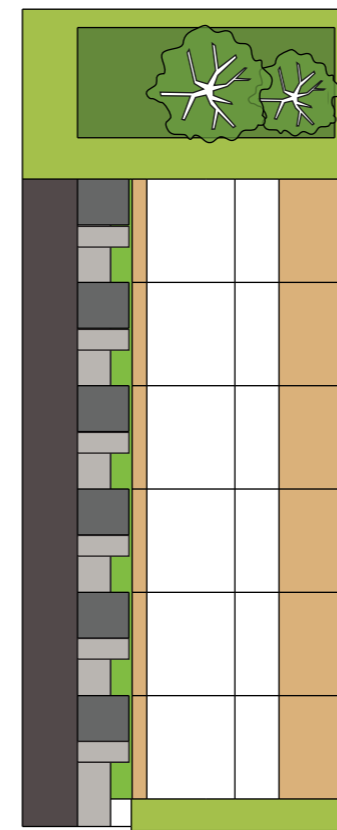


**Building Coverage: 270m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Terrace Type: 6xT2a  
 Total Units: 6  
 Total Bedrooms: 18  
 Occupancy: 23  
 GFA: 810m<sup>2</sup>

**Landscape Area: 180m<sup>2</sup>**  
**(Standard: 20% >160m<sup>2</sup>)**  
 inc. Deep Soil Area: 80m<sup>2</sup>

**Impervious Area: 375m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 270m<sup>2</sup>  
 Vehicle Manoeuvring: 105m<sup>2</sup>

### MHU Proposed:

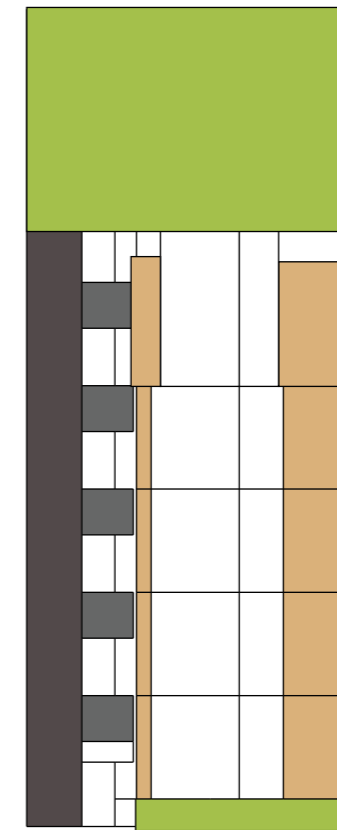


**Building Coverage: 270m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Terrace Type: 6xT2a  
 Total Units: 6  
 Total Bedrooms: 18  
 Occupancy: 23  
 GFA: 810m<sup>2</sup>

**Landscape Area: 180m<sup>2</sup>**  
**(Standard: 20% >160m<sup>2</sup>)**  
 inc. Deep Soil Area: 80m<sup>2</sup>

**Impervious Area: 375m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 270m<sup>2</sup>  
 Vehicle Manoeuvring: 105m<sup>2</sup>

### THAB Existing:

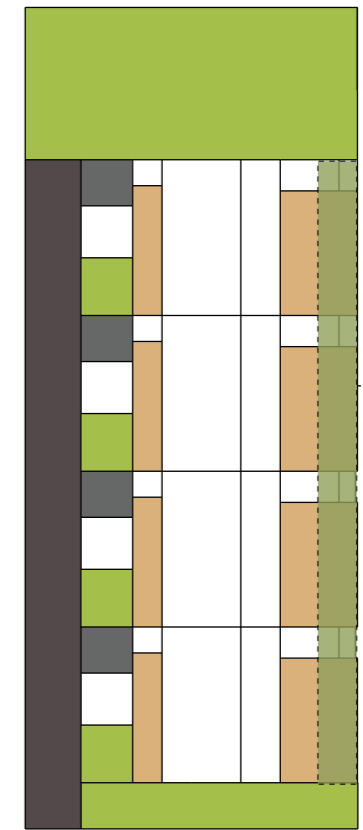


**Building Coverage: 247.5m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Terrace Type: 4xT2a, 1xT2iia  
 Total Units: 5  
 Total Bedrooms: 15  
 Occupancy: 19  
 GFA: 675m<sup>2</sup>

**Landscape Area: >240m<sup>2</sup>**  
**(Standard: 30% >240m<sup>2</sup>)**

**Impervious Area: 375m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 247.5m<sup>2</sup>  
 Vehicle Manoeuvring: 100m<sup>2</sup>

### MHU Existing:



**Building Coverage: 270m<sup>2</sup>**  
**(Standard: 45% <360m<sup>2</sup>)**  
 Terrace Type: 4xT2iia  
 Total Units: 4  
 Total Bedrooms: 12  
 Occupancy: 15  
 GFA: 540m<sup>2</sup>

**Landscape Area: 287.5m<sup>2</sup>**  
**(Standard: 35% >280m<sup>2</sup>)**  
 inc. LA in POLs: 67.5m<sup>2</sup>

**Impervious Area: 375m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 270m<sup>2</sup>  
 Vehicle Manoeuvring: 105m<sup>2</sup>

### Key:

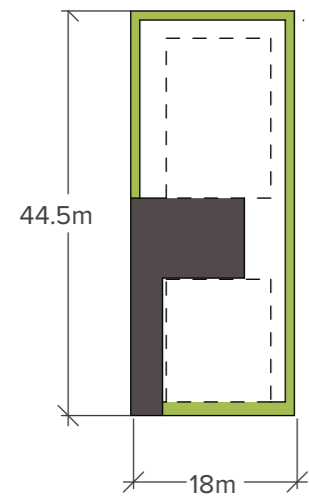
- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

# Terrace House Study

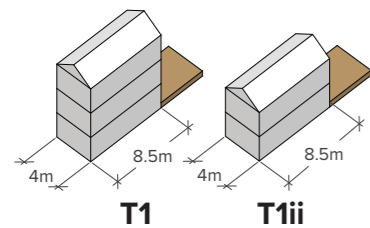
## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

### Site 1 + Scenario 2:

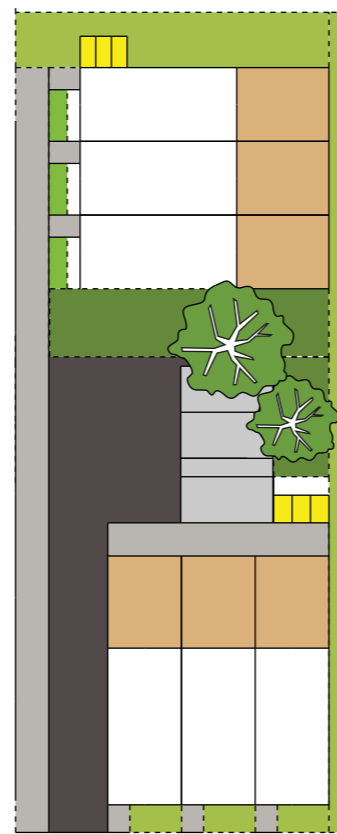
Typical Site 18x44.5m, 801m<sup>2</sup>  
Grouped Car Parking Scenario



### Terrace House Typologies:



### THAB Proposed:

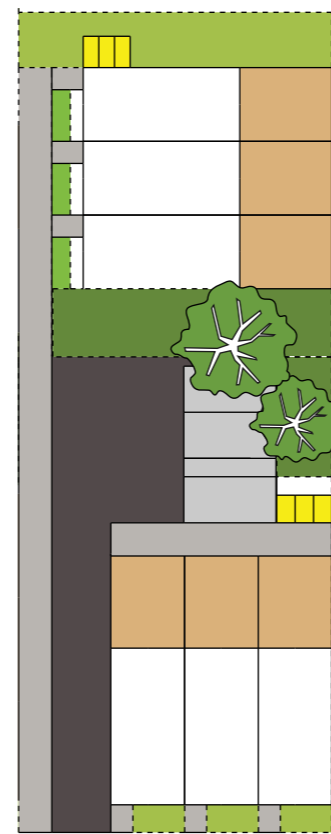


**Building Coverage: 204m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
Terrace Type: 6xT1  
Total Units: 6  
Total Bedrooms: 18  
Occupancy: 23  
GFA: 612m<sup>2</sup>

**Landscape Area: 190m<sup>2</sup>**  
**(Standard: 20% >160m<sup>2</sup>)**  
inc. Deep Soil Area: 80m<sup>2</sup>

**Impervious Area: 304m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
Building Footprints: 204m<sup>2</sup>  
Vehicle Manoeuvring: 110m<sup>2</sup>

### MHU Proposed:

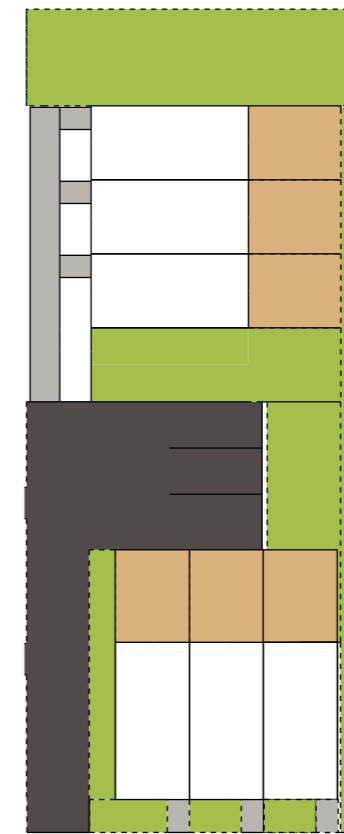


**Building Coverage: 204m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
Terrace Type: 5xT1, 1xT1ii  
Total Units: 6  
Total Bedrooms: 17  
Occupancy: 21  
GFA: 578m<sup>2</sup>

**Landscape Area: 190m<sup>2</sup>**  
**(Standard: 20% >160m<sup>2</sup>)**  
inc. Deep Soil Area: 80m<sup>2</sup>

**Impervious Area: 304m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
Building Footprints: 204m<sup>2</sup>  
Vehicle Manoeuvring: 110m<sup>2</sup>

### THAB Existing:

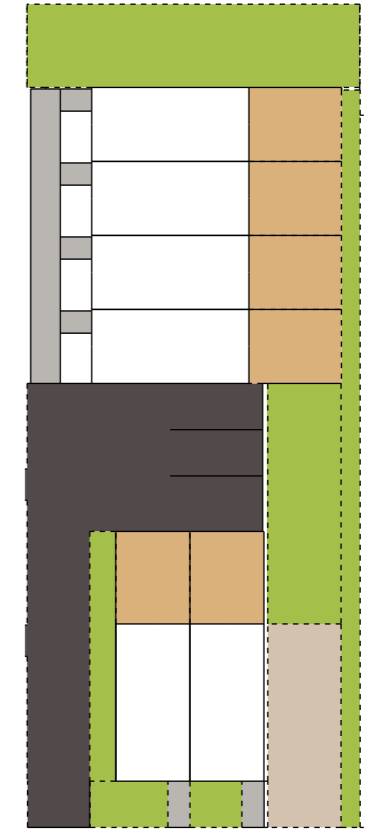


**Building Coverage: 204m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
Terrace Type: 3xT1, 3xT1ii  
Total Units: 6  
Total Bedrooms: 15  
Occupancy: 19  
GFA: 510m<sup>2</sup>

**Landscape Area: >240m<sup>2</sup>**  
**(Standard: 30% >240m<sup>2</sup>)**

**Impervious Area: 304m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
Building Footprints: 204m<sup>2</sup>  
Vehicle Manoeuvring: 110m<sup>2</sup>

### MHU Existing:



**Building Coverage: 204m<sup>2</sup>**  
**(Standard: 45% <360m<sup>2</sup>)**  
Terrace Type: 2xT1, 4xT1ii  
Total Units: 6  
Total Bedrooms: 14  
Occupancy: 18  
GFA: 476m<sup>2</sup>

**Landscape Area: 285m<sup>2</sup>**  
**(Standard: 35% >280m<sup>2</sup>)**  
inc. LA in POLs: 30m<sup>2</sup>  
& non-vegetated LA: 42m<sup>2</sup>

**Impervious Area: 304m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
Building Footprints: 204m<sup>2</sup>  
Vehicle Manoeuvring: 110m<sup>2</sup>

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

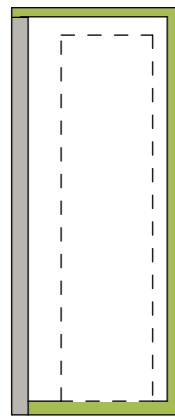
# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

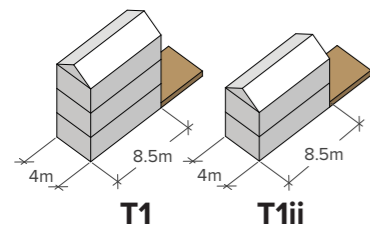
### Site 1 + Scenario 3:

Typical Site: 18x44.5m, 801m<sup>2</sup>

Pedestrian Only Access Scenario



### Terrace House Typologies:



### THAB Proposed:



**Building Coverage: 306m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Terrace Type: 9xT1  
 Total Units: 9  
 Total Bedrooms: 27  
 Occupancy: 34  
 GFA: 918m<sup>2</sup>

**Landscape Area: 160m<sup>2</sup>**  
**(Standard: 20% >160m<sup>2</sup>)**  
 inc. Deep Soil Area: 80m<sup>2</sup>  
 and LA Buffer: 10m<sup>2</sup>

**Impervious Area: 306m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 306m<sup>2</sup>

### MHU Proposed:

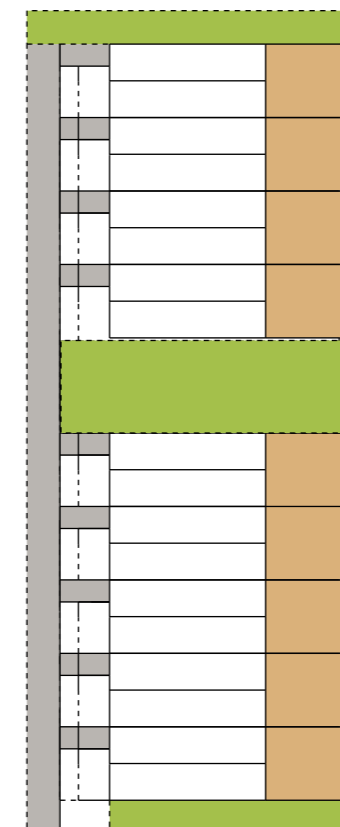


**Building Coverage: 306m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Terrace Type: 8xT1, 1xT1ii  
 Total Units: 9  
 Total Bedrooms: 26  
 Occupancy: 33  
 GFA: 884m<sup>2</sup>

**Landscape Area: 160m<sup>2</sup>**  
**(Standard: 20% >160m<sup>2</sup>)**  
 inc. Deep Soil Area: 80m<sup>2</sup>  
 and LA Buffer: 10m<sup>2</sup>

**Impervious Area: 306m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 306m<sup>2</sup>

### THAB Existing:

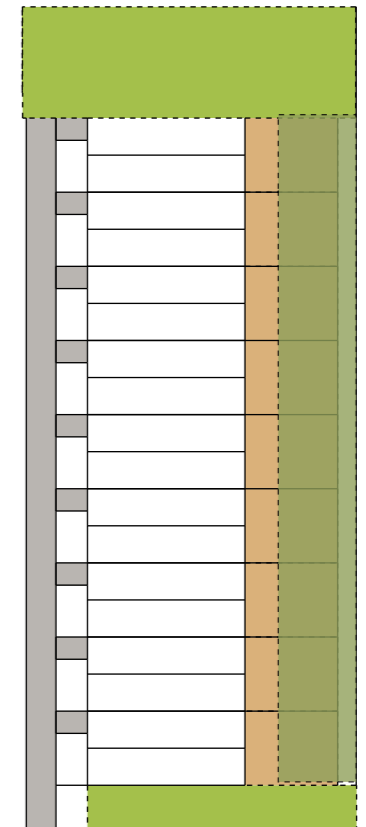


**Building Coverage: 306m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Terrace Type: 5xT1, 4xT1ii  
 Total Units: 9  
 Total Bedrooms: 23  
 Occupancy: 29  
 GFA: 782m<sup>2</sup>

**Landscape Area: >240m<sup>2</sup>**  
**(Standard: 30% >240m<sup>2</sup>)**

**Impervious Area: 306m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 204m<sup>2</sup>

### MHU Existing:



**Building Coverage: 306m<sup>2</sup>**  
**(Standard: 45% <360m<sup>2</sup>)**  
 Terrace Type: 9xT1ii  
 Total Units: 9  
 Total Bedrooms: 18  
 Occupancy: 23  
 GFA: 612m<sup>2</sup>

**Landscape Area: 284m<sup>2</sup>**  
**(Standard: 35% >280m<sup>2</sup>)**  
 inc. LA in POLs: 150m<sup>2</sup>

**Impervious Area: 306m<sup>2</sup>**  
**(Standard: 50% <400m<sup>2</sup>)**  
 Building Footprints: 306m<sup>2</sup>

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Yield Analysis

### Site 2a (40x40m) Summary:

- S1 Scenario 1**  
Vehicle Accessway + Footpath
- S2 Scenario 2**  
Grouped Car Parking
- S3 Scenario 3**  
Pedestrian Only Access

### Proposed THAB:

- Scenario 1: 14 Units**  
Terrace Type: 13xT2, 1xT2a (GFA: 1890m<sup>2</sup>)
- Scenario 2: 12 Units**  
Terrace Type: 12xT1 (GFA: 1224m<sup>2</sup>)
- Scenario 3: 14 Units**  
Terrace Type: 14xT1 (GFA: 1428m<sup>2</sup>)

### Proposed MHU:

- Scenario 1: 14 Units**  
Terrace Type: 14xT2, 1xT2a (GFA: 1890m<sup>2</sup>)
- Scenario 2: 12 Units**  
Terrace Type: 10xT1, 2xT1ii (GFA: 1156m<sup>2</sup>)
- Scenario 3: 14 Units**  
Terrace Type: 14xT1 (GFA: 1428m<sup>2</sup>)

### Existing THAB:

- Scenario 1: 14 Units**  
Terrace Type: 14xT2 (GFA: 1890m<sup>2</sup>)
- Scenario 2: 12 Units**  
Terrace Type: 10xT1, 2xT1ii (GFA: 1156m<sup>2</sup>)
- Scenario 3: 14 Units**  
Terrace Type: 14xT1 (GFA: 1428m<sup>2</sup>)

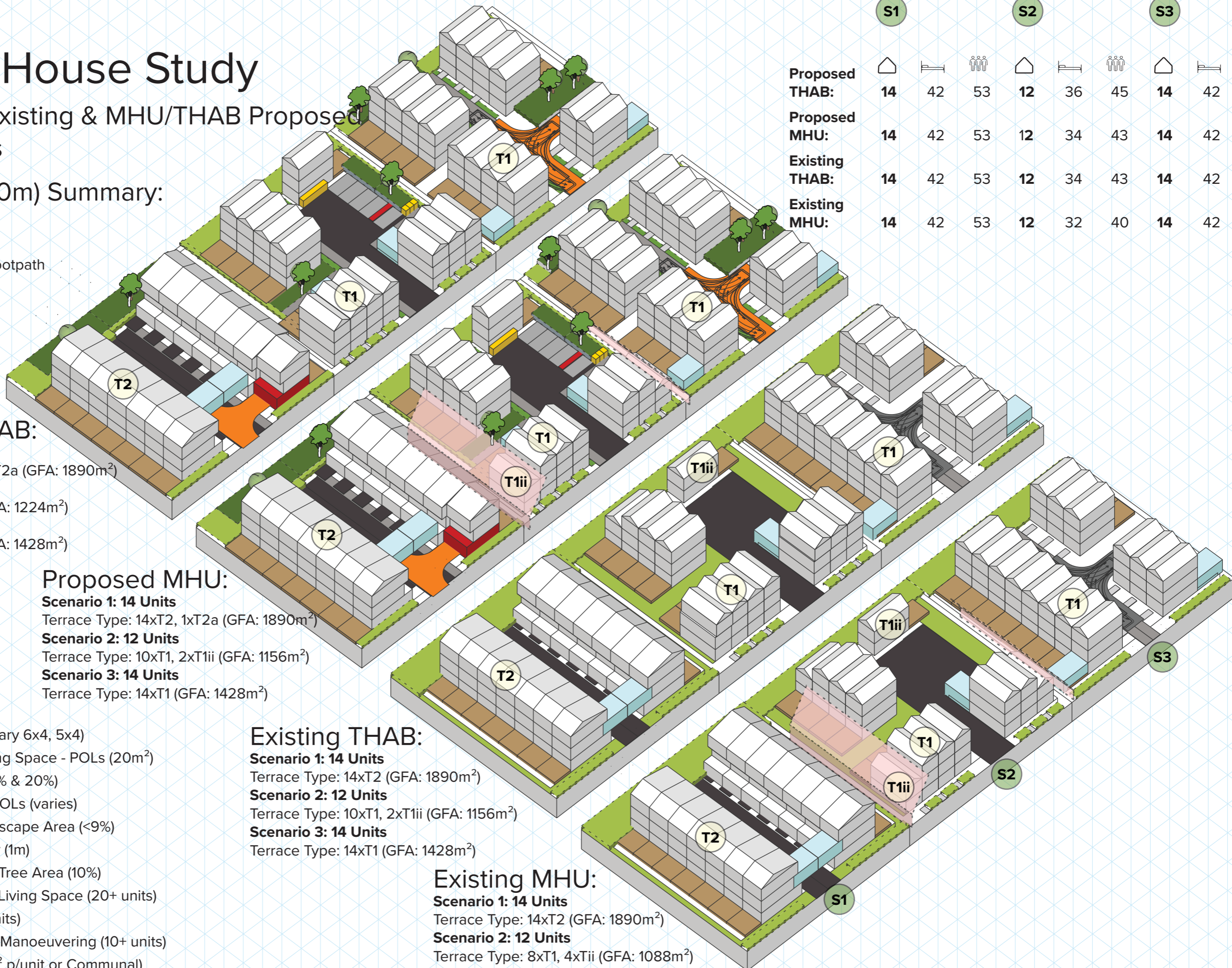
### Existing MHU:

- Scenario 1: 14 Units**  
Terrace Type: 14xT2 (GFA: 1890m<sup>2</sup>)
- Scenario 2: 12 Units**  
Terrace Type: 8xT1, 4xT1ii (GFA: 1088m<sup>2</sup>)
- Scenario 3: 14 Units**  
Terrace Type: 14xT1 (GFA: 1428m<sup>2</sup>)

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

	S1			S2			S3		
<b>Proposed THAB:</b>	14	42	53	12	36	45	14	42	53
<b>Proposed MHU:</b>	14	42	53	12	34	43	14	42	53
<b>Existing THAB:</b>	14	42	53	12	34	43	14	42	53
<b>Existing MHU:</b>	14	42	53	12	32	40	14	42	53



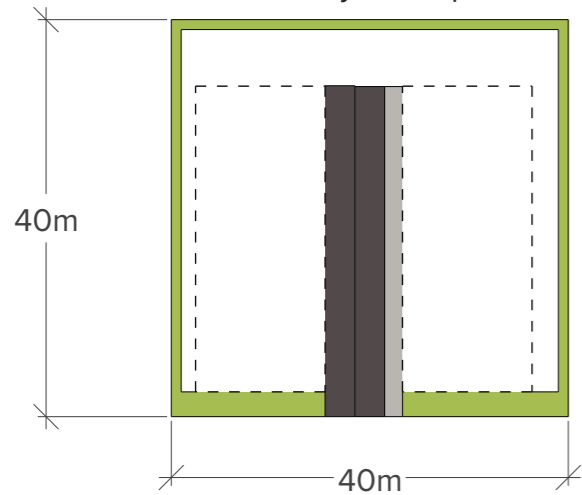


# Terrace House Study

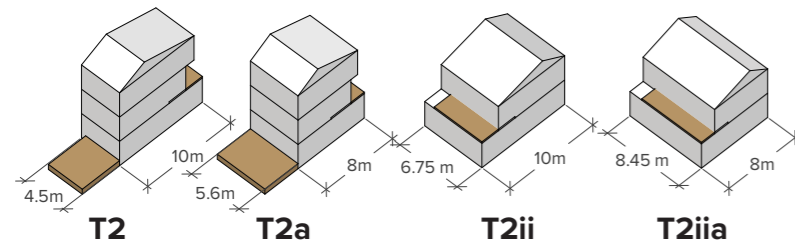
## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

### Site 2a + Scenario 1:

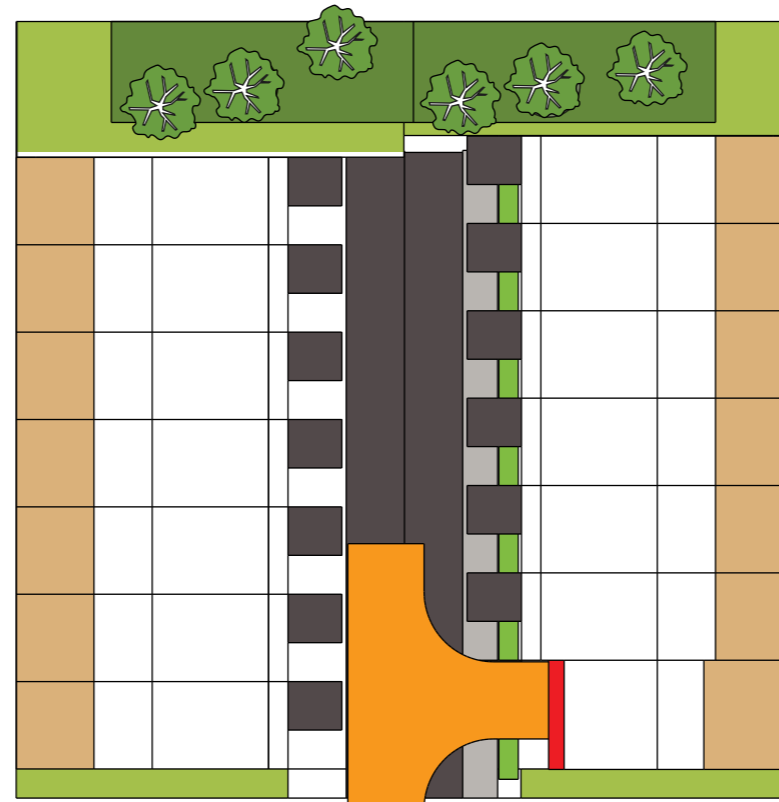
Large Site: 40x40m, 1600m<sup>2</sup>  
 Vehicle Accessway + Footpath Scenario



### Terrace House Typologies:

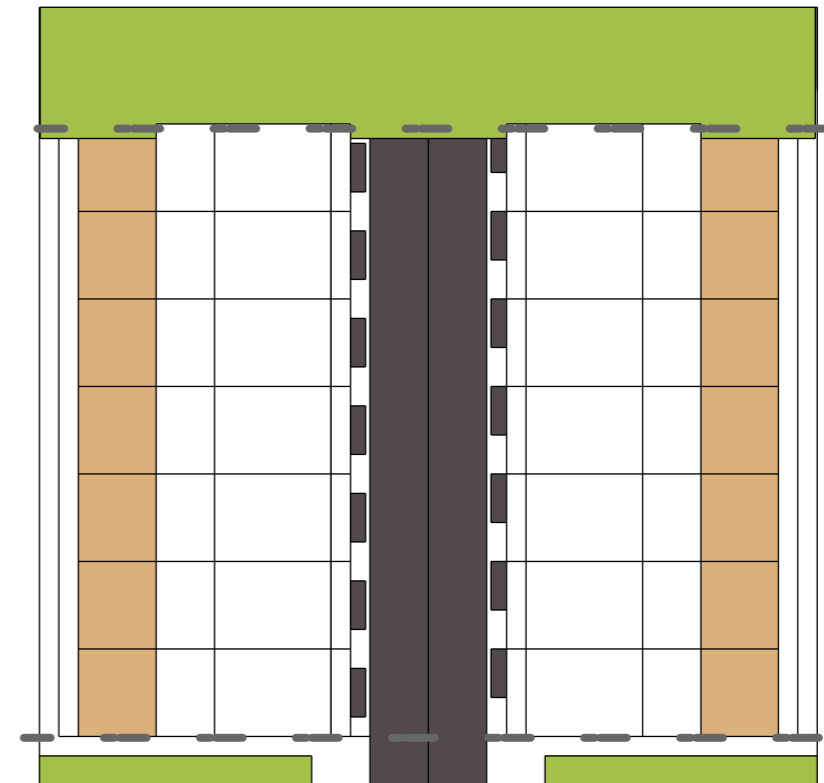


### MHU & THAB Proposed:



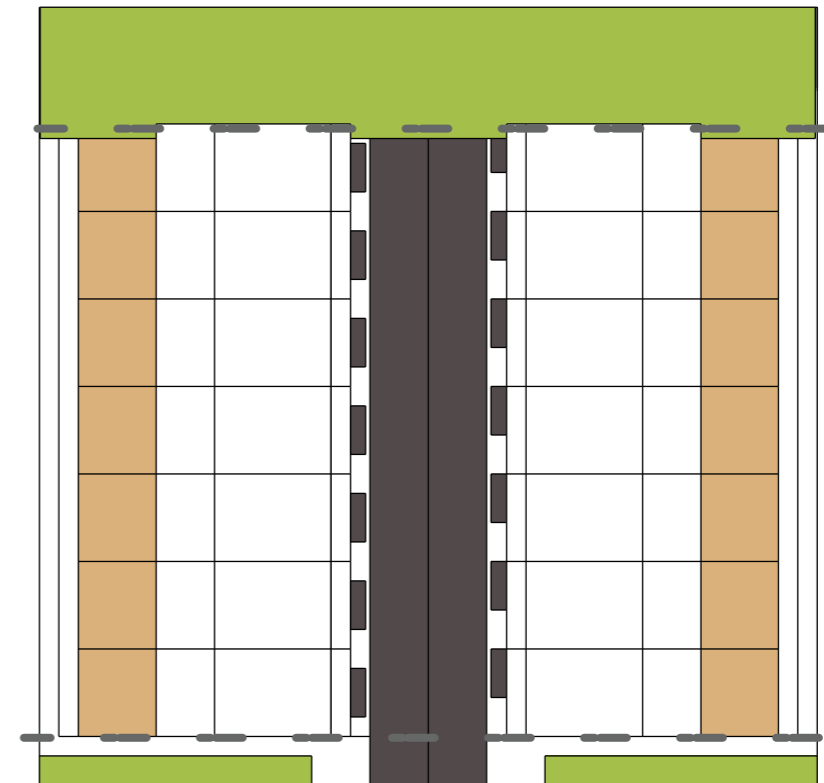
### THAB Existing:

Front Yard 1.5m



### MHU Existing:

Front Yard 2.5m



### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

**Building Coverage: 630m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
 Terrace Type: 13xT2, 1xT2a\*  
 \* due to Accessible Carspace  
 Total Units: 14  
 Total Bedrooms: 42  
 Occupancy: 53  
 GFA: 1890m<sup>2</sup>

**Landscape Area: >320m<sup>2</sup>**  
**(Standard: 20% >320m<sup>2</sup>)**  
 inc. Deep Soil Area: 160m<sup>2</sup>

**Impervious Area: 630m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
 Building Footprints: 630m<sup>2</sup>

**Building Coverage: 630m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
 Terrace Type: 14xT2  
 Total Units: 14  
 Total Bedrooms: 42  
 Occupancy: 53  
 GFA: 1890m<sup>2</sup>

**Landscape Area: >480m<sup>2</sup>**  
**(Standard: 30% >480m<sup>2</sup>)**

**Impervious Area: 630m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
 Building Footprints: 630m<sup>2</sup>

**Building Coverage: 630m<sup>2</sup>**  
**(Standard: 45% <720m<sup>2</sup>)**  
 Terrace Type: 14xT2  
 Total Units: 14  
 Total Bedrooms: 42  
 Occupancy: 53  
 GFA: 1890m<sup>2</sup>

**Landscape Area: >560m<sup>2</sup>**  
**(Standard: 35% >560m<sup>2</sup>)**

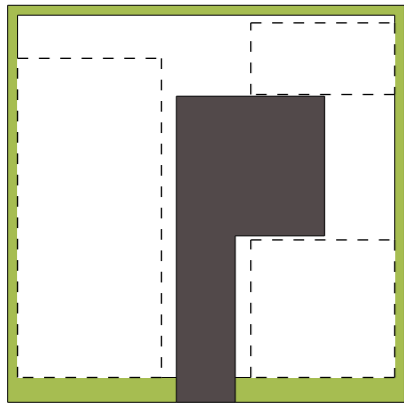
**Impervious Area: 630m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
 Building Footprints: 630m<sup>2</sup>

# Terrace House Study

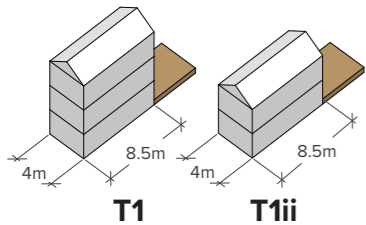
## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

### Site 2a + Scenario 2:

Large Site: 40x40m, 1600m<sup>2</sup>  
Grouped Car Parking Scenario



### Terrace House Typologies:



### THAB Proposed:

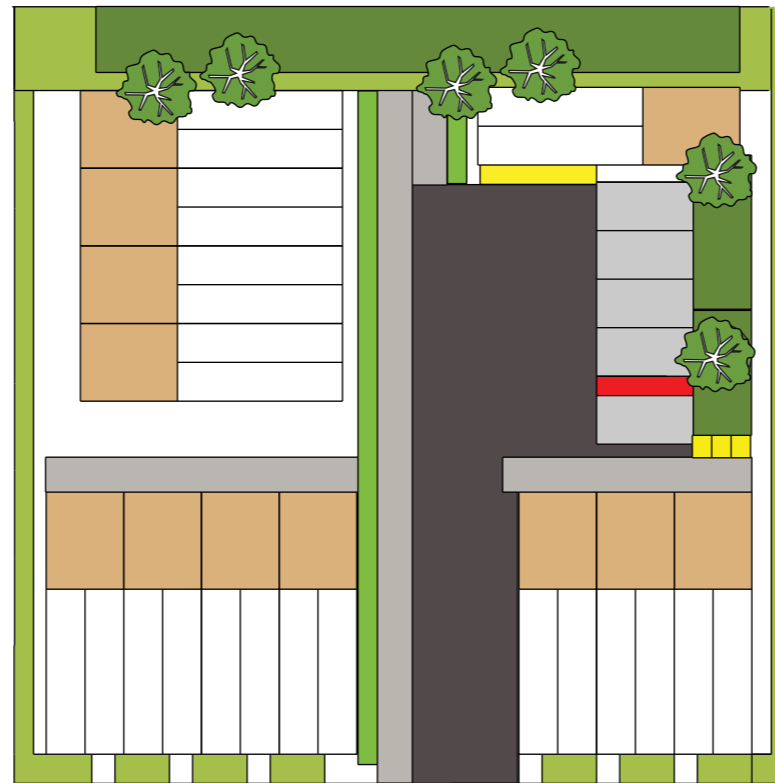
### MHU Proposed:

### THAB Existing:

### MHU Existing:

Front Yard 1.5m

Front Yard 2.5m



### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

**Building Coverage: 408m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
Terrace Type: 12xT1  
Total Units: 12  
Total Bedrooms: 36  
Occupancy: 45  
GFA: 1224m<sup>2</sup>

**Landscape Area: >320m<sup>2</sup>**  
**(Standard: 20% >320m<sup>2</sup>)**  
inc. Deep Soil Area: 160m<sup>2</sup>

**Impervious Area: 408m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
Building Footprints: 408m<sup>2</sup>

**Building Coverage: 408m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
Terrace Type: 10xT1, 2xT1ii  
Total Units: 12  
Total Bedrooms: 34  
Occupancy: 43  
GFA: 1156m<sup>2</sup>

**Landscape Area: >320m<sup>2</sup>**  
**(Standard: 20% >320m<sup>2</sup>)**  
inc. Deep Soil Area: 160m<sup>2</sup>

**Impervious Area: 408m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
Building Footprints: 408m<sup>2</sup>

**Building Coverage: 408m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
Terrace Type: 10xT1, 2xT1ii  
Total Units: 12  
Total Bedrooms: 34  
Occupancy: 43  
GFA: 1156m<sup>2</sup>

**Landscape Area: >480m<sup>2</sup>**  
**(Standard: 30% >480m<sup>2</sup>)**

**Impervious Area: 408m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
Building Footprints: 408m<sup>2</sup>

**Building Coverage: 408m<sup>2</sup>**  
**(Standard: 45% <720m<sup>2</sup>)**  
Terrace Type: 8xT2, 4xT1ii  
Total Units: 12  
Total Bedrooms: 32  
Occupancy: 40  
GFA: 1080m<sup>2</sup>

**Landscape Area: >560m<sup>2</sup>**  
**(Standard: 35% >560m<sup>2</sup>)**

**Impervious Area: 408m<sup>2</sup>**  
**(Standard: 50% <800m<sup>2</sup>)**  
Building Footprints: 408m<sup>2</sup>

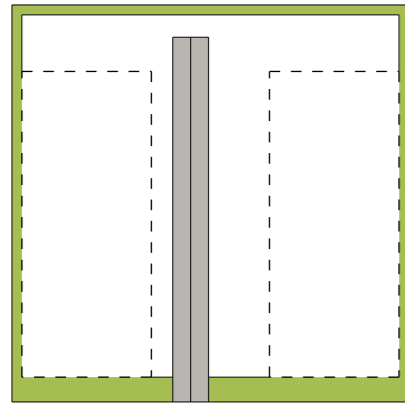
# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

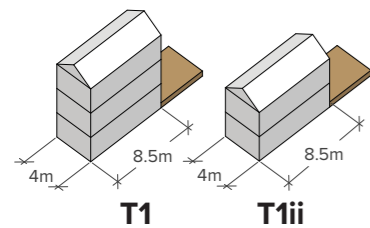
### Site 2a + Scenario 3:

Large Site: 40x40m, 1600m<sup>2</sup>

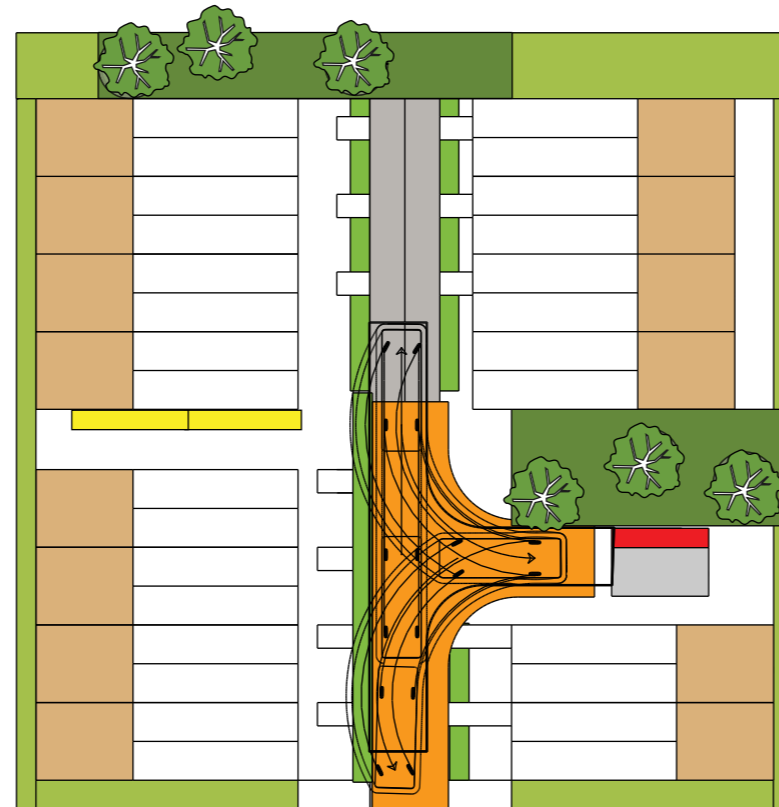
Pedestrian Only Access Scenario



### Terrace House Typologies:

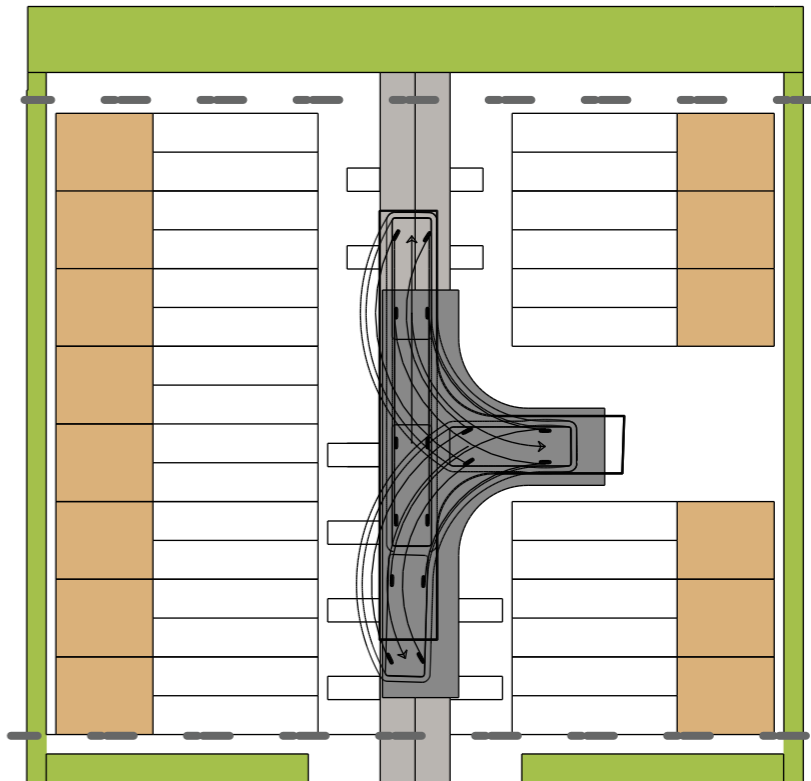


### MHU & THAB Proposed:



### THAB Existing:

Front Yard 1.5m



### MHU Existing:

Front Yard 2.5m

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

**Building Coverage: 476m<sup>2</sup>**

**(Standard: 50% <800m<sup>2</sup>)**

Terrace Type: 14xT1

Total Units: 14

Total Bedrooms: 42

Occupancy: 53

GFA: 1428m<sup>2</sup>

**Landscape Area: >320m<sup>2</sup>**

**(Standard: 20% >320m<sup>2</sup>)**

inc. Deep Soil Area: 160m<sup>2</sup>

**Impervious Area: 476m<sup>2</sup>**

**(Standard: 50% <800m<sup>2</sup>)**

Building Footprints: 476m<sup>2</sup>

**Building Coverage: 476m<sup>2</sup>**

**(Standard: 50% <800m<sup>2</sup>)**

Terrace Type: 14xT1

Total Units: 14

Total Bedrooms: 42

Occupancy: 53

GFA: 1428m<sup>2</sup>

**Landscape Area: >480m<sup>2</sup>**

**(Standard: 30% >480m<sup>2</sup>)**

**Impervious Area: 476m<sup>2</sup>**

**(Standard: 50% <800m<sup>2</sup>)**

Building Footprints: 476m<sup>2</sup>

**Building Coverage: 476m<sup>2</sup>**

**(Standard: 45% <720m<sup>2</sup>)**

Terrace Type: 14xT1

Total Units: 14

Total Bedrooms: 42

Occupancy: 53

GFA: 1428m<sup>2</sup>

**Landscape Area: >560m<sup>2</sup>**

**(Standard: 35% >560m<sup>2</sup>)**

**Impervious Area: 476m<sup>2</sup>**

**(Standard: 50% <800m<sup>2</sup>)**

Building Footprints: 476m<sup>2</sup>

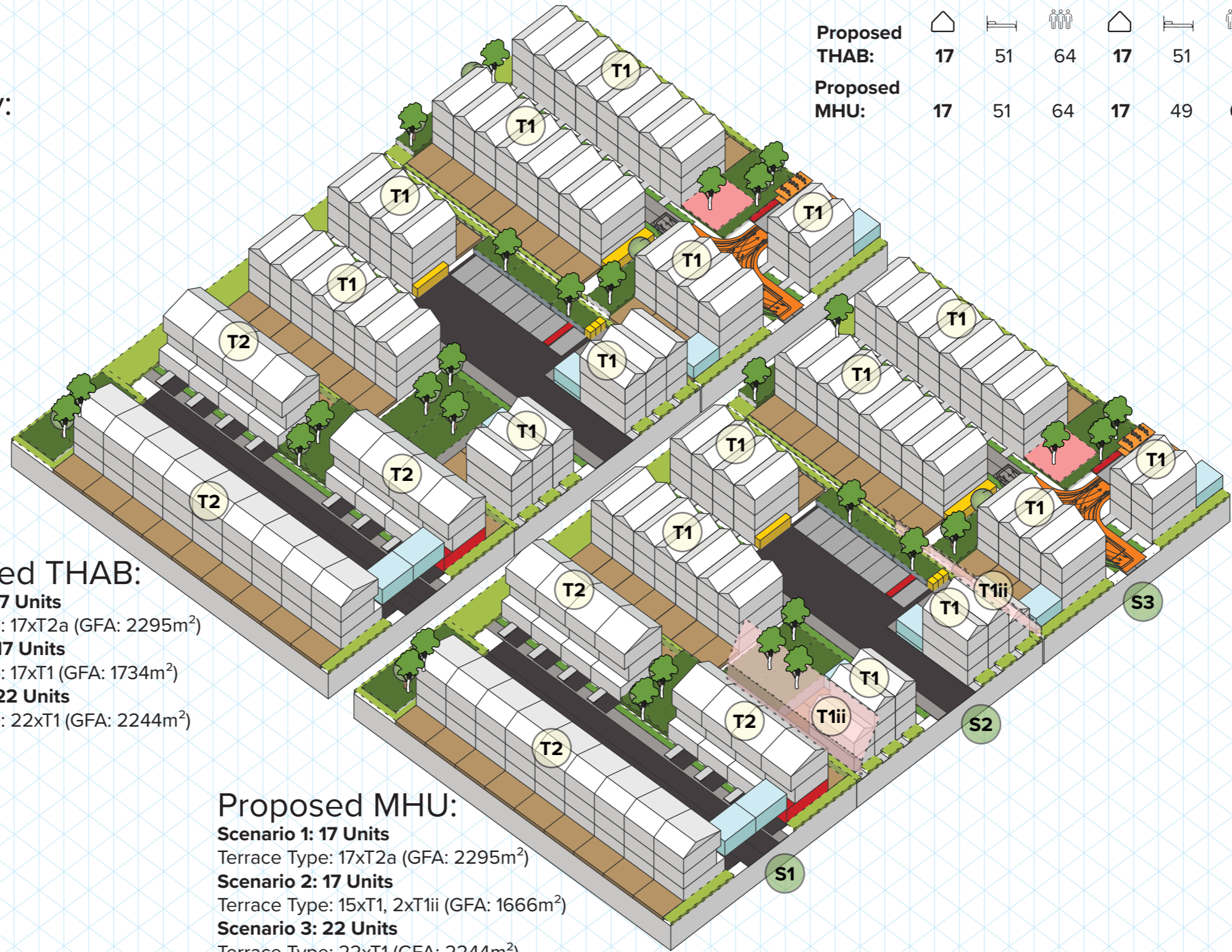
# Terrace House Study

## MHU/THAB Proposed Yield Analysis

### Site 2b (36x60m) Summary:

- S1 Scenario 1**  
Vehicle Accessway + Footpath
- S2 Scenario 2**  
Grouped Car Parking
- S3 Scenario 3**  
Pedestrian Only Access

	S1			S2			S3		
<b>Proposed THAB:</b>	17	51	64	17	51	64	22	66	83
<b>Proposed MHU:</b>	17	51	64	17	49	61	22	66	83



### Proposed THAB:

- Scenario 1: 17 Units**  
Terrace Type: 17xT2a (GFA: 2295m<sup>2</sup>)
- Scenario 2: 17 Units**  
Terrace Type: 17xT1 (GFA: 1734m<sup>2</sup>)
- Scenario 3: 22 Units**  
Terrace Type: 22xT1 (GFA: 2244m<sup>2</sup>)

### Proposed MHU:

- Scenario 1: 17 Units**  
Terrace Type: 17xT2a (GFA: 2295m<sup>2</sup>)
- Scenario 2: 17 Units**  
Terrace Type: 15xT1, 2xT1ii (GFA: 1666m<sup>2</sup>)
- Scenario 3: 22 Units**  
Terrace Type: 22xT1 (GFA: 2244m<sup>2</sup>)

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

# Terrace House Study

MHU/THAB Existing  
Yield Analysis

Site 2b (36x60m) Summary:

- S1 Scenario 1**  
Vehicle Accessway + Footpath
- S2 Scenario 2**  
Grouped Car Parking
- S3 Scenario 3**  
Pedestrian Only Access

	S1			S2			S3		
<b>Existing THAB:</b>	18	54	68	17	49	61	24	70	88
<b>Existing MHU:</b>	14	42	53	17	48	60	24	70	88



**Existing THAB:**  
**Scenario 1: 18 Units**  
 Terrace Type: 8xT2, 10xT2ii (GFA: 2430m<sup>2</sup>)  
**Scenario 2: 17 Units**  
 Terrace Type: 15xT1, 2xT1ii (GFA: 1666m<sup>2</sup>)  
**Scenario 3: 24 Units**  
 Terrace Type: 22xT1, 2xT1ii (GFA: 2380m<sup>2</sup>)

**Existing MHU:**  
**Scenario 1: 14 Units**  
 Terrace Type: 14xT2iia (GFA: 1890m<sup>2</sup>)  
**Scenario 2: 17 Units**  
 Terrace Type: 14xT1, 3xTii (GFA: 1632m<sup>2</sup>)  
**Scenario 3: 24 Units**  
 Terrace Type: 22xT1, 2xT1ii (GFA: 2380m<sup>2</sup>)

## Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

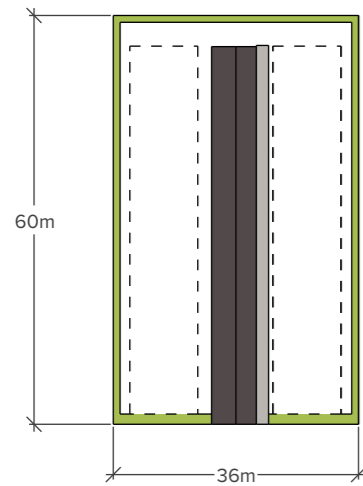
# Terrace House Study

## THAB Existing & THAB Proposed Standards Comparison

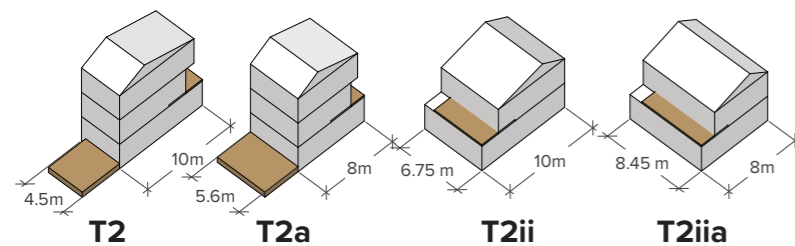
### Site 2b + Scenario 1:

Large Site: 36x60m, 2160m<sup>2</sup>

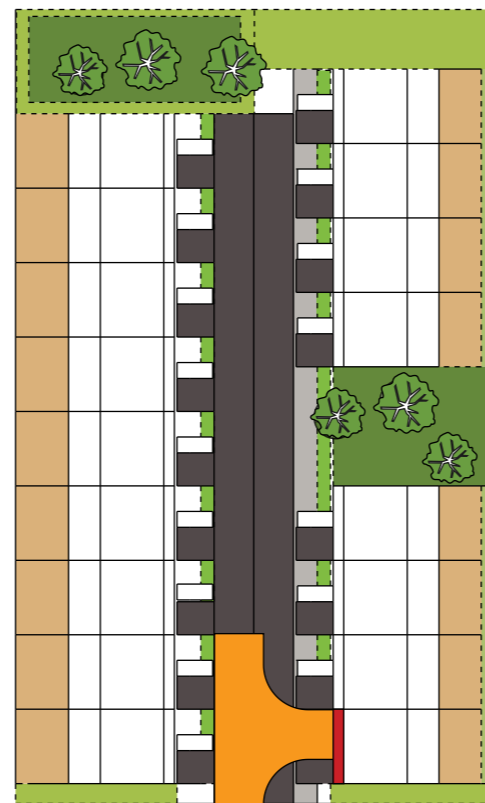
Vehicle Accessway + Footpath Scenario



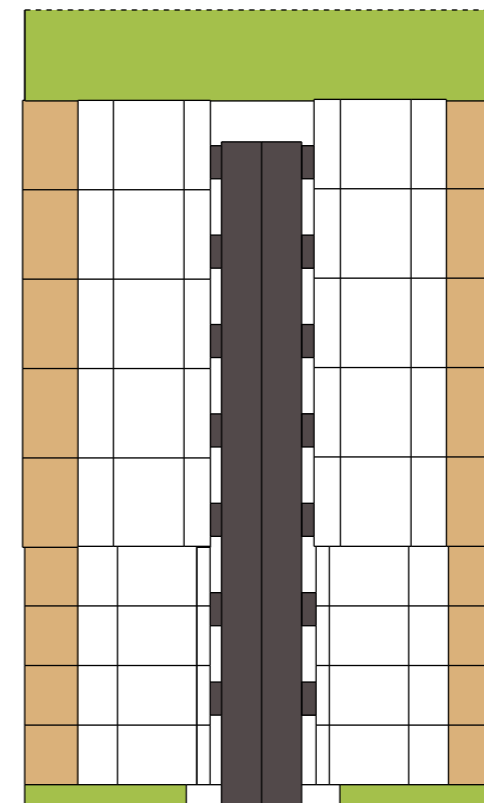
### Terrace House Typologies:



### THAB Proposed:



### THAB Existing:



### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

**Building Coverage: 765m<sup>2</sup>**  
(Standard: 50% <1080m<sup>2</sup>)

Terrace Type: 17xT2  
Total Units: 17  
Total Bedrooms: 51  
Occupancy: 64  
GFA: 2295m<sup>2</sup>

**Landscape Area: 465m<sup>2</sup>**  
(Standard: 20% >432m<sup>2</sup>)  
inc. Deep Soil Area: 216m<sup>2</sup>

**Impervious Area: 765m<sup>2</sup>**  
(Standard: 50% <1080m<sup>2</sup>)  
Building Footprints: 765m<sup>2</sup>

**Building Coverage: 955m<sup>2</sup>**  
(Standard: 50% <1080m<sup>2</sup>)

Terrace Type: 8xT1, 10xT2ii  
Total Units: 18  
Total Bedrooms: 54  
Occupancy: 68  
GFA: 2430m<sup>2</sup>

**Landscape Area: >648m<sup>2</sup>**  
(Standard: 30% >648m<sup>2</sup>)

**Impervious Area: 955m<sup>2</sup>**  
(Standard: 50% <1080m<sup>2</sup>)  
Building Footprints: 955m<sup>2</sup>

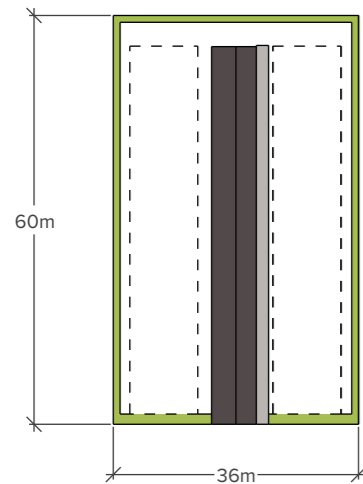
# Terrace House Study

## MHU Existing & MHU Proposed Standards Comparison

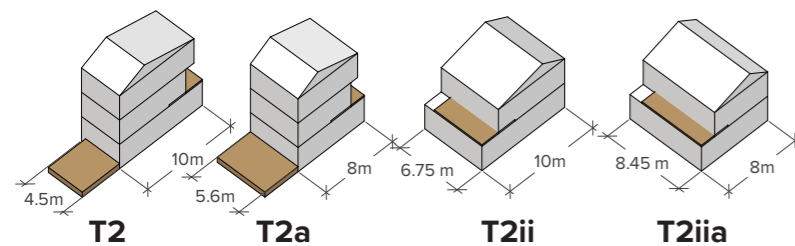
### Site 2b + Scenario 1:

Large Site: 36x60m, 2160m<sup>2</sup>

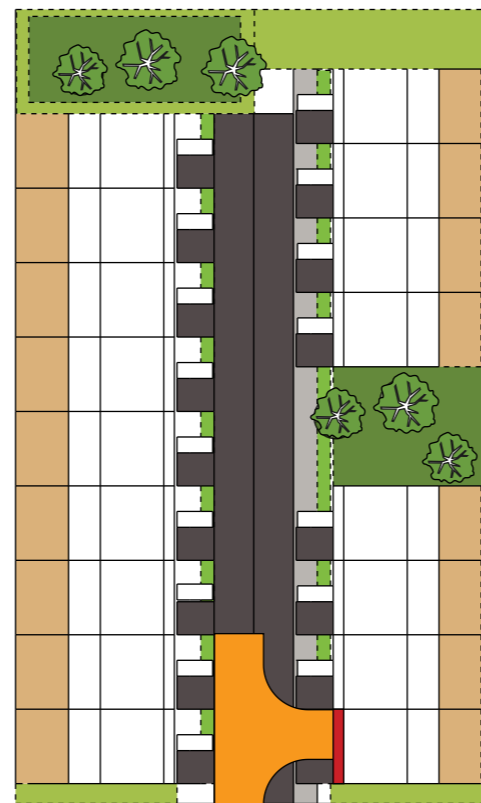
Vehicle Accessway + Footpath Scenario



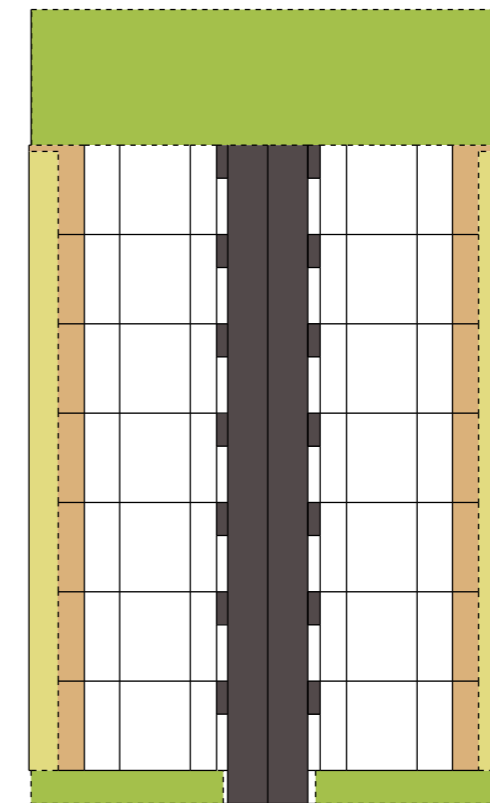
### Terrace House Typologies:



### MHU Proposed:



### MHU Existing:



### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

**Building Coverage: 765m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**

Terrace Type: 17xT2  
 Total Units: 17  
 Total Bedrooms: 51  
 Occupancy: 64  
 GFA: 2295m<sup>2</sup>

**Landscape Area: 465m<sup>2</sup>**  
**(Standard: 20% >432m<sup>2</sup>)**  
 inc. Deep Soil Area: 216m<sup>2</sup>

**Impervious Area: 765m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
 Building Footprints: 765m<sup>2</sup>

**Building Coverage: 945m<sup>2</sup>**  
**(Standard: 45% <972m<sup>2</sup>)**

Terrace Type: 14xT2ii  
 Total Units: 14  
 Total Bedrooms: 42  
 Occupancy: 52  
 GFA: 1890m<sup>2</sup>

**Landscape Area: 770m<sup>2</sup>**  
**(Standard: 35% >756m<sup>2</sup>)**  
 inc. LA in POLs: 210m<sup>2</sup>

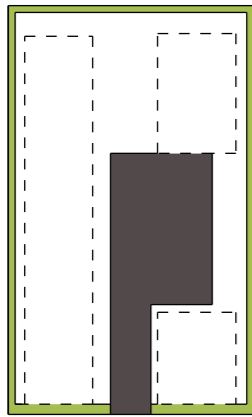
**Impervious Area: 945m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
 Building Footprints: 945m<sup>2</sup>

# Terrace House Study

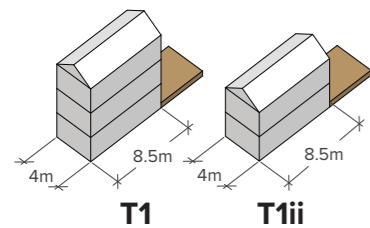
## THAB Existing & THAB Proposed Standards Comparison

### Site 2b + Scenario 2:

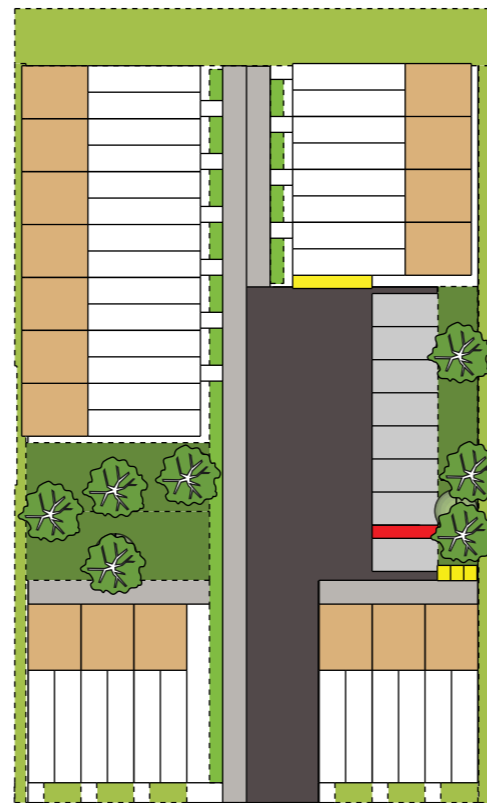
Large Site: 36x60m, 2160m<sup>2</sup>  
Grouped Car Parking Scenario



### Terrace House Typologies:



### THAB Proposed:

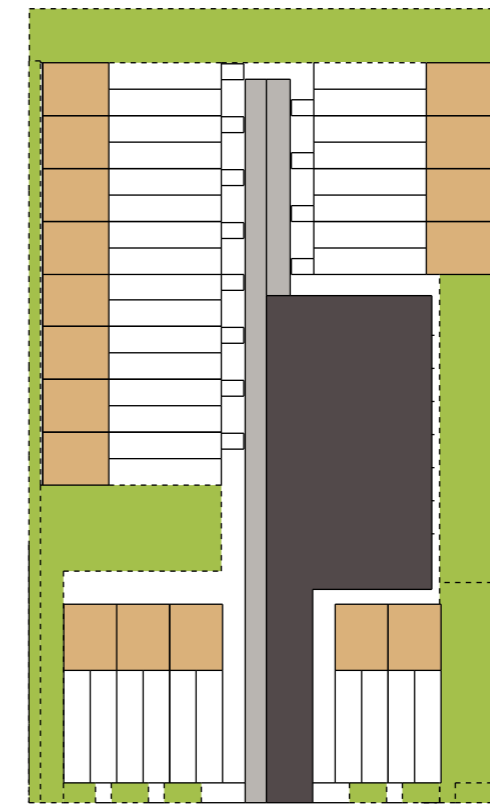


**Building Coverage: 578m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
Terrace Type: 17xT1  
Total Units: 17  
Total Bedrooms: 51  
Occupancy: 64  
GFA: 1734m<sup>2</sup>

**Landscape Area: 515m<sup>2</sup>**  
**(Standard: 20% >432m<sup>2</sup>)**  
inc. Deep Soil Area: 216m<sup>2</sup>

**Impervious Area: 858m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
Building Footprints: 578m<sup>2</sup>  
Vehicle Manoeuvring: 280m<sup>2</sup>

### THAB Existing:



**Building Coverage: 578m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
Terrace Type: 15xT1, 2xT1ii  
Total Units: 17  
Total Bedrooms: 4  
Occupancy: 60  
GFA: 1632m<sup>2</sup>

**Landscape Area: 760m<sup>2</sup>**  
**(Standard: 30% >648m<sup>2</sup>)**

**Impervious Area: 858m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
Building Footprints: 578m<sup>2</sup>  
Vehicle Manoeuvring: 280m<sup>2</sup>

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

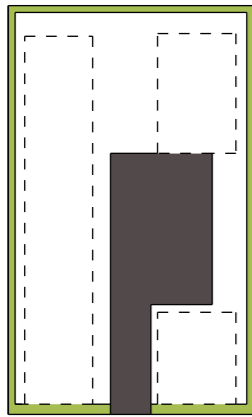


# Terrace House Study

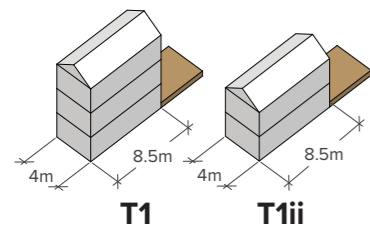
## MHU Existing & MHU Proposed Standards Comparison

### Site 2b + Scenario 2:

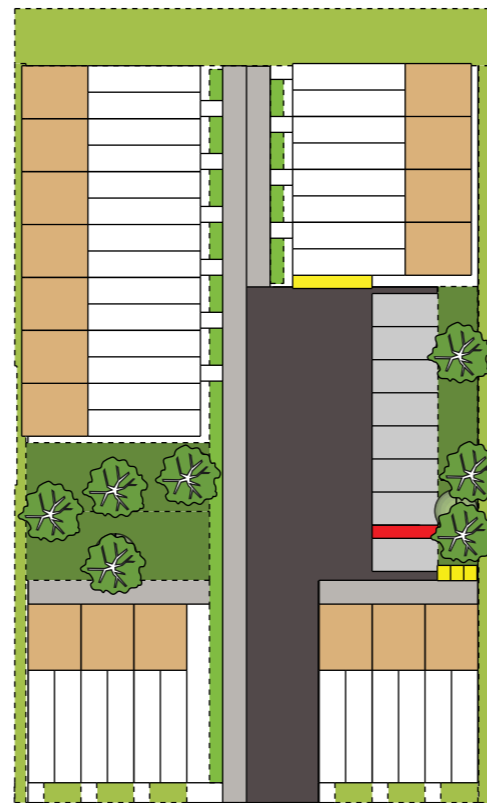
Large Site: 36x60m, 2160m<sup>2</sup>  
Grouped Car Parking Scenario



### Terrace House Typologies:



### MHU Proposed:

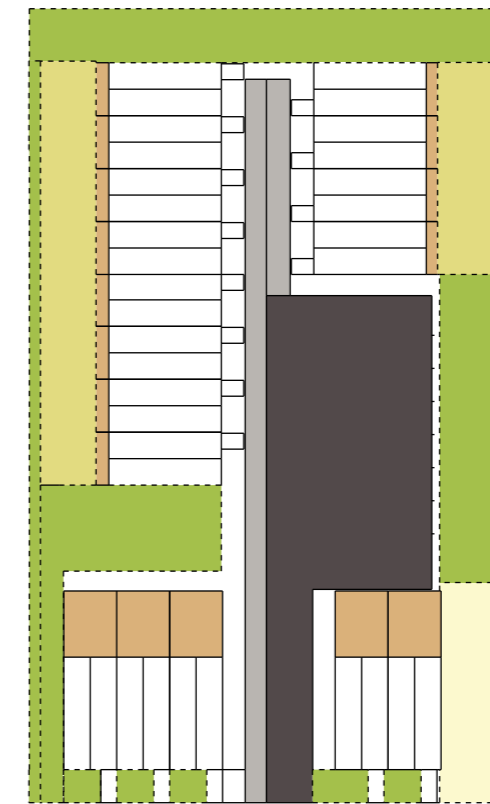


**Building Coverage: 578m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
Terrace Type: 15xT1, 2xTii  
Total Units: 17  
Total Bedrooms: 49  
Occupancy: 61  
GFA: 1666m<sup>2</sup>

**Landscape Area: 515m<sup>2</sup>**  
**(Standard: 20% >432m<sup>2</sup>)**  
inc. Deep Soil Area: 216m<sup>2</sup>

**Impervious Area: 858m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
Building Footprints: 578m<sup>2</sup>  
Vehicle Manoeuvring: 280m<sup>2</sup>

### MHU Existing:



**Building Coverage: 578m<sup>2</sup>**  
**(Standard: 45% <972m<sup>2</sup>)**  
Terrace Type: 14xT1, 3xTii  
Total Units: 17  
Total Bedrooms: 48  
Occupancy: 60  
GFA: 1632m<sup>2</sup>

**Landscape Area: 760m<sup>2</sup>**  
**(Standard: 35% >756m<sup>2</sup>)**  
inc. LA in POLs: 200m<sup>2</sup>  
& non-vegetated LA: 42m<sup>2</sup>

**Impervious Area: 858m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
Building Footprints: 578m<sup>2</sup>  
Vehicle Manoeuvring: 280m<sup>2</sup>

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

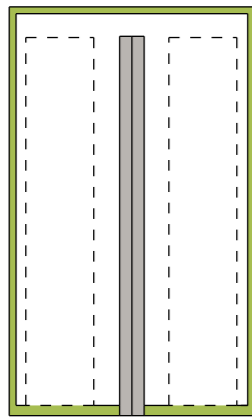
# Terrace House Study

## THAB Existing & THAB Proposed Standards Comparison

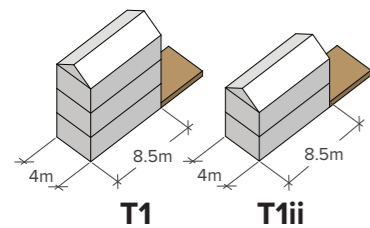
### Site 2b + Scenario 3:

Large Site: 36x60m, 2160m<sup>2</sup>

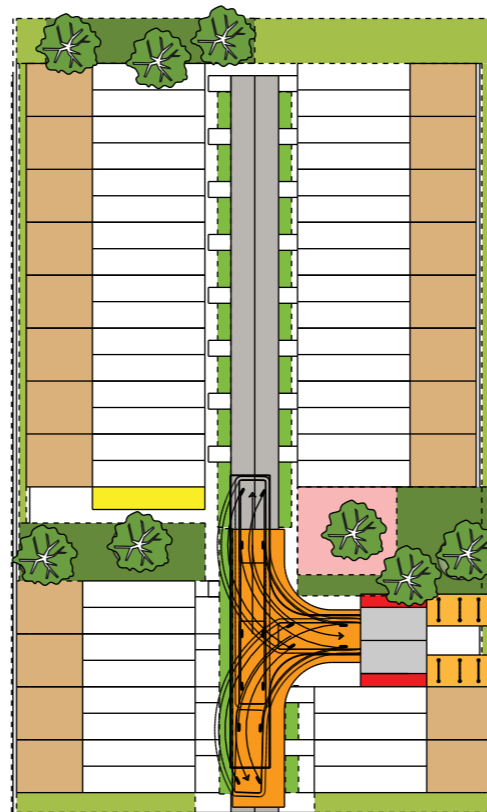
Pedestrian Only Access Scenario



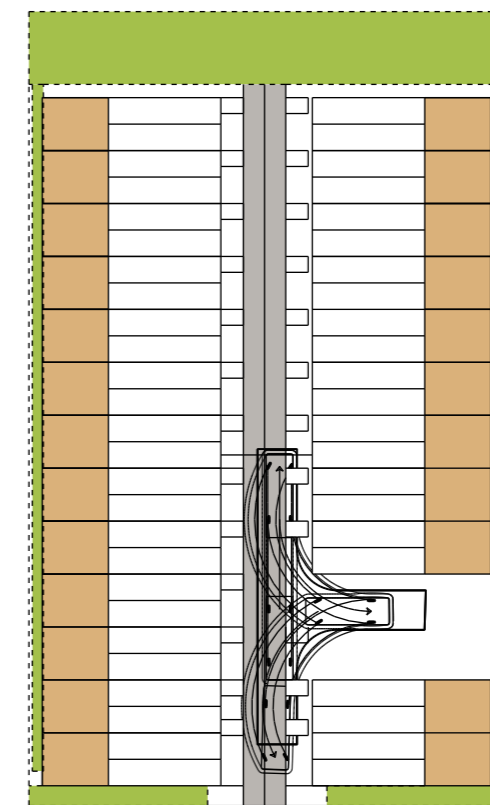
### Terrace House Typologies:



### THAB Proposed:



### THAB Existing:



### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

**Building Coverage: 748m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**

Terrace Type: 22xT1  
 Total Units: 22  
 Total Bedrooms: 66  
 Occupancy: 83  
 GFA: 2244m<sup>2</sup>

**Landscape Area: >432m<sup>2</sup>**  
**(Standard: 20% >432m<sup>2</sup>)**  
 inc. Deep Soil Area: 216m<sup>2</sup>

**Impervious Area: 748m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
 Building Footprints: 748m<sup>2</sup>

**Building Coverage: 816m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**

Terrace Type: 22xT1, 2xT1ii  
 Total Units: 24  
 Total Bedrooms: 70  
 Occupancy: 88  
 GFA: 2380m<sup>2</sup>

**Landscape Area: >648m<sup>2</sup>**  
**(Standard: 30% >648m<sup>2</sup>)**

**Impervious Area: 816m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
 Building Footprints: 816m<sup>2</sup>

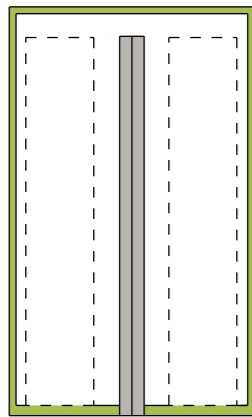
# Terrace House Study

## MHU Existing & MHU Proposed Standards Comparison

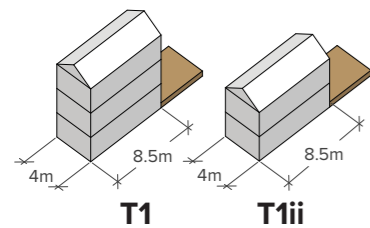
### Site 2b + Scenario 3:

Large Site: 36x60m, 2160m<sup>2</sup>

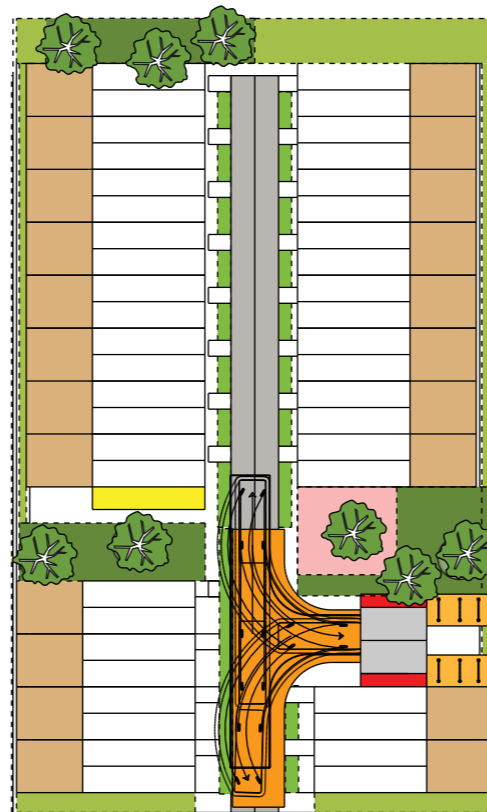
Pedestrian Only Access Scenario



### Terrace House Typologies:



### MHU Proposed:

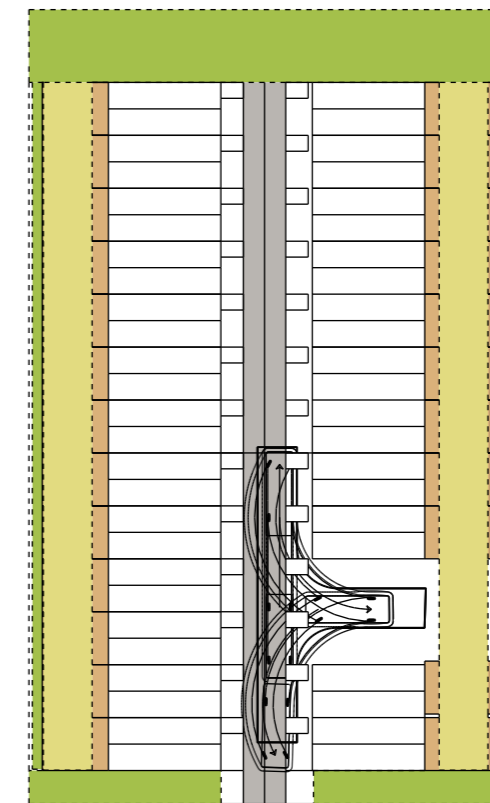


**Building Coverage: 748m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
 Terrace Type: 22xT1  
 Total Units: 22  
 Total Bedrooms: 66  
 Occupancy: 83  
 GFA: 2244m<sup>2</sup>

**Landscape Area: >432m<sup>2</sup>**  
**(Standard: 20% >432m<sup>2</sup>)**  
 inc. Deep Soil Area: 216m<sup>2</sup>

**Impervious Area: 748m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
 Building Footprints: 748m<sup>2</sup>

### MHU Existing:



**Building Coverage: 816m<sup>2</sup>**  
**(Standard: 45% <972m<sup>2</sup>)**  
 Terrace Type: 22xT1, 2xT1ii  
 Total Units: 24  
 Total Bedrooms: 70  
 Occupancy: 88  
 GFA: 2380m<sup>2</sup>

**Landscape Area: 770m<sup>2</sup>**  
**(Standard: 35% >756m<sup>2</sup>)**  
 inc. LA in POLs: 400m<sup>2</sup>

**Impervious Area: 816m<sup>2</sup>**  
**(Standard: 50% <1080m<sup>2</sup>)**  
 Building Footprints: 816m<sup>2</sup>

### Key:

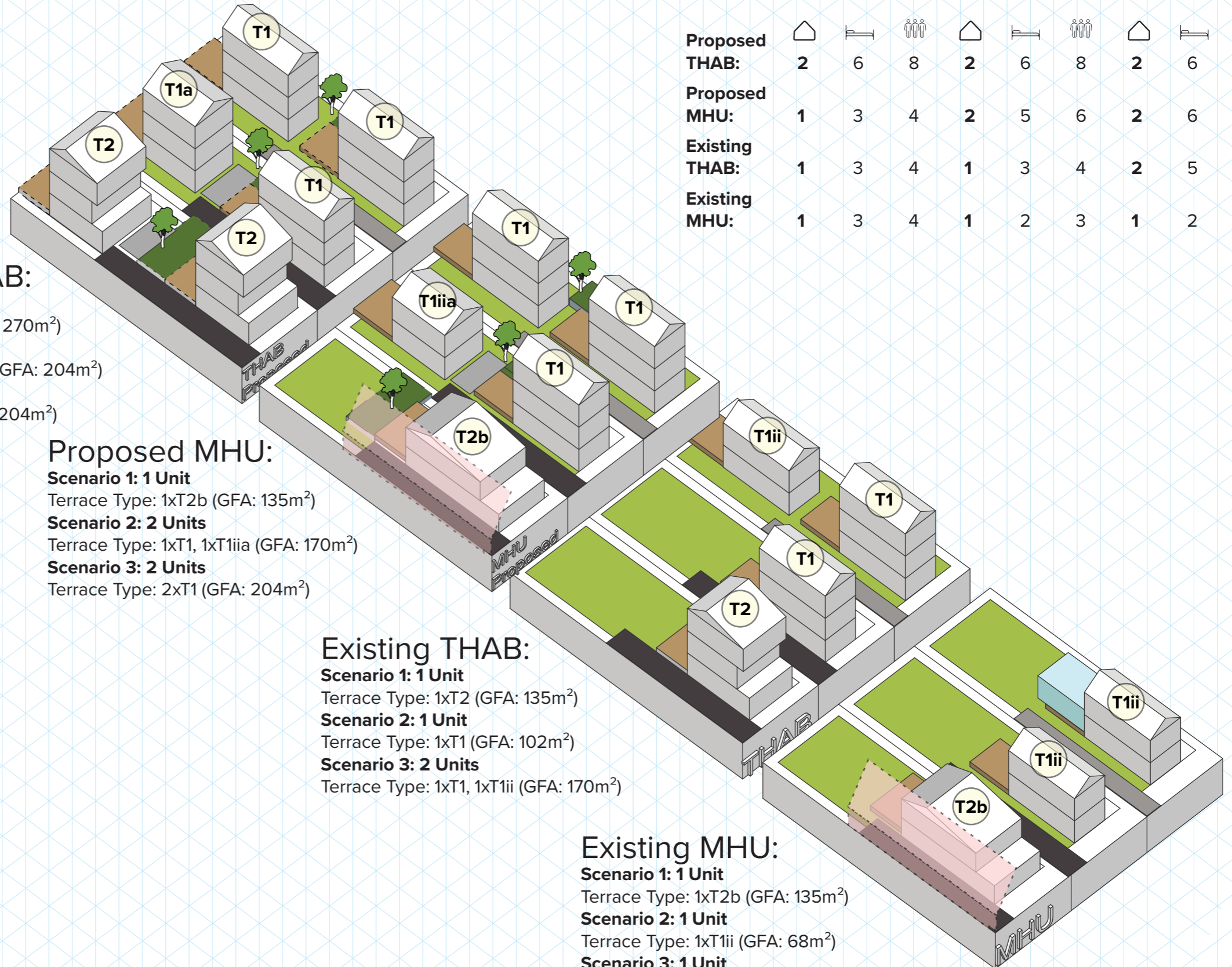
- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Yield Analysis

### Site 3 (10x30m) Summary:

- S1 Scenario 1**  
Vehicle Accessway + Footpath
- S2 Scenario 2**  
Grouped Car Parking
- S3 Scenario 3**  
Pedestrian Only Access



### Proposed THAB:

- Scenario 1: 2 Units**  
Terrace Type: 2xT2 (GFA: 270m<sup>2</sup>)
- Scenario 2: 2 Units**  
Terrace Type: 1xT1, 1xT1a (GFA: 204m<sup>2</sup>)
- Scenario 3: 2 Units**  
Terrace Type: 2xT1 (GFA: 204m<sup>2</sup>)

### Proposed MHU:

- Scenario 1: 1 Unit**  
Terrace Type: 1xT2b (GFA: 135m<sup>2</sup>)
- Scenario 2: 2 Units**  
Terrace Type: 1xT1, 1xT1ia (GFA: 170m<sup>2</sup>)
- Scenario 3: 2 Units**  
Terrace Type: 2xT1 (GFA: 204m<sup>2</sup>)

### Existing THAB:

- Scenario 1: 1 Unit**  
Terrace Type: 1xT2 (GFA: 135m<sup>2</sup>)
- Scenario 2: 1 Unit**  
Terrace Type: 1xT1 (GFA: 102m<sup>2</sup>)
- Scenario 3: 2 Units**  
Terrace Type: 1xT1, 1xT1ii (GFA: 170m<sup>2</sup>)

### Existing MHU:

- Scenario 1: 1 Unit**  
Terrace Type: 1xT2b (GFA: 135m<sup>2</sup>)
- Scenario 2: 1 Unit**  
Terrace Type: 1xT1ii (GFA: 68m<sup>2</sup>)
- Scenario 3: 1 Unit**  
Terrace Type: 1xT1ii (GFA: 68m<sup>2</sup>)

	S1			S2			S3		
	House	Bed	Person	House	Bed	Person	House	Bed	Person
<b>Proposed THAB:</b>	2	6	8	2	6	8	2	6	8
<b>Proposed MHU:</b>	1	3	4	2	5	6	2	6	8
<b>Existing THAB:</b>	1	3	4	1	3	4	2	5	6
<b>Existing MHU:</b>	1	3	4	1	2	3	1	2	3

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

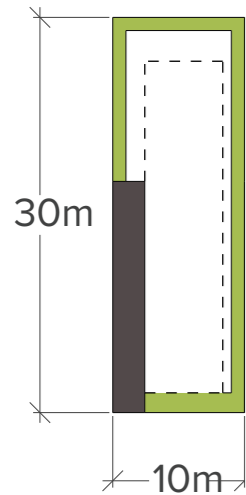
# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

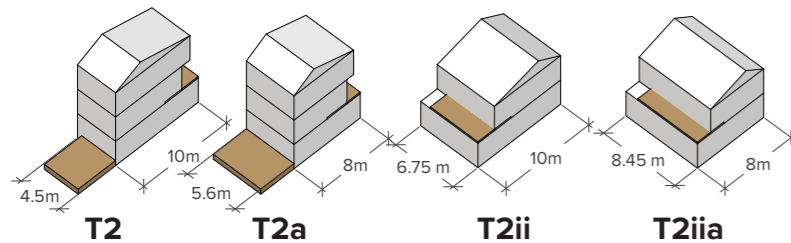
### Site 3 + Scenario 1:

Small Site: 10x30m, 300m<sup>2</sup>

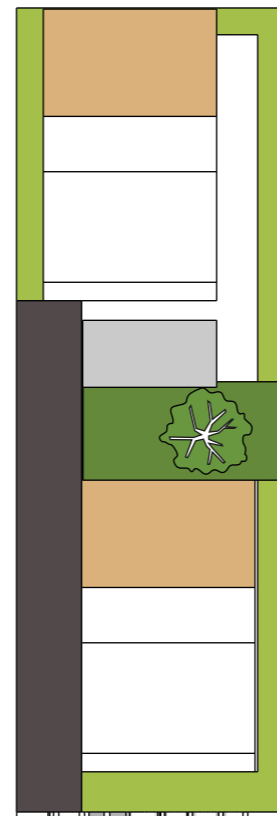
Vehicle Accessway + Footpath Scenario



### Terrace House Typologies:



### THAB Proposed:

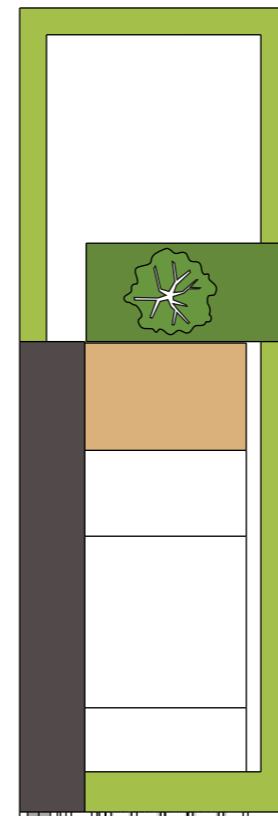


**Building Coverage: 90m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
Terrace Type: 2xT2b  
Total Units: 2  
Total Bedrooms: 6  
Occupancy: 7.5  
GFA: 270m<sup>2</sup>

**Landscape Area: >60m<sup>2</sup>**  
**(Standard: 20% >60m<sup>2</sup>)**  
inc. Deep Soil Area: 30m<sup>2</sup>

**Impervious Area: 90m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
Building Footprints: 90m<sup>2</sup>

### MHU Proposed:

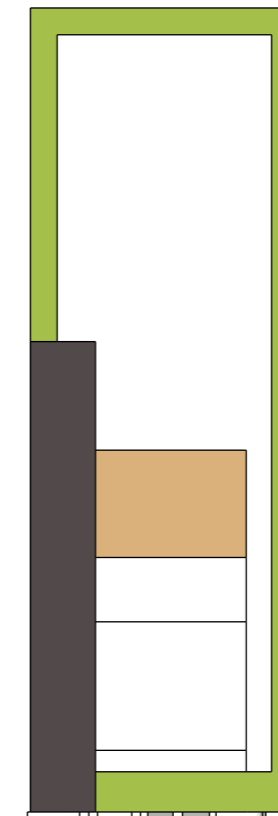


**Building Coverage: 67.5m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
Terrace Type: 1xT2iib (2Level)  
Total Units: 1  
Total Bedrooms: 3  
Occupancy: 4  
GFA: 135m<sup>2</sup>

**Landscape Area: >60m<sup>2</sup>**  
**(Standard: 20% >60m<sup>2</sup>)**  
inc. Deep Soil Area: 30m<sup>2</sup>

**Impervious Area: 67.5m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
Building Footprints: 67.5m<sup>2</sup>

### THAB Existing:

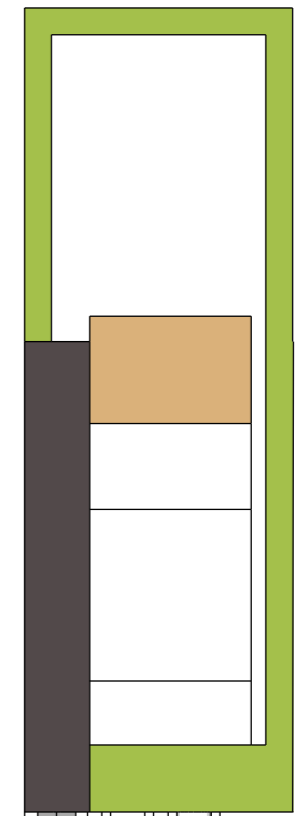


**Building Coverage: 45m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
Terrace Type: 1xT2a  
Total Units: 1  
Total Bedrooms: 3  
Occupancy: 4  
GFA: 135m<sup>2</sup>

**Landscape Area: >90m<sup>2</sup>**  
**(Standard: 30% >90m<sup>2</sup>)**

**Impervious Area: 45m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
Building Footprints: 45m<sup>2</sup>

### MHU Existing:



**Building Coverage: 67.5m<sup>2</sup>**  
**(Standard: 45% <135m<sup>2</sup>)**  
Terrace Type: 1xT2iib (2Level)  
Total Units: 1  
Total Bedrooms: 3  
Occupancy: 4  
GFA: 135m<sup>2</sup>

**Landscape Area: >105m<sup>2</sup>**  
**(Standard: 35% >105m<sup>2</sup>)**

**Impervious Area: 67.5m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
Building Footprints: 67.5m<sup>2</sup>

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

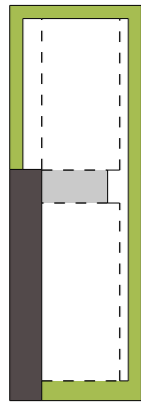
# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

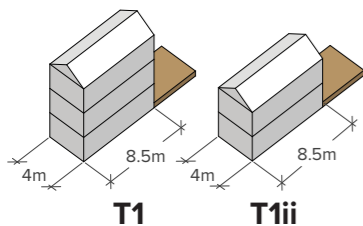
### Site 3 + Scenario 2:

Small Site: 10x30m, 300m<sup>2</sup>

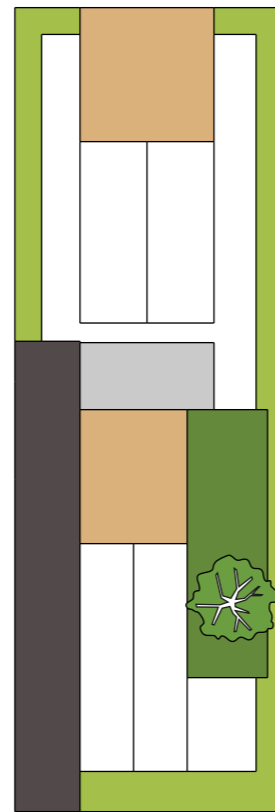
Grouped Car Parking Scenario



### Terrace House Typologies:



### THAB Proposed:

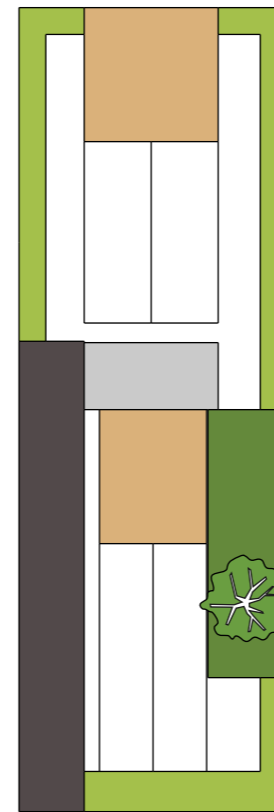


**Building Coverage: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Terrace Type: 1xT1, 1xT1ia  
 Total Units: 2  
 Total Bedrooms: 6  
 Occupancy: 7.5  
 GFA: 204m<sup>2</sup>

**Landscape Area: >60m<sup>2</sup>**  
**(Standard: 20% >60m<sup>2</sup>)**  
 inc. Deep Soil Area: 30m<sup>2</sup>

**Impervious Area: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 68m<sup>2</sup>

### MHU Proposed:

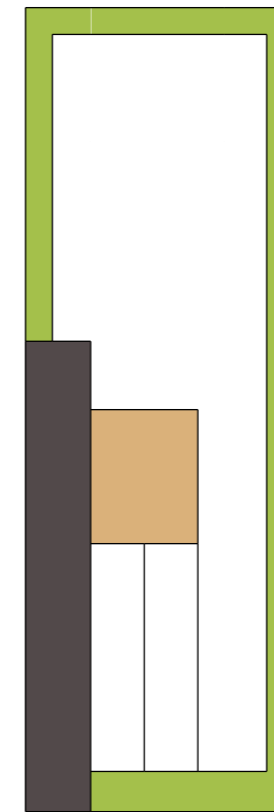


**Building Coverage: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Terrace Type: 1xT1, 1xT1iia  
 Total Units: 2  
 Total Bedrooms: 5  
 Occupancy: 7.5  
 GFA: 170m<sup>2</sup>

**Landscape Area: >60m<sup>2</sup>**  
**(Standard: 20% >60m<sup>2</sup>)**  
 inc. Deep Soil Area: 30m<sup>2</sup>

**Impervious Area: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 68m<sup>2</sup>

### THAB Existing:

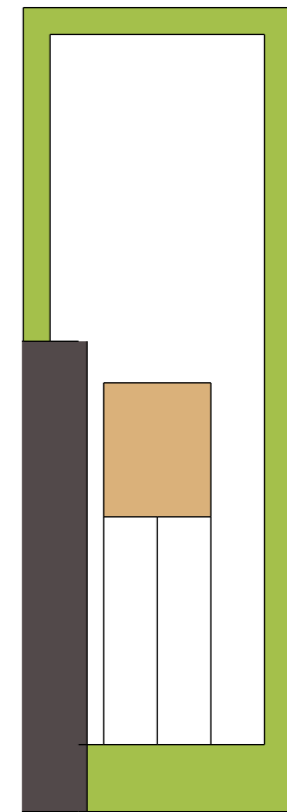


**Building Coverage: 34m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Terrace Type: 1xT1  
 Total Units: 1  
 Total Bedrooms: 3  
 Occupancy: 4  
 GFA: 102m<sup>2</sup>

**Landscape Area: >90m<sup>2</sup>**  
**(Standard: 30% >90m<sup>2</sup>)**

**Impervious Area: 34m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 35m<sup>2</sup>

### MHU Existing:



**Building Coverage: 34m<sup>2</sup>**  
**(Standard: 45% <135m<sup>2</sup>)**  
 Terrace Type: 1xT1ii (2Level)  
 Total Units: 1  
 Total Bedrooms: 2  
 Occupancy: 2.5  
 GFA: 68m<sup>2</sup>

**Landscape Area: >105m<sup>2</sup>**  
**(Standard: 35% >105m<sup>2</sup>)**

**Impervious Area: 34m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 34m<sup>2</sup>

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

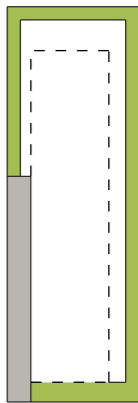
# Terrace House Study

## MHU/THAB Existing & MHU/THAB Proposed Standards Comparison

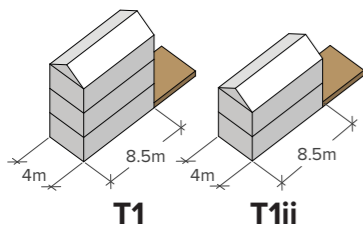
### Site 3 + Scenario 3:

Small Site: 10x30m, 300m<sup>2</sup>

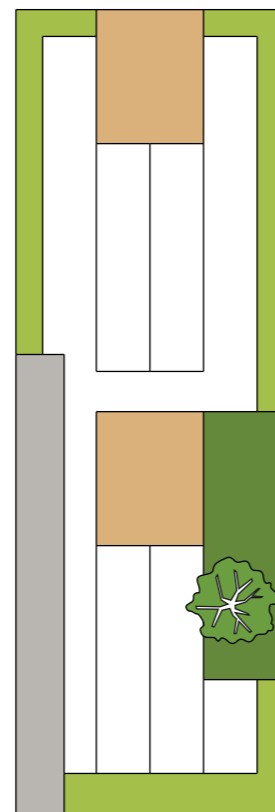
Pedestrian Only Access Scenario



### Terrace House Typologies:



### THAB Proposed:

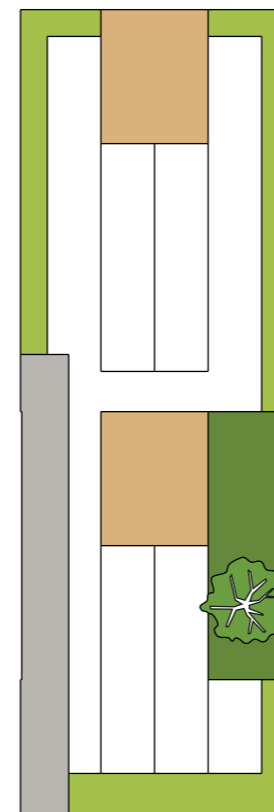


**Building Coverage: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Terrace Type: 2xT1  
 Total Units: 2  
 Total Bedrooms: 6  
 Occupancy: 7.5  
 GFA: 204m<sup>2</sup>

**Landscape Area: >60m<sup>2</sup>**  
**(Standard: 20% >60m<sup>2</sup>)**  
 inc. Deep Soil Area: 30m<sup>2</sup>

**Impervious Area: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 68m<sup>2</sup>

### MHU Proposed:

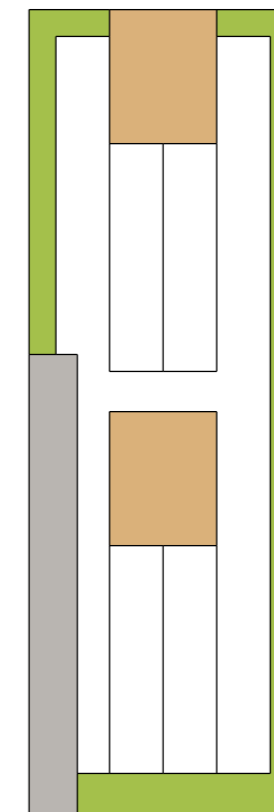


**Building Coverage: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Terrace Type: 2xT1  
 Total Units: 2  
 Total Bedrooms: 6  
 Occupancy: 7.5  
 GFA: 204m<sup>2</sup>

**Landscape Area: >60m<sup>2</sup>**  
**(Standard: 20% >60m<sup>2</sup>)**  
 inc. Deep Soil Area: 30m<sup>2</sup>

**Impervious Area: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 68m<sup>2</sup>

### THAB Existing:

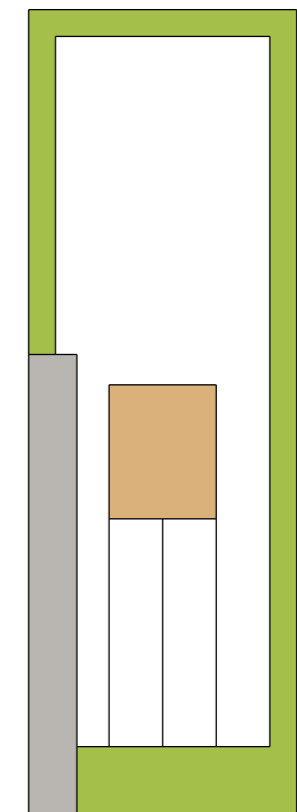


**Building Coverage: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Terrace Type: 1xT1, 1xT1ii  
 Total Units: 2  
 Total Bedrooms: 5  
 Occupancy: 6  
 GFA: 170m<sup>2</sup>

**Landscape Area: >90m<sup>2</sup>**  
**(Standard: 30% >90m<sup>2</sup>)**

**Impervious Area: 68m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 68m<sup>2</sup>

### MHU Existing:



**Building Coverage: 34m<sup>2</sup>**  
**(Standard: 45% <135m<sup>2</sup>)**  
 Terrace Type: 1xT1ii (2Level)  
 Total Units: 1  
 Total Bedrooms: 2  
 Occupancy: 2.5  
 GFA: 68m<sup>2</sup>

**Landscape Area: >105m<sup>2</sup>**  
**(Standard: 35% >105m<sup>2</sup>)**

**Impervious Area: 34m<sup>2</sup>**  
**(Standard: 50% <150m<sup>2</sup>)**  
 Building Footprints: 34m<sup>2</sup>

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)

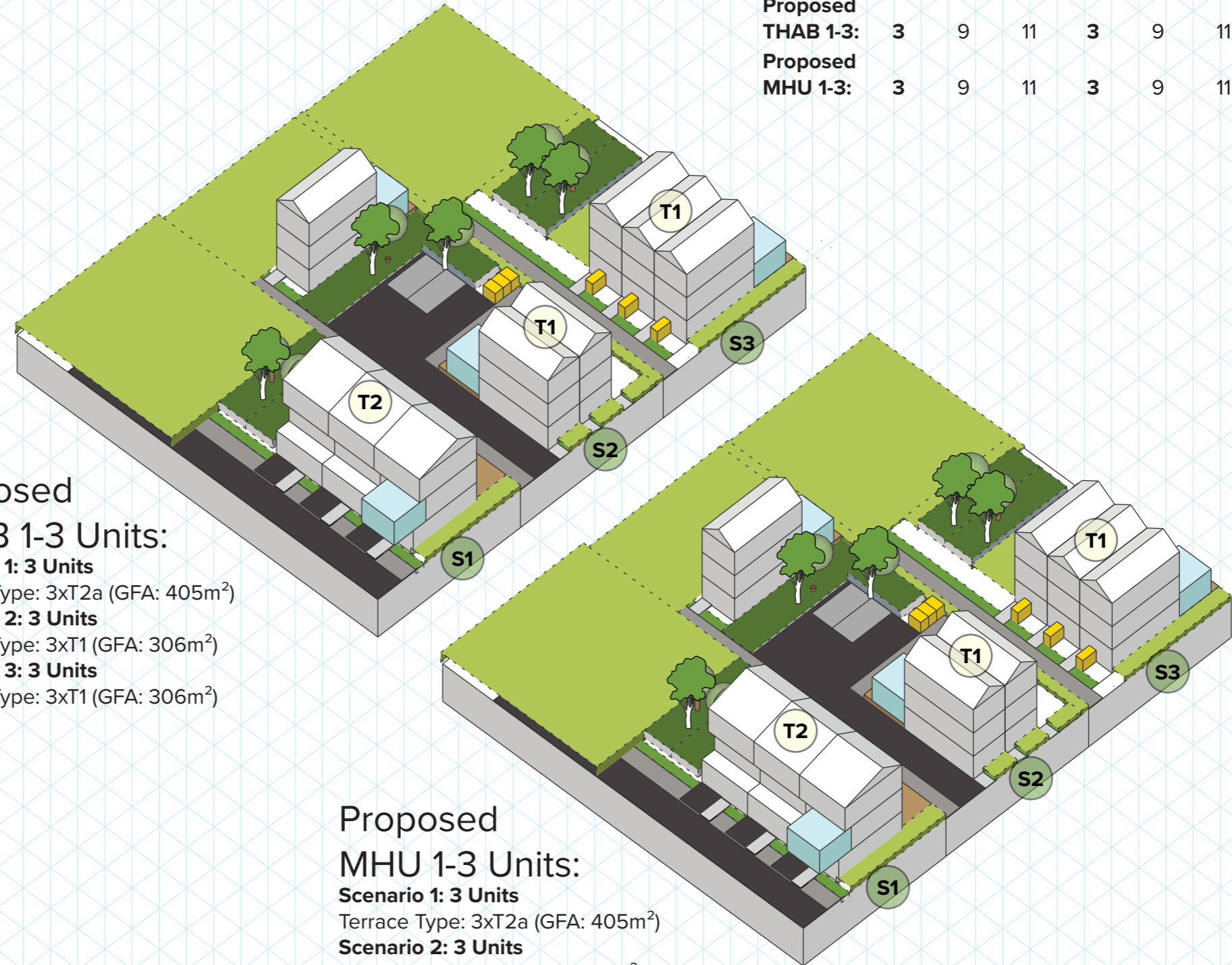
# Terrace House Study

## MHU 1-3 & THAB 1-3 Proposed Yield Analysis

### Site 1 (18x44.5m) Summary:

- S1 Scenario 1**  
Vehicle Accessway + Footpath
- S2 Scenario 2**  
Grouped Car Parking
- S3 Scenario 3**  
Pedestrian Only Access

	S1			S2			S3		
<b>Proposed THAB 1-3:</b>	3	9	11	3	9	11	3	9	11
<b>Proposed MHU 1-3:</b>	3	9	11	3	9	11	3	9	11



**Proposed THAB 1-3 Units:**  
**Scenario 1: 3 Units**  
 Terrace Type: 3xT2a (GFA: 405m<sup>2</sup>)  
**Scenario 2: 3 Units**  
 Terrace Type: 3xT1 (GFA: 306m<sup>2</sup>)  
**Scenario 3: 3 Units**  
 Terrace Type: 3xT1 (GFA: 306m<sup>2</sup>)

**Proposed MHU 1-3 Units:**  
**Scenario 1: 3 Units**  
 Terrace Type: 3xT2a (GFA: 405m<sup>2</sup>)  
**Scenario 2: 3 Units**  
 Terrace Type: 3xT1 (GFA: 306m<sup>2</sup>)  
**Scenario 3: 3 Units**  
 Terrace Type: 3xT1 (GFA: 306m<sup>2</sup>)

### Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m<sup>2</sup>)
- Landscape Area (35% & 20%)
- Landscape Area in POLs (varies)
- Non-vegetated Landscape Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvring (10+ units)
- Waste Storage (1.4m<sup>2</sup> p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)



Appendix 4: Jasmox (2022).  
Building Height Memo;  
Auckland: Jasmox

# Memo

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**To:** QBE workstream – NPSUD

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**From:** James Whetter, Jasmax

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**Date:** 27/05/2022

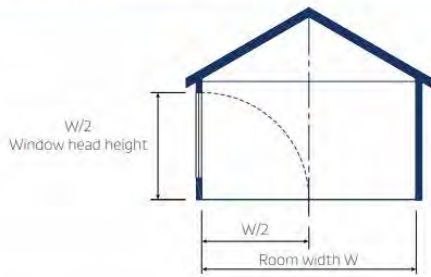
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**Subject:** Floor to floor heights and overall building height to enable at least 6 storeys.

---

- The following is a summary of technical building considerations and current market and code trends which we believe will flow on to outcomes in building heights in the future
- Most come out of the Building Code contained in Schedule 1 of the Building Regulations 1992. The performance standards within the Building Code and methods of compliance via acceptable solutions have a large impact on constructing buildings, those which address housing are slowly being revised for better outcomes. Eg
- **G7 Natural Light** – new provision November 2021. *Providing sufficient natural light for occupied spaces and appropriate visual awareness of the outside for occupants. This clause requires habitable spaces to have adequate windows for natural light and visual awareness of the outside environment to safeguard against illness, and loss of amenity due to isolation.*
  - o It requires natural light of no less than 30 lux at floor level for 75% of the standard year, and for transparent openings in certain buildings. A pathway to compliance for this provision is
  - o Acceptable Solution G7/AS1.  
(note this is appropriate acceptable solution for up to 3 storeys. Higher buildings fall into a more complex method of assessment but is based on the same principle of getting more natural light within the interior of the apartment, made easier by larger areas and higher head heights of glazing to exterior facades)
  - o The incentive within G7/AS1 is to maximise window head height to gain deeper apartment depth.

**FIGURE 2.1.2.1A:** Window head height for a window on one side or adjacent sides of a room  
Paragraph 2.1.2.1 c) i)



**FIGURE 2.1.2.1B:** Window head heights for windows on opposite side of a room  
Paragraph 2.1.2.1 c) ii)

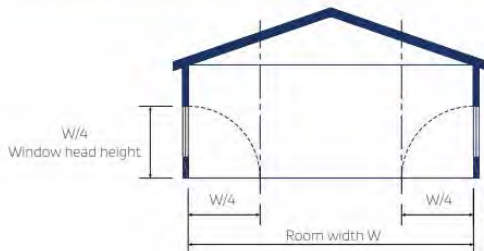


Figure 1 Excerpt from G7/AS1

- Figure 2. The figure shows that if a window head height was only 2.4m then the room depth could only be 4.8m to comply or 9.6m if dual aspect. If the head height is 2.7m, then the room (living included) could only be 5.4m or 10.8 if dual aspect.
- **G6 – Impact and Airborne Sound.** *Prevention of undue noise transmission in building elements between occupancies or common spaces in household units.*

Acoustic requirements between tenancies are classed in two ways IIC (impact) and STC Sound transmission class A single number rating derived from measured values of transmission loss in accordance with classification .

- o Acceptable solution calls for 250mm system. Acoustic engineers regularly deem STC 55 as too low and recommend STC 60 or above.

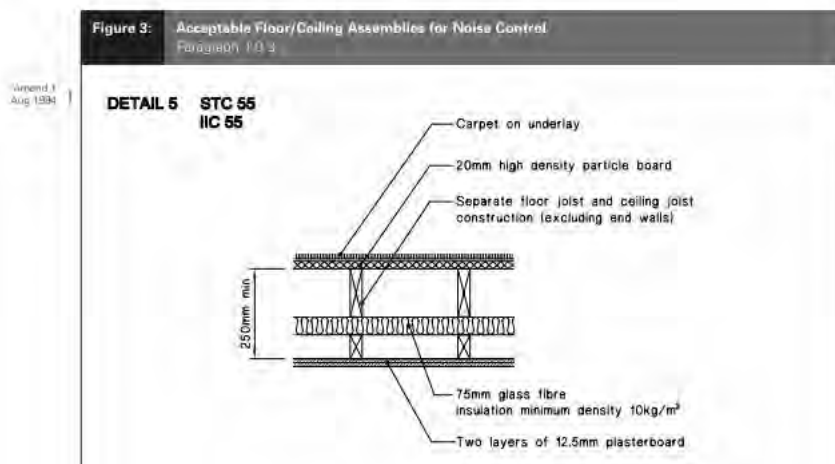


Figure 3 Acceptable Solution Assembly - timber floor

- o In reality we find that a concrete structural floor performs best with acoustic requirements but if timber is desired and batten and cradle system build up creates a better acoustic system. A batten and cradle system build up might look like the following – totalling 350mm or more.

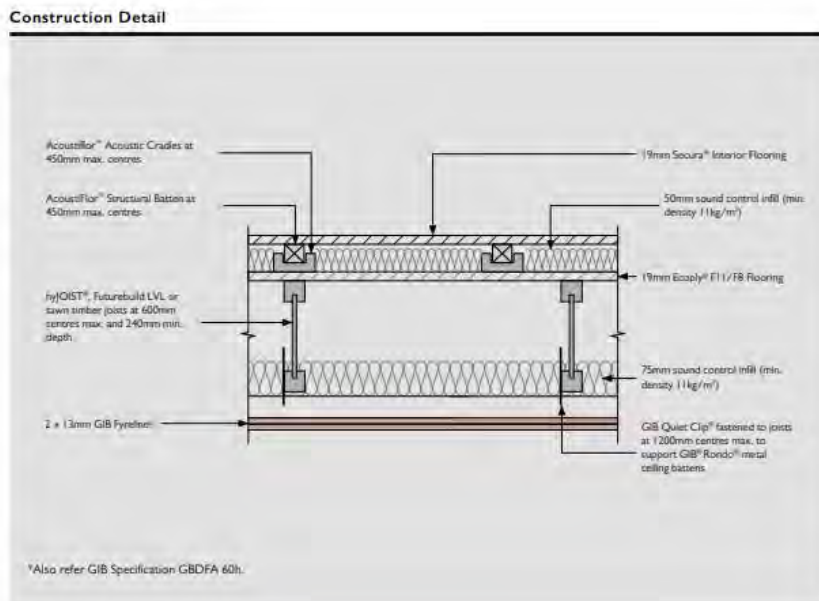


Figure 4 standard batten and cradle acoustic floor build up

- o Concrete construction methodologies – standard slab construction might be less than a timber build up might be 200mm slab (plus flooring at approx. 20mm). Beams are generally required and size (depth) depend greatly on span but wouldn't be unusual to be another 300mm below slab underside. A total primary structural build up of 500mm is not unlikely.
- **G4 Ventilation and E3 Internal Moisture.** Good ventilation is important for apartments to address the build-up of moisture. As part of the ventilation and energy strategy we generally recommend heat recovery ventilation systems. These extract air from bathroom areas but also supply air into the lounge and bedrooms. This meet NZBC clause G4 and keep the apartments dry and well ventilated no matter whether the tenants open windows or not. As such, the ceiling void the space is getting increasingly cluttered. The market has moved predominantly to mechanically ventilated spaced which require ducts for intake and extract air connected to a central unit which is unlikely to be less than 250mm and kitchen extracts require at least 300mm clear space within ceiling. If also negotiating clearance around structural beams this can greatly increase the size of suspended ceiling voids.
- **Other services allowances.** On the ground floor, within ceiling voids allowance is made for additional 'turn outs' of services from main switch board rooms, fibre (chorus) data boards etc. Any commercial kitchens on the ground floor would require fire rated ducted exhausted which take up additional space. For this reason it would not be unlikely to have 1m between ceiling of ground floor and level one floor. So, even without commercial uses at the ground floor it is prudent to allow for a greater height of 4m minimum to the level 1 floor.

- **Roof form.** Building typologies of at least six storeys will have roof plant and lift overruns. These will need access for maintenance, as will the roof cladding and gutters in general. A likely scenario is a stairwell reaching the roof cladding which is a 2-3 degrees membrane or low slope metal roof. A parapet around the building facade and internal gutters are likely. A parapet can act as a barrier to falling for roof maintenance as well as hide all the roof plant. In the most efficient and simplistic approach to a building such as this, you are unlikely to appreciate any roof form or change in roof line from the street. Large eave overhangs are unlikely on this building type.

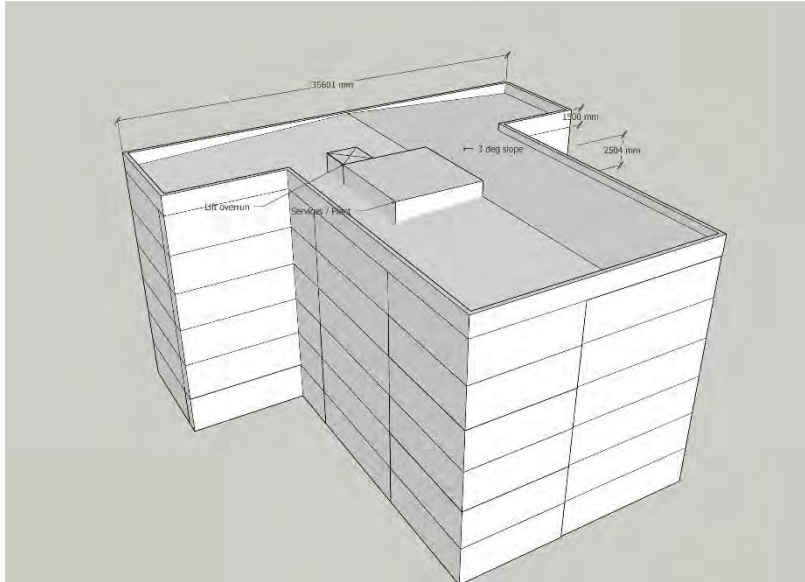
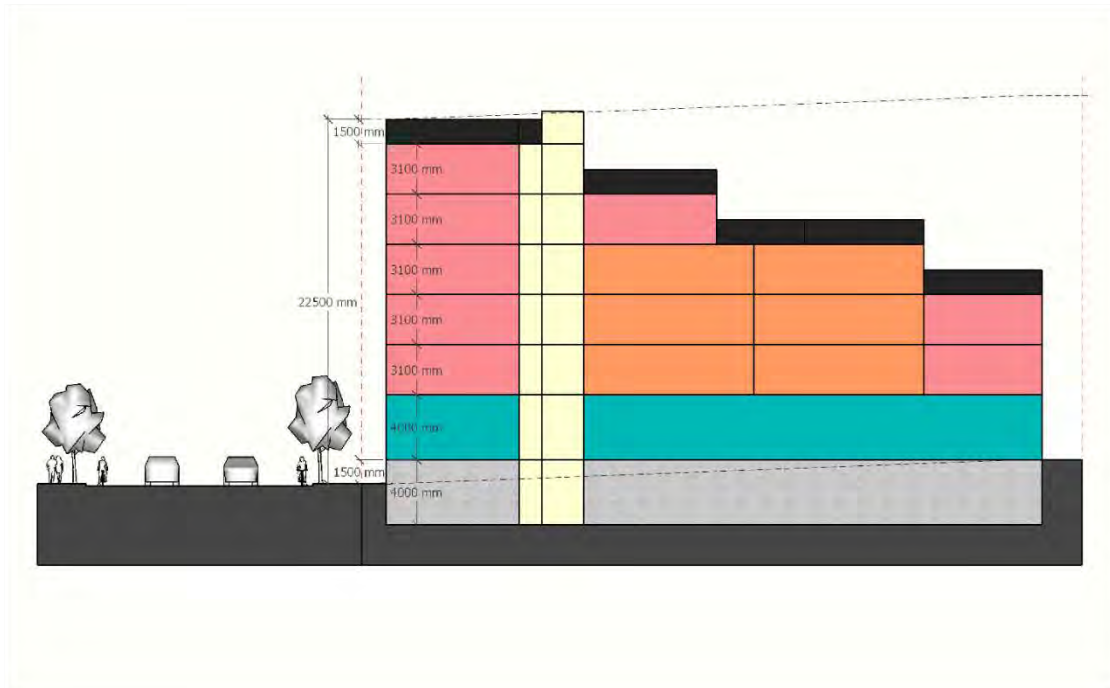


Figure 5 The following shows a build up of 1.5 -2.0m roof build up to allow for a minimum 2-3 degree pitched roof (classed as flat). A greater depth would be required to allow for a pitched roof.

- **Topography:** Our experience within Tāmaki Makaurau residential practice within the last 15 years is that we should expect topography. A flat site is a rarity within the isthmus. Given that it is not unusual on a standard 800m<sup>2</sup> site to have at least a 1.5m fall across, we would think it prudent to anticipate this within rolling height allowances to avoid the following.
  - Stepped floor slabs – extra expense in construction methodology, tanking and waterproofing. Complexity in foundation.
  - On grade living facing the street at ground level. A vertical separation to ground floor apartment outdoor living facing streets is preferable.
  - Sub- street level entries / lobbies / living areas. An outcome evident on the recently completed Elm Apartments on Orakei Road and much debated on the Trinity Apartments, Parnell.
  - Extra excavation cost should basements be involved. A basement coming out of the ground around 1m at one side of the building is acceptable from a street level interface point of view and greatly reduces ramp length required for vehicle access.
- In our experience it would be very difficult to complete a floor-to-floor height in residential use of 2.7m in the current market for statutory, cost and market acceptability reasons. For that matter, anything less than 3.0m floor to floor induces cost thrown at innovative construction methods and bespoke solutions in design process and construction. Generally this would only be feasible in central city locations where sale costs of apartments could support the added cost of construction.

- In summary – in our residential work we are currently starting at an assumption of a 4m ground floor to floor and additional levels at 3.2 floor to floor as well as a 1.5m roof build up in order to ensure good design outcomes. We set out ground floor (lobby entry) at the street level and continue this datum throughout the ground floor if at all possible. We would think that 3.1m floor to floor is adequate if the ground floor and basement allowance were made. In line with our original recommendation of the following.



Appendix 5: Auckland Council.  
Width of an average of 'typical' residential site  
within walkable catchment in Auckland;  
UDU Research, October 2021

# Width, length, and area of an average or ‘typical’ residential site within walkable catchments in Auckland

UDU research  
June 2022

Researcher: Jess Romhany  
Reviewed by: Eva Zombori  
Peer reviewed by: Chad Hu

## 1. Research objective

The objective of this research was to identify the width, length and area of a typical residential site within the walkable catchments of Rapid Transit Network (RTN) stations in Auckland, to inform Council’s relevant work streams to amend the Auckland Unitary Plan Operative in Part (AUP OP) and fulfil the requirements of Policy 3 of the National Policy Statement on Urban Development (NPSUD).

Policy 3 of the NPSUD requires that:

*“In relation to tier 1 urban environments, regional policy statements and district plans enable:*

*(a) in city centre zones, building heights and density of urban form to realise as much development capacity as possible, to maximise benefits of intensification; and*

*(b) in metropolitan centre zones, building heights and density of urban form to reflect demand for housing and business use in those locations, and in all cases building heights of at least 6 storeys; and*

*(c) building heights of least 6 storeys within at least a walkable catchment of the following:*

- (i) existing and planned rapid transit stops*
- (ii) the edge of city centre zones*
- (iii) the edge of metropolitan centre zones; and*

*(d) in all other locations in the tier 1 urban environment, building heights and density of urban form commensurate with the greater of:*

- (i) the level of accessibility by existing or planned active or public transport to a range of commercial activities and community services; or*
- (ii) relative demand for housing and business use in that location.”*

Council sought legal advice to clarify what ‘enable’ means in the context of the NPSUD. Council was advised by DLA Piper, dated 11 August 2021, that “...our view is that the Council can give effect to Policy 3 if, in a location, building heights of at least 6 storeys are enabled as a permitted activity or controlled activity on a typical site in the location.”



## **2. Research methodology**

This research used the RTN walkable catchment boundaries that were set by the Geospatial Team of Plans and Places. We looked at all 45 walkable catchments, including the eight Metropolitan Centres.

GIS data of all sites within the walkable catchments was obtained from the Geospatial Team of Plans and Places. To determine what a 'typical' site was, the research applied the mode average methodology separately for the three attributes - site width, area and length - that is the value that appears most frequently in a dataset. Site width was recorded as the dimension of the site's frontage to the street. Site length was calculated by dividing the site area by the site width. This calculation provided an approximate site length (please note limitations discussed under Section 3 below).

This data was first filtered by zone, site width and property ownership type. With the application of these filters the sites that were analysed were all sites that were zoned residential in the AUP OP (SH, MHS, MHU and THAB), sites that had a minimum of 7m width or more, sites that had a frontage to the street and sites that were freehold. Some sites with an area less than 100m<sup>2</sup> were excluded from the analysis as these are not suitable for residential development (e.g., forms part of berm, road verge).

This methodology therefore excluded all sites that were not residential, parts of sites that formed a driveway to a rear property and sites that have multiple buildings on them owned by multiple owners. In the original dataset, some sites appeared more than once due to having two frontages to the street (i.e. corner sites). Duplicates were removed from the list.

## **3. Methodology Limitations**

### *3.1 Site Length*

The dimensions used for site length were calculated by dividing the site area by the site width. This method had its limitations as it assumes that each site is rectangular or regular in shape. This is not the case for all sites, where many are irregular in shape.

A high-level analysis found that approximately 60% of sites within the walkable catchments are or are close to being (within 10% margin of error) perfectly rectangular in shape. Therefore, the calculated dimensions are relatively accurate for at least 60% of the total sites included in the dataset.

It is acknowledged that there is a level of inaccuracy associated with the dataset and that the dimensions used for site length are only an estimate. The estimate of site length was considered to be appropriate for this high-level analysis.

### *3.2 Dataset*

The initial dataset was extracted in September 2021. Therefore, the dataset was based on the walkable catchment boundaries at that time. A more recent analysis to take account of any updated walkable catchment boundaries has not been completed as part of this assessment.

### 3.2 Human Error

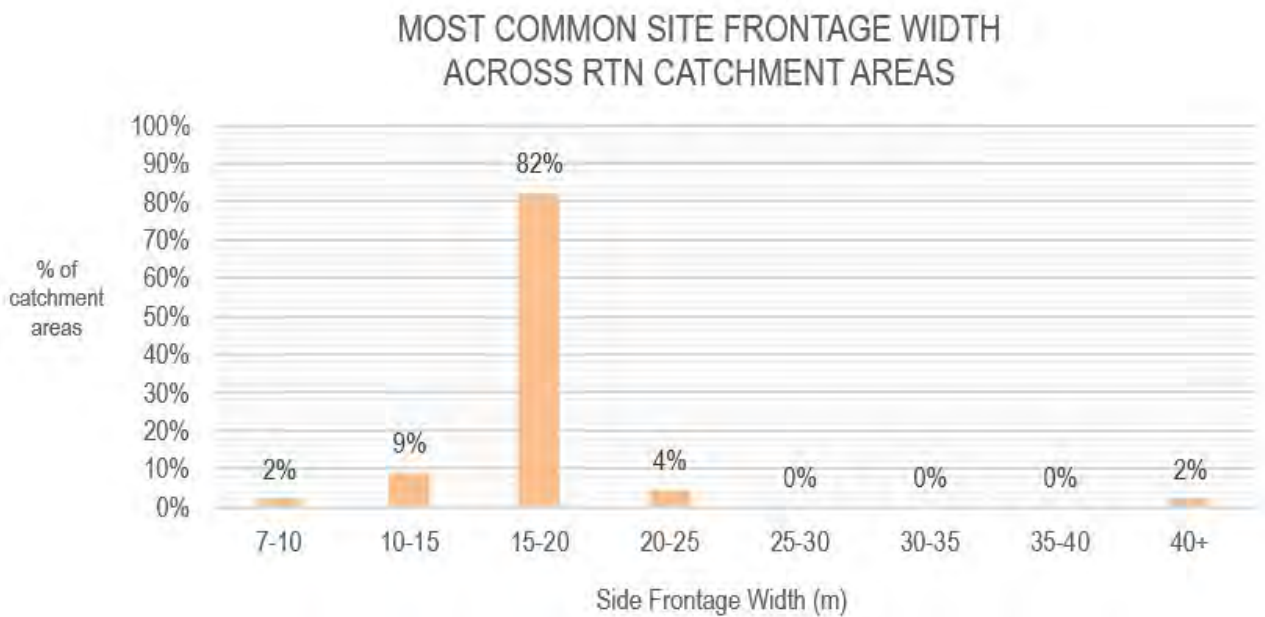
The analysis of all sites within the walkable catchment was subject to a degree of human error as the dataset was assessed using Microsoft Excel and was manually filtered, counted and assessed.

## 4. Findings

The research findings are organised into three categories: an overall mode average of site width, site area and site length throughout all walkable catchments. The findings broken down by individual RTN walkable catchments are attached in **Appendix 1**.

### a. Typical site width - walkable catchment-wide result

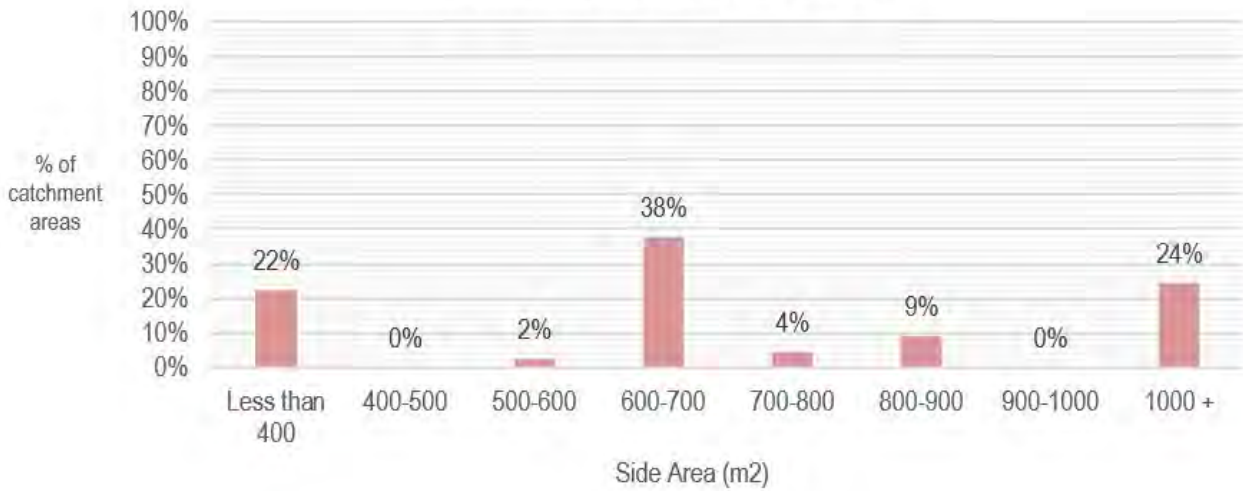
The most common site width (82%) of the residential freehold sites throughout the walkable catchments is between 15m and 20m.



### b. Typical site area - walkable catchment-wide result

The most common site area (38%) of the residential freehold sites throughout the walkable catchments is between 600m<sup>2</sup> and 700m<sup>2</sup>.

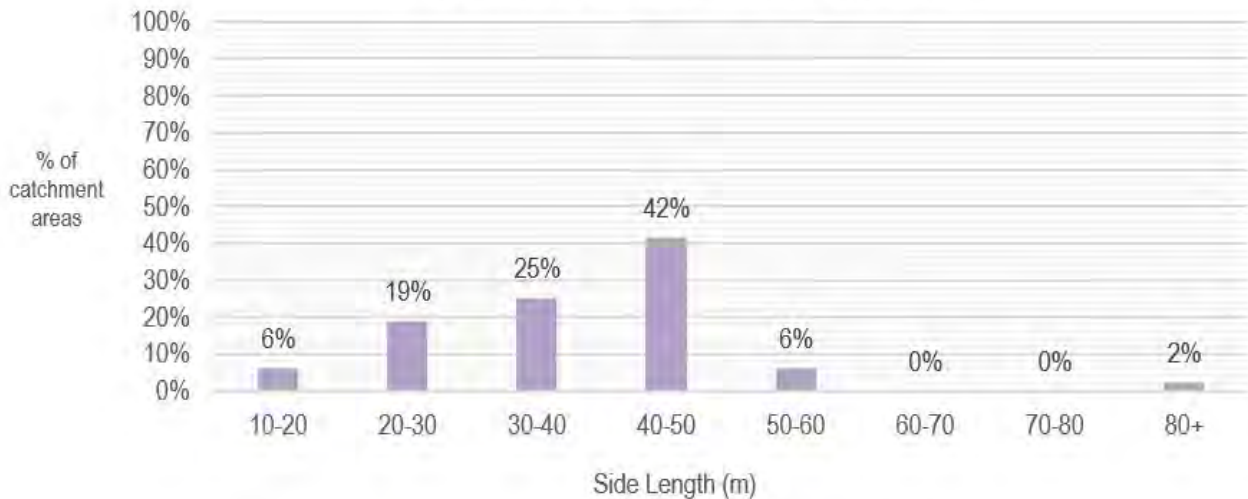
### MOST COMMON SITE AREA ACROSS RTN CATCHMENT AREAS



### c. Typical site length - walkable catchment-wide result

The most common site length (42%) of the residential freehold sites throughout the walkable catchments is between 40m and 50m.

### MOST COMMON SITE LENGTH ACROSS RTN CATCHMENT AREAS



## 5. Summary

The majority of the sites within walkable catchments that are subject to Policy 3 of the NPSUD and therefore are required to accommodate at least 6-storey high buildings:

- have between 15m and 20m site width at their road frontage
- are sites between 600m<sup>2</sup> and 700m<sup>2</sup> in area, and
- have between 40m and 50m site length.

It should be noted that these findings are not intended to determine the width, height and area of a single 'typical' site. These findings do not mean that a 'typical' or average residential site is in fact 15m-20m wide, 45m-50m long and 600-700m<sup>2</sup> in area. These average values for width, height and area need to be considered as separate findings, which can only be used to inform modelling to determine the suitable zone standards that enable the construction of 6+ storey high buildings on a 'typical' site in the walkable catchments in Auckland. Further, it should be noted that these results are based on calculations from given GIS data and not data that we have researched independently.

### Disclaimer

The correctness of the research methodology and the validity of the findings of this research have been confirmed by the peer reviewer. It is important to note however, that the methodology and accuracy of this research were adequate for internal use to enable Council to develop, test and model proposed Plan standards. It is believed further research, rigor and detail is necessary, should this work be required to be used as hearing evidence.

Any additional work needs

to be undertaken to a level of detail appropriate to the evidentiary requirements of a hearing.

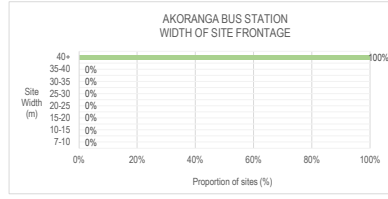
**Calculation of typical site frontage width and site area:**

A table and graph has been generated for each RTN catchment area to demonstrate the distribution of sites in terms of site frontage width and site area. Some parameters have been applied to the data set so only the following sites have been included within this analysis:

- Only those sites with a residential zoning
- Only sites with a frontage to the street and with a frontage width of greater than 7m
- Only sites with a freehold title. Other types of sites (e.g. cross-lease, unit title) were excluded
- Some sites with an area less than 100m<sup>2</sup> were excluded from the analysis as they were unable to be developed (e.g. forms part of berm, road verge).

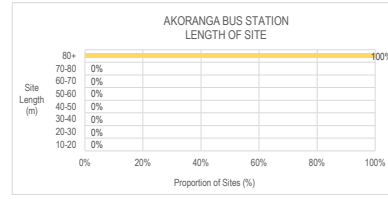
**AKORANGA BUS STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	0	0%
10-15	0	0%
15-20	0	0%
20-25	0	0%
25-30	0	0%
30-35	0	0%
35-40	0	0%
40+	1	100%
<b>TOTAL</b>	<b>1</b>	<b>100%</b>



**AKORANGA BUS STATION**

LENGTH OF SITE (m)	NO. OF SITES	% OF TOTAL
10-20	0	0%
20-30	0	0%
30-40	0	0%
40-50	0	0%
50-60	0	0%
60-70	0	0%
70-80	0	0%
80+	1	100%
<b>TOTAL</b>	<b>1</b>	<b>100%</b>



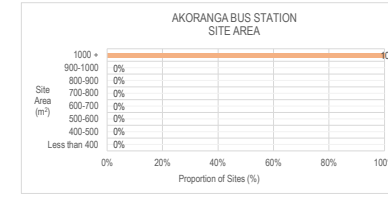
**Calculation of typical site frontage width and site area:**

A table and graph has been generated for each RTN catchment area to demonstrate the distribution of sites in terms of site frontage width and site area. Some parameters have been applied to the data set so only the following sites have been included within this analysis:

- Only those sites with a residential zoning
- Only sites with a frontage to the street and with a frontage width of greater than 7m
- Only sites with a freehold title. Other types of sites (e.g. cross-lease, unit title) were excluded.
- Some sites with an area less than 100m<sup>2</sup> were excluded from the analysis as they were unable to be developed (e.g. forms part of berm, road verge).

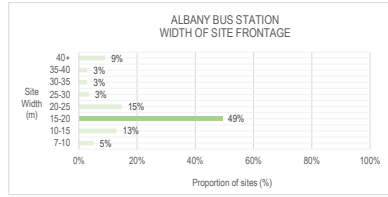
**AKORANGA BUS STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	0	0%
400-500	0	0%
500-600	0	0%
600-700	0	0%
700-800	0	0%
800-900	0	0%
900-1000	0	0%
1000+	1	100%
<b>TOTAL</b>	<b>1</b>	<b>100%</b>



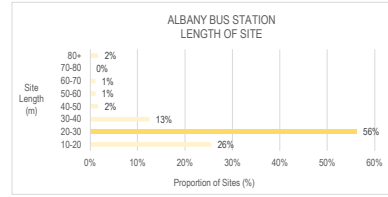
**ALBANY BUS STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	9	5%
10-15	23	13%
15-20	87	49%
20-25	26	15%
25-30	6	3%
30-35	5	3%
35-40	5	3%
40+	16	9%
<b>TOTAL</b>	<b>177</b>	<b>100%</b>



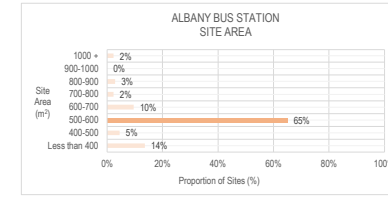
**ALBANY BUS STATION**

LENGTH OF SITE (m)	NO. OF SITES	% OF TOTAL
10-20	45	26%
20-30	99	56%
30-40	22	13%
40-50	3	2%
50-60	2	1%
60-70	2	1%
70-80	0	0%
80+	3	2%
<b>TOTAL</b>	<b>176</b>	<b>100%</b>



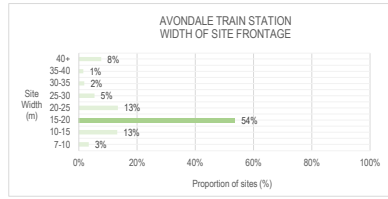
**ALBANY BUS STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	24	14%
400-500	8	5%
500-600	115	65%
600-700	17	10%
700-800	4	2%
800-900	5	3%
900-1000	0	0%
1000+	4	2%
<b>TOTAL</b>	<b>177</b>	<b>100%</b>



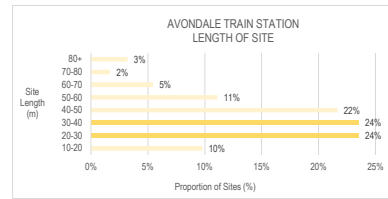
**AVONDALE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	18	3%
10-15	71	13%
15-20	288	54%
20-25	72	13%
25-30	29	5%
30-35	10	2%
35-40	8	1%
40+	41	8%
<b>TOTAL</b>	<b>537</b>	<b>100%</b>



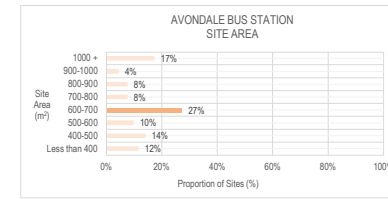
**AVONDALE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	52	10%
20-30	125	24%
30-40	125	24%
40-50	115	22%
50-60	59	11%
60-70	29	5%
70-80	9	2%
80+	17	3%
<b>TOTAL</b>	<b>531</b>	<b>100%</b>



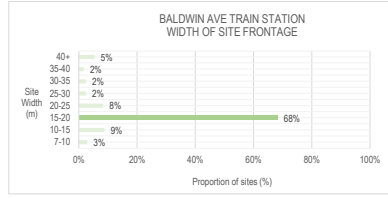
**AVONDALE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	62	12%
400-500	76	14%
500-600	53	10%
600-700	146	27%
700-800	41	8%
800-900	41	8%
900-1000	24	4%
1000+	93	17%
<b>TOTAL</b>	<b>536</b>	<b>100%</b>



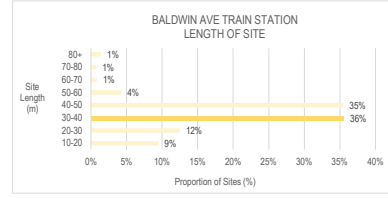
**BALDWIN AVE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	29	3%
10-15	89	9%
15-20	690	68%
20-25	84	8%
25-30	24	2%
30-35	24	2%
35-40	17	2%
40+	54	5%
<b>TOTAL</b>	<b>1011</b>	<b>100%</b>



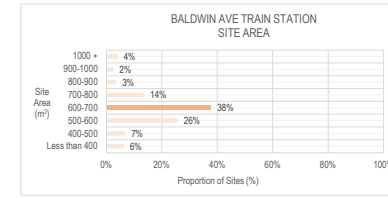
**BALDWIN AVE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	94	9%
20-30	124	12%
30-40	354	36%
40-50	353	35%
50-60	42	4%
60-70	8	1%
70-80	7	1%
80+	14	1%
<b>TOTAL</b>	<b>996</b>	<b>100%</b>



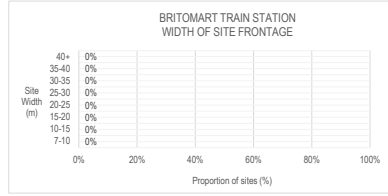
**BALDWIN AVE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	63	6%
400-500	68	7%
500-600	257	26%
600-700	379	38%
700-800	136	14%
800-900	35	3%
900-1000	7	1%
1000+	40	4%
<b>TOTAL</b>	<b>1003</b>	<b>100%</b>



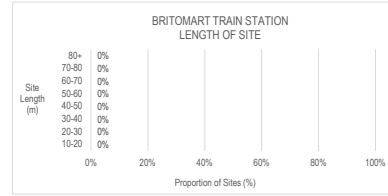
**BRITOMART TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	0	0%
10-15	0	0%
15-20	0	0%
20-25	0	0%
25-30	0	0%
30-35	0	0%
35-40	0	0%
40+	0	0%
<b>TOTAL</b>	<b>0</b>	<b>0%</b>



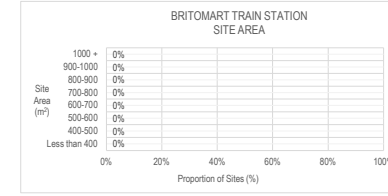
**BRITOMART TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	0	0%
20-30	0	0%
30-40	0	0%
40-50	0	0%
50-60	0	0%
60-70	0	0%
70-80	0	0%
80+	0	0%
<b>TOTAL</b>	<b>0</b>	<b>0%</b>



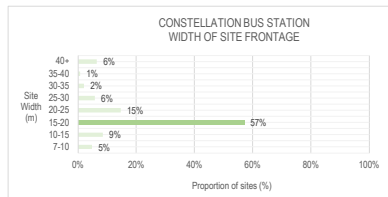
**BRITOMART TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	0	0%
400-500	0	0%
500-600	0	0%
600-700	0	0%
700-800	0	0%
800-900	0	0%
900-1000	0	0%
1000+	0	0%
<b>TOTAL</b>	<b>0</b>	<b>0%</b>



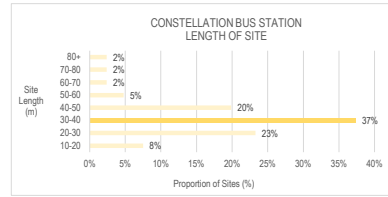
**CONSTELLATION BUS STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	14	5%
10-15	25	9%
15-20	167	57%
20-25	43	15%
25-30	17	6%
30-35	6	2%
35-40	2	1%
40+	19	6%
<b>TOTAL</b>	<b>293</b>	<b>100%</b>



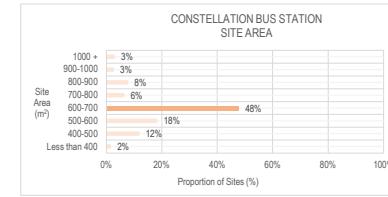
**CONSTELLATION BUS STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	22	8%
20-30	68	23%
30-40	109	37%
40-50	58	20%
50-60	14	5%
60-70	7	2%
70-80	7	2%
80+	7	2%
<b>TOTAL</b>	<b>292</b>	<b>100%</b>



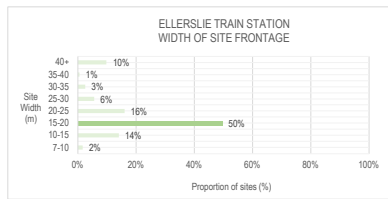
**CONSTELLATION BUS STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	5	2%
400-500	35	12%
500-600	54	18%
600-700	140	48%
700-800	19	6%
800-900	23	8%
900-1000	8	3%
1000+	9	3%
<b>TOTAL</b>	<b>293</b>	<b>100%</b>



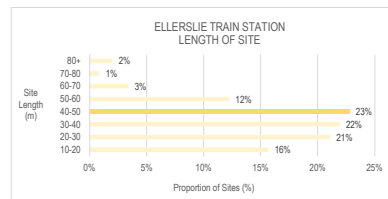
**ELLERSLIE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	6	2%
10-15	50	14%
15-20	116	30%
20-25	57	16%
25-30	20	6%
30-35	9	3%
35-40	2	1%
40+	35	10%
<b>TOTAL</b>	<b>355</b>	<b>100%</b>



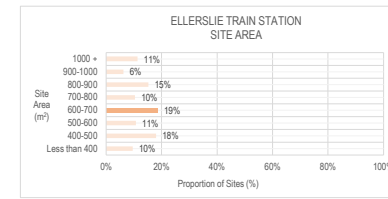
**ELLERSLIE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	55	16%
20-30	74	21%
30-40	97	27%
40-50	80	23%
50-60	43	12%
60-70	12	3%
70-80	3	1%
80+	7	2%
<b>TOTAL</b>	<b>351</b>	<b>100%</b>



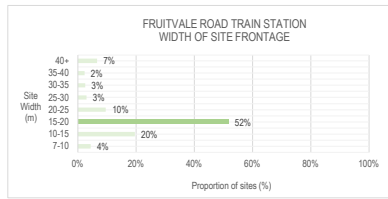
**ELLERSLIE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	34	10%
400-500	64	18%
500-600	38	11%
600-700	66	19%
700-800	37	10%
800-900	54	15%
900-1000	22	6%
1000+	40	11%
<b>TOTAL</b>	<b>355</b>	<b>100%</b>



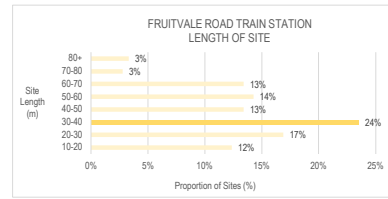
**FRUITVALE ROAD TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	26	4%
10-15	116	20%
15-20	306	52%
20-25	57	10%
25-30	18	3%
30-35	15	3%
35-40	14	2%
40+	39	7%
<b>TOTAL</b>	<b>591</b>	<b>100%</b>

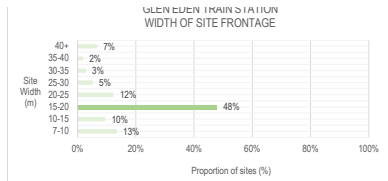


**FRUITVALE ROAD TRAIN STATION**

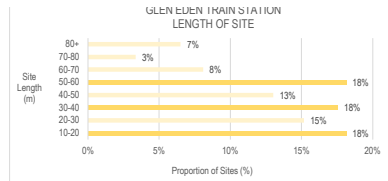
WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	71	12%
20-30	97	17%
30-40	135	24%
40-50	77	13%
50-60	82	14%
60-70	77	13%
70-80	16	3%
80+	19	3%
<b>TOTAL</b>	<b>574</b>	<b>100%</b>



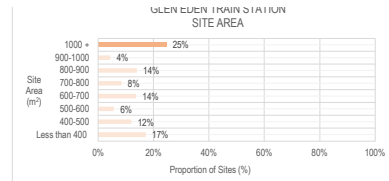
WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	71	13%
10-15	50	10%
15-20	252	48%
20-25	65	12%
25-30	28	5%
30-35	15	3%
35-40	10	2%
40+	35	7%
<b>TOTAL</b>	<b>526</b>	<b>100%</b>



WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	92	18%
20-30	77	15%
30-40	89	18%
40-50	66	13%
50-60	92	18%
60-70	41	8%
70-80	17	3%
80+	33	7%
<b>TOTAL</b>	<b>507</b>	<b>100%</b>

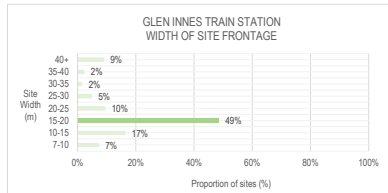


SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	90	17%
400-500	63	12%
500-600	30	6%
600-700	72	14%
700-800	44	8%
800-900	73	14%
900-1000	23	4%
1000+	129	25%
<b>TOTAL</b>	<b>524</b>	<b>100%</b>



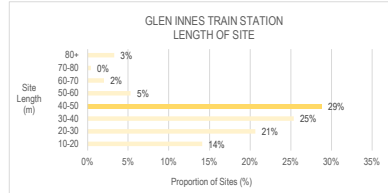
**GLEN INNES TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	37	7%
10-15	83	17%
15-20	244	49%
20-25	48	10%
25-30	25	5%
30-35	8	2%
35-40	12	2%
40+	46	9%
<b>TOTAL</b>	<b>503</b>	<b>100%</b>



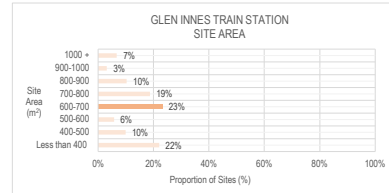
**GLEN INNES TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	69	14%
20-30	101	21%
30-40	124	25%
40-50	141	29%
50-60	26	5%
60-70	10	2%
70-80	2	0%
80+	16	3%
<b>TOTAL</b>	<b>489</b>	<b>100%</b>



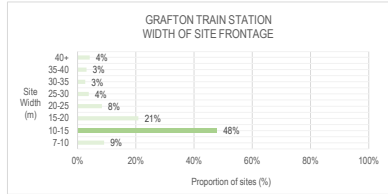
**GLEN INNES TRAIN STATION**

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	111	22%
400-500	50	10%
500-600	29	6%
600-700	117	23%
700-800	94	19%
800-900	52	10%
900-1000	16	3%
1000+	34	7%
<b>TOTAL</b>	<b>503</b>	<b>100%</b>



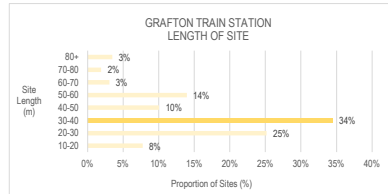
**GRAFTON TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	24	9%
10-15	126	48%
15-20	55	21%
20-25	22	8%
25-30	10	4%
30-35	7	3%
35-40	8	3%
40+	11	4%
<b>TOTAL</b>	<b>263</b>	<b>100%</b>



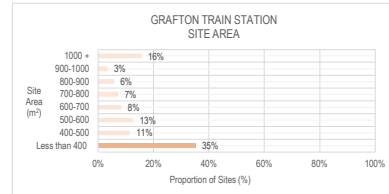
**GRAFTON TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	20	8%
20-30	65	25%
30-40	89	34%
40-50	26	10%
50-60	36	14%
60-70	8	3%
70-80	5	2%
80+	9	3%
<b>TOTAL</b>	<b>258</b>	<b>100%</b>



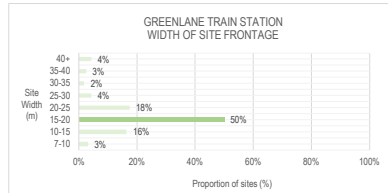
**GRAFTON TRAIN STATION**

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	92	35%
400-500	30	11%
500-600	33	13%
600-700	22	8%
700-800	19	7%
800-900	15	6%
900-1000	9	3%
1000+	41	16%
<b>TOTAL</b>	<b>261</b>	<b>100%</b>



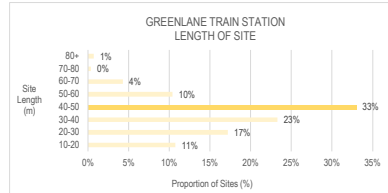
**GREENLANE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	9	3%
10-15	46	16%
15-20	140	50%
20-25	49	18%
25-30	12	4%
30-35	5	2%
35-40	7	3%
40+	12	4%
<b>TOTAL</b>	<b>280</b>	<b>100%</b>



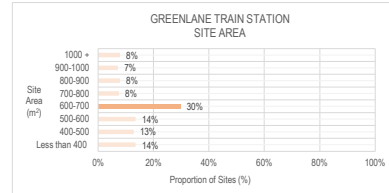
**GREENLANE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	30	11%
20-30	48	17%
30-40	65	23%
40-50	92	33%
50-60	29	10%
60-70	12	4%
70-80	7	3%
80+	2	1%
<b>TOTAL</b>	<b>279</b>	<b>100%</b>



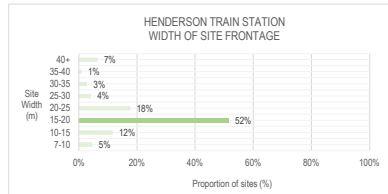
**GREENLANE TRAIN STATION**

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	38	14%
400-500	36	13%
500-600	38	14%
600-700	83	30%
700-800	21	8%
800-900	22	8%
900-1000	20	7%
1000+	22	8%
<b>TOTAL</b>	<b>280</b>	<b>100%</b>



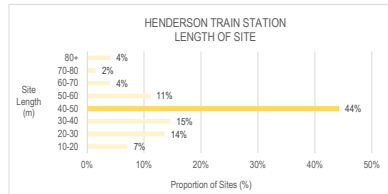
**HENDERSON TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	10	5%
10-15	25	12%
15-20	111	52%
20-25	38	18%
25-30	9	4%
30-35	6	3%
35-40	2	1%
40+	14	7%
<b>TOTAL</b>	<b>215</b>	<b>100%</b>



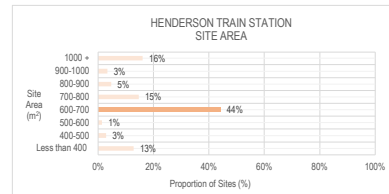
**HENDERSON TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	14	7%
20-30	27	14%
30-40	29	15%
40-50	88	44%
50-60	22	11%
60-70	8	4%
70-80	3	2%
80+	8	4%
<b>TOTAL</b>	<b>199</b>	<b>100%</b>



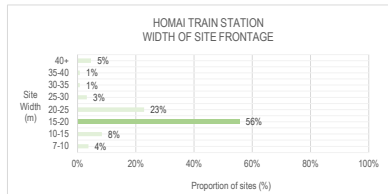
**HENDERSON TRAIN STATION**

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	27	13%
400-500	6	3%
500-600	3	1%
600-700	93	44%
700-800	31	15%
800-900	8	4%
900-1000	7	3%
1000+	34	16%
<b>TOTAL</b>	<b>211</b>	<b>100%</b>



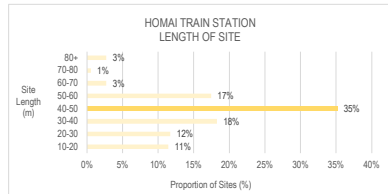
**HOMAI TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	14	4%
10-15	31	8%
15-20	207	56%
20-25	85	23%
25-30	12	3%
30-35	3	1%
35-40	3	1%
40+	17	5%
<b>TOTAL</b>	<b>372</b>	<b>100%</b>



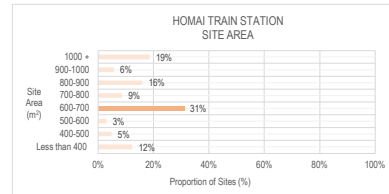
**HOMAI TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	42	11%
20-30	43	12%
30-40	67	18%
40-50	129	35%
50-60	64	17%
60-70	10	3%
70-80	2	1%
80+	10	3%
<b>TOTAL</b>	<b>367</b>	<b>100%</b>



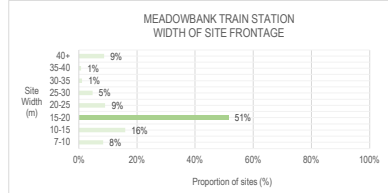
**HOMAI TRAIN STATION**

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	46	12%
400-500	18	5%
500-600	11	3%
600-700	115	31%
700-800	32	9%
800-900	59	16%
900-1000	21	6%
1000+	69	19%
<b>TOTAL</b>	<b>371</b>	<b>100%</b>



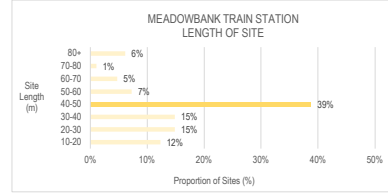
**MEADOWBANK TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	23	8%
10-15	44	16%
15-20	142	51%
20-25	25	9%
25-30	13	5%
30-35	3	1%
35-40	2	1%
40+	24	9%
<b>TOTAL</b>	<b>276</b>	<b>100%</b>



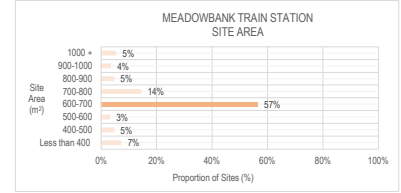
**MEADOWBANK TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	34	12%
20-30	41	15%
30-40	41	15%
40-50	107	39%
50-60	20	7%
60-70	13	5%
70-80	3	1%
80+	17	6%
<b>TOTAL</b>	<b>276</b>	<b>100%</b>



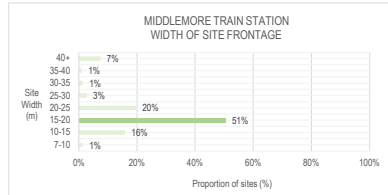
**MEADOWBANK TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	20	7%
400-500	13	5%
500-600	9	3%
600-700	156	57%
700-800	40	14%
800-900	13	5%
900-1000	10	4%
1000+	15	5%
<b>TOTAL</b>	<b>276</b>	<b>100%</b>



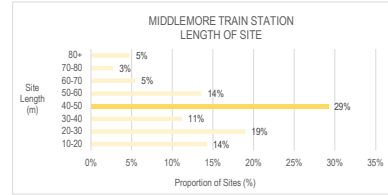
**MIDDLEMORE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	4	1%
10-15	47	16%
15-20	149	51%
20-25	58	20%
25-30	8	3%
30-35	4	1%
35-40	3	1%
40+	22	7%
<b>TOTAL</b>	<b>295</b>	<b>100%</b>



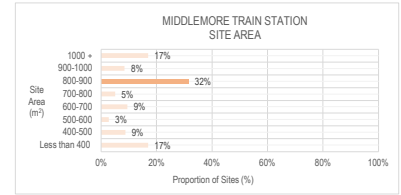
**MIDDLEMORE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	42	14%
20-30	56	19%
30-40	33	11%
40-50	86	29%
50-60	40	14%
60-70	16	5%
70-80	8	3%
80+	14	5%
<b>TOTAL</b>	<b>295</b>	<b>100%</b>



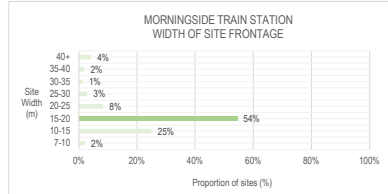
**MIDDLEMORE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	50	17%
400-500	26	9%
500-600	8	3%
600-700	28	9%
700-800	15	5%
800-900	23	8%
900-1000	9	3%
1000+	50	17%
<b>TOTAL</b>	<b>295</b>	<b>100%</b>



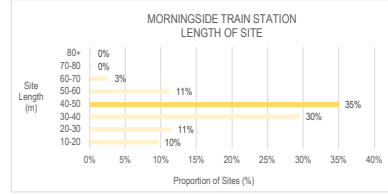
**MORNINGSIDE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	2%
10-15	96	25%
15-20	209	54%
20-25	32	8%
25-30	11	3%
30-35	5	1%
35-40	7	2%
40+	16	4%
<b>TOTAL</b>	<b>384</b>	<b>100%</b>



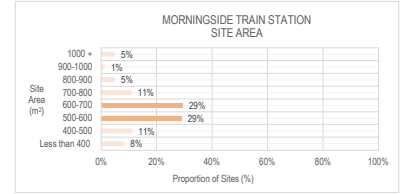
**MORNINGSIDE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	37	10%
20-30	44	11%
30-40	113	30%
40-50	134	35%
50-60	43	11%
60-70	10	3%
70-80	1	0%
80+	1	0%
<b>TOTAL</b>	<b>383</b>	<b>100%</b>



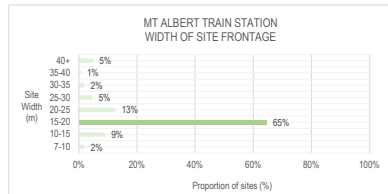
**MORNINGSIDE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	32	8%
400-500	43	11%
500-600	111	29%
600-700	113	29%
700-800	42	11%
800-900	19	5%
900-1000	5	1%
1000+	19	5%
<b>TOTAL</b>	<b>384</b>	<b>100%</b>



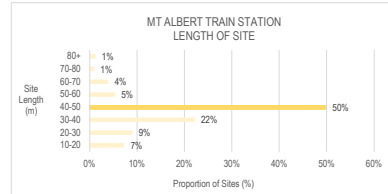
**MT ALBERT TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	12	2%
10-15	57	9%
15-20	408	65%
20-25	79	13%
25-30	29	5%
30-35	12	2%
35-40	4	1%
40+	31	5%
<b>TOTAL</b>	<b>632</b>	<b>100%</b>



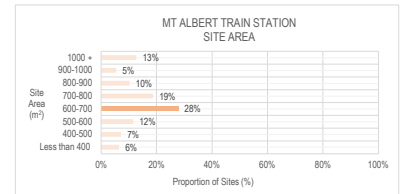
**MT ALBERT TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	46	7%
20-30	57	9%
30-40	140	22%
40-50	315	50%
50-60	34	5%
60-70	25	4%
70-80	6	1%
80+	8	1%
<b>TOTAL</b>	<b>631</b>	<b>100%</b>



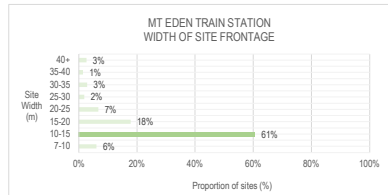
**MT ALBERT TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	41	6%
400-500	45	7%
500-600	73	12%
600-700	176	28%
700-800	118	19%
800-900	65	10%
900-1000	34	5%
1000+	80	13%
<b>TOTAL</b>	<b>632</b>	<b>100%</b>



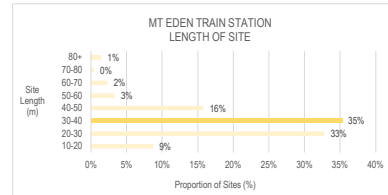
**MT EDEN TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	30	6%
10-15	299	61%
15-20	88	18%
20-25	33	7%
25-30	9	2%
30-35	14	3%
35-40	7	1%
40+	13	3%
<b>TOTAL</b>	<b>493</b>	<b>100%</b>



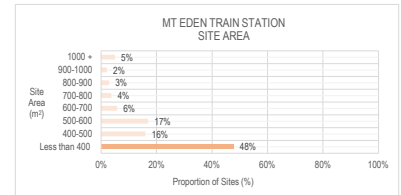
**MT EDEN TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	42	9%
20-30	158	33%
30-40	170	35%
40-50	76	16%
50-60	16	3%
60-70	11	2%
70-80	2	0%
80+	7	1%
<b>TOTAL</b>	<b>482</b>	<b>100%</b>



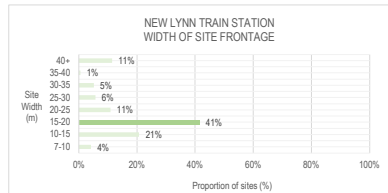
**MT EDEN TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	233	48%
400-500	78	16%
500-600	83	17%
600-700	28	6%
700-800	18	4%
800-900	14	3%
900-1000	10	2%
1000+	24	5%
<b>TOTAL</b>	<b>488</b>	<b>100%</b>



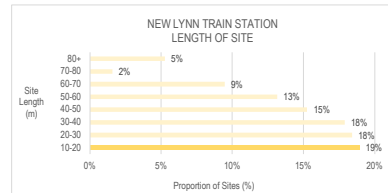
**NEW LYNN TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	4%
10-15	40	21%
15-20	80	41%
20-25	21	11%
25-30	11	6%
30-35	10	5%
35-40	1	1%
40+	22	11%
<b>TOTAL</b>	<b>193</b>	<b>100%</b>



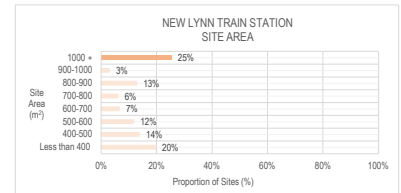
**NEW LYNN TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	36	19%
20-30	35	18%
30-40	34	18%
40-50	29	15%
50-60	25	13%
60-70	18	9%
70-80	3	2%
80+	10	5%
<b>TOTAL</b>	<b>190</b>	<b>100%</b>



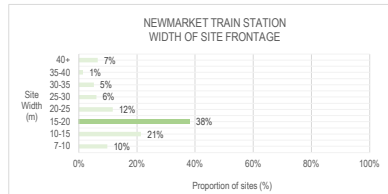
**NEW LYNN TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	38	20%
400-500	27	14%
500-600	23	12%
600-700	13	7%
700-800	12	6%
800-900	25	13%
900-1000	6	3%
1000+	49	25%
<b>TOTAL</b>	<b>193</b>	<b>100%</b>



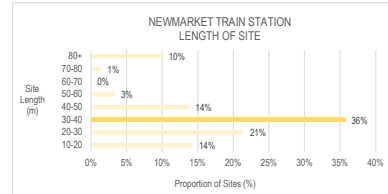
**NEWMARKET TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	21	10%
10-15	46	21%
15-20	82	38%
20-25	25	12%
25-30	13	6%
30-35	11	5%
35-40	3	1%
40+	14	7%
<b>TOTAL</b>	<b>215</b>	<b>100%</b>



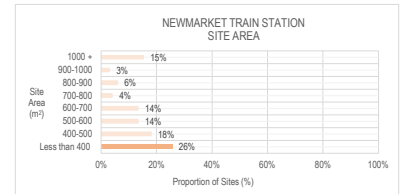
**NEWMARKET TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	30	14%
20-30	45	21%
30-40	75	36%
40-50	29	14%
50-60	7	3%
60-70	0	0%
70-80	3	1%
80+	21	10%
<b>TOTAL</b>	<b>210</b>	<b>100%</b>



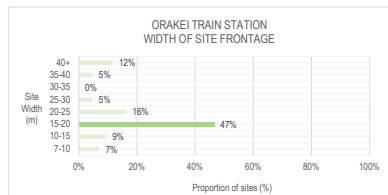
**NEWMARKET TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	55	26%
400-500	39	18%
500-600	29	14%
600-700	29	14%
700-800	9	4%
800-900	13	6%
900-1000	7	3%
1000+	33	15%
<b>TOTAL</b>	<b>214</b>	<b>100%</b>



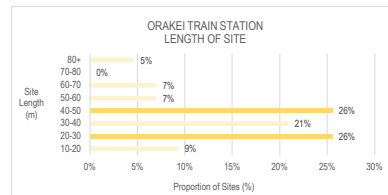
**ORAKEI TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	3	7%
10-15	4	9%
15-20	20	47%
20-25	7	16%
25-30	2	5%
30-35	0	0%
35-40	2	5%
40+	5	12%
<b>TOTAL</b>	<b>43</b>	<b>100%</b>



**ORAKEI TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	4	9%
20-30	11	26%
30-40	9	21%
40-50	11	26%
50-60	3	7%
60-70	3	7%
70-80	0	0%
80+	2	5%
<b>TOTAL</b>	<b>43</b>	<b>100%</b>



**ORAKEI TRAIN STATION**

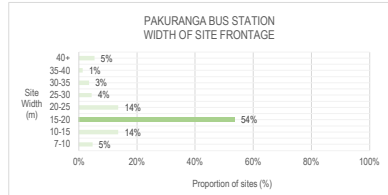
SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	5	12%
400-500		

40+	9	5%
<b>TOTAL</b>	<b>182</b>	<b>100%</b>



**PAKURANGA BUS STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	15	5%
10-15	43	14%
15-20	170	54%
20-25	43	14%
25-30	14	4%
30-35	11	3%
35-40	4	1%
40+	17	5%
<b>TOTAL</b>	<b>317</b>	<b>100%</b>

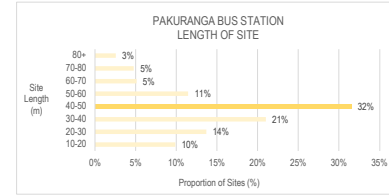


80+	4	2%
<b>TOTAL</b>	<b>181</b>	<b>100%</b>

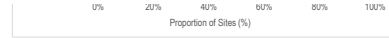


**PAKURANGA BUS STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	31	10%
20-30	43	14%
30-40	66	21%
40-50	99	32%
50-60	36	11%
60-70	16	5%
70-80	15	5%
80+	8	3%
<b>TOTAL</b>	<b>314</b>	<b>100%</b>

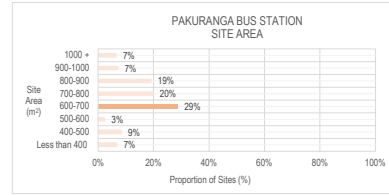


1000 +	29	16%
<b>TOTAL</b>	<b>182</b>	<b>100%</b>



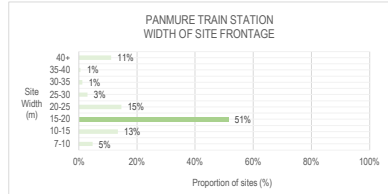
**PAKURANGA BUS STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	22	7%
400-500	27	9%
500-600	8	3%
600-700	91	29%
700-800	63	20%
800-900	61	19%
900-1000	23	7%
1000 +	29	16%
<b>TOTAL</b>	<b>316</b>	<b>100%</b>



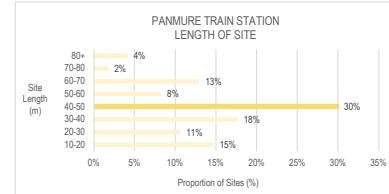
**PANMURE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	5%
10-15	23	13%
15-20	88	51%
20-25	25	15%
25-30	5	3%
30-35	2	1%
35-40	1	1%
40+	19	11%
<b>TOTAL</b>	<b>171</b>	<b>100%</b>



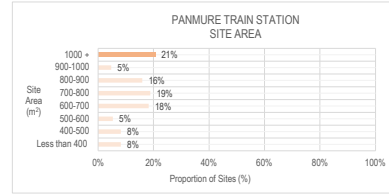
**PANMURE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	25	15%
20-30	18	11%
30-40	30	18%
40-50	51	30%
50-60	14	8%
60-70	22	13%
70-80	3	2%
80+	7	4%
<b>TOTAL</b>	<b>170</b>	<b>100%</b>



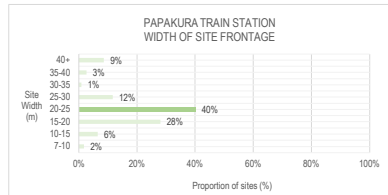
**PANMURE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	14	8%
400-500	14	8%
500-600	9	5%
600-700	31	18%
700-800	37	19%
800-900	22	13%
900-1000	3	2%
1000 +	35	21%
<b>TOTAL</b>	<b>170</b>	<b>100%</b>



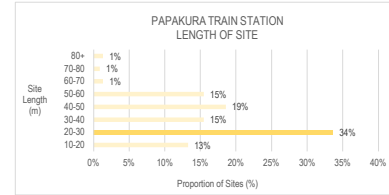
**PAPAKURA TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	4	2%
10-15	15	6%
15-20	65	28%
20-25	93	40%
25-30	27	12%
30-35	2	1%
35-40	6	3%
40+	20	9%
<b>TOTAL</b>	<b>232</b>	<b>100%</b>



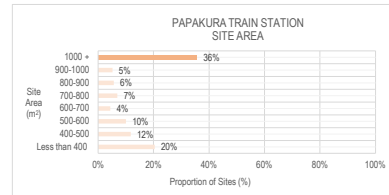
**PAPAKURA TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	30	13%
20-30	76	34%
30-40	35	15%
40-50	42	19%
50-60	35	15%
60-70	3	1%
70-80	2	1%
80+	3	1%
<b>TOTAL</b>	<b>226</b>	<b>100%</b>



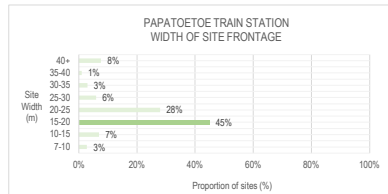
**PAPAKURA TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	47	20%
400-500	27	12%
500-600	23	10%
600-700	10	4%
700-800	16	7%
800-900	13	6%
900-1000	1	0%
1000 +	62	26%
<b>TOTAL</b>	<b>230</b>	<b>100%</b>



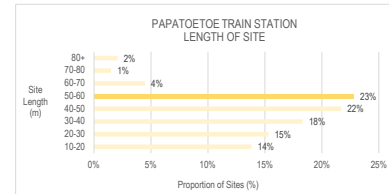
**PAPATOETOE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	15	3%
10-15	37	7%
15-20	241	45%
20-25	150	28%
25-30	32	6%
30-35	16	3%
35-40	5	1%
40+	41	8%
<b>TOTAL</b>	<b>537</b>	<b>100%</b>



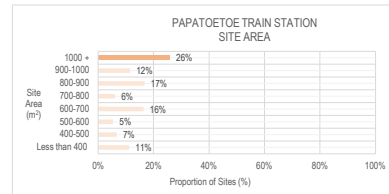
**PAPATOETOE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	74	14%
20-30	82	15%
30-40	98	18%
40-50	116	22%
50-60	122	23%
60-70	24	4%
70-80	8	1%
80+	11	2%
<b>TOTAL</b>	<b>535</b>	<b>100%</b>



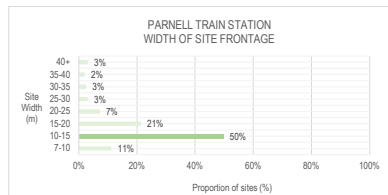
**PAPATOETOE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	60	11%
400-500	36	7%
500-600	29	5%
600-700	88	16%
700-800	33	6%
800-900	90	17%
900-1000	62	12%
1000 +	82	16%
<b>TOTAL</b>	<b>537</b>	<b>100%</b>



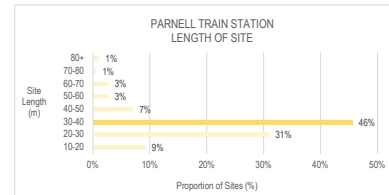
**PARNELL TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	22	11%
10-15	98	50%
15-20	42	21%
20-25	14	7%
25-30	6	3%
30-35	5	3%
35-40	4	2%
40+	6	3%
<b>TOTAL</b>	<b>197</b>	<b>100%</b>



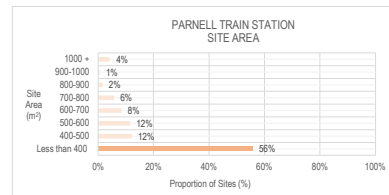
**PARNELL TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	17	9%
20-30	57	31%
30-40	84	46%
40-50	13	7%
50-60	5	3%
60-70	5	3%
70-80	1	1%
80+	2	1%
<b>TOTAL</b>	<b>184</b>	<b>100%</b>



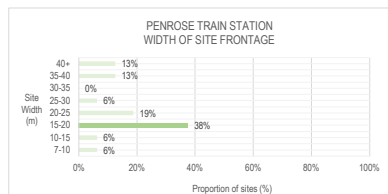
**PARNELL TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	106	56%
400-500	23	12%
500-600	22	12%
600-700	16	8%
700-800	11	6%
800-900	3	2%
900-1000	1	1%
1000 +	8	4%
<b>TOTAL</b>	<b>190</b>	<b>100%</b>



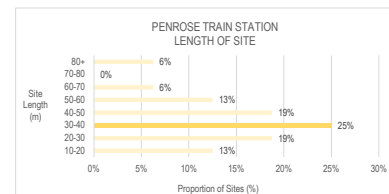
**PENROSE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	1	6%
10-15	1	6%
15-20	6	38%
20-25	3	19%
25-30	1	6%
30-35	0	0%
35-40	2	13%
40+	2	13%
<b>TOTAL</b>	<b>16</b>	<b>100%</b>



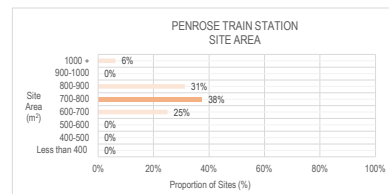
**PENROSE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	2	13%
20-30	3	19%
30-40	4	25%
40-50	3	19%
50-60	2	13%
60-70	1	6%
70-80	0	0%
80+	1	6%
<b>TOTAL</b>	<b>16</b>	<b>100%</b>



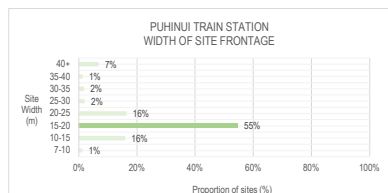
**PENROSE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	0	0%
400-500	0	0%
500-600	0	0%
600-700	4	25%
700-800	6	38%
800-900	5	31%
900-1000	0	0%
1000 +	1	6%
<b>TOTAL</b>	<b>16</b>	<b>100%</b>



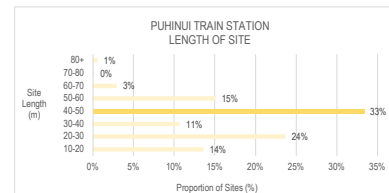
**PUHINUI TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	1%
10-15	110	16%
15-20	377	55%
20-25	113	16%
25-30	14	2%
30-35	12	2%
35-40	9	1%
40+	47	7%
<b>TOTAL</b>	<b>690</b>	<b>100%</b>



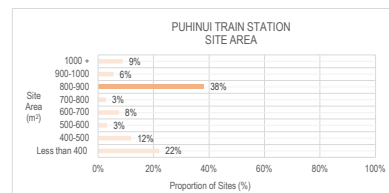
**PUHINUI TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	93	14%
20-30	162	24%
30-40	73	11%
40-50	228	33%
50-60	103	15%
60-70	20	3%
70-80	1	0%
80+	4	1%
<b>TOTAL</b>	<b>684</b>	<b>100%</b>



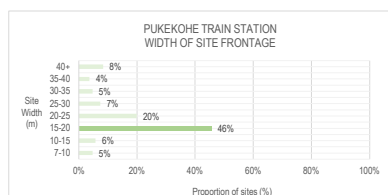
**PUHINUI TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	152	22%
400-500	82	12%
500-600	22	3%
600-700	52	8%
700-800	19	3%
800-900	263	38%
900-1000	38	6%
1000 +	61	9%
<b>TOTAL</b>	<b>689</b>	<b>100%</b>



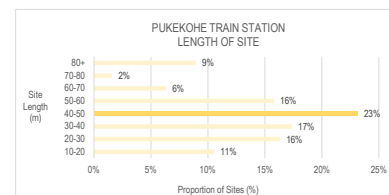
**PUKEKOHE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	9	5%
10-15	11	6%
15-20	87	46%
20-25	38	20%
25-30	14	7%
30-35	9	5%
35-40	7	4%
40+	16	8%
<b>TOTAL</b>	<b>191</b>	<b>100%</b>



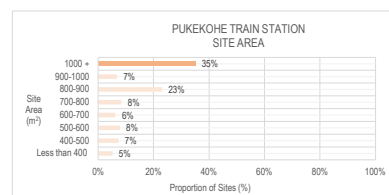
**PUKEKOHE TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	20	11%
20-30	31	16%
30-40	33	17%
40-50	44	23%
50-60	30	16%
60-70	12	6%
70-80	3	2%
80+	17	9%
<b>TOTAL</b>	<b>190</b>	<b>100%</b>



**PUKEKOHE TRAIN STATION**

SITE AREA (m <sup>2</sup> )	NO. OF SITES	% OF TOTAL
Less than 400	10	5%
400-500	14	7%
500-600	15	8%
600-700	12	6%
700-800	16	8%
800-900	44	23%
900-1000	13	7%
1000 +	67	35%
<b>TOTAL</b>	<b>191</b>	<b>100%</b>

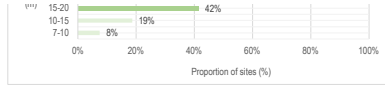


**RANUI TRAIN STATION**

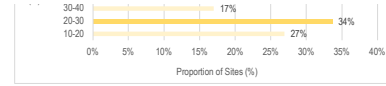
WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	75	8%
10-15	186	19%
15-20	413	



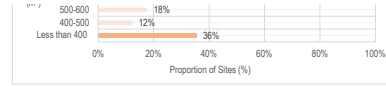
Width (m)	No. of Sites	% of Total
25-30	45	5%
30-35	38	4%
35-40	30	3%
40+	65	7%
<b>TOTAL</b>	<b>994</b>	<b>100%</b>



Length (m)	No. of Sites	% of Total
50-60	67	7%
60-70	7	1%
70-80	5	1%
80+	21	2%
<b>TOTAL</b>	<b>943</b>	<b>100%</b>

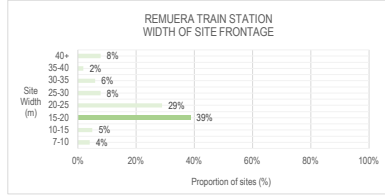


Area (m²)	No. of Sites	% of Total
700-800	21	2%
800-900	103	10%
900-1000	8	1%
1000+	71	7%
<b>TOTAL</b>	<b>994</b>	<b>100%</b>



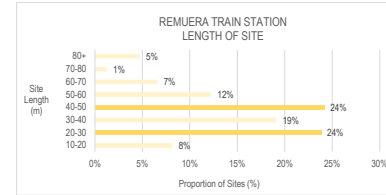
**REMUERA TRAIN STATION**

Width (m)	No. of Sites	% of Total
7-10	13	4%
10-15	16	5%
15-20	124	39%
20-25	93	29%
25-30	25	8%
30-35	19	6%
35-40	6	2%
40+	25	8%
<b>TOTAL</b>	<b>321</b>	<b>100%</b>



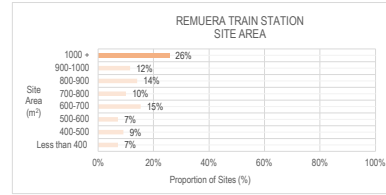
**REMUERA TRAIN STATION**

Width (m)	No. of Sites	% of Total
10-20	26	8%
20-30	76	24%
30-40	61	19%
40-50	77	24%
50-60	39	12%
60-70	21	7%
70-80	4	1%
80+	15	5%
<b>TOTAL</b>	<b>319</b>	<b>100%</b>



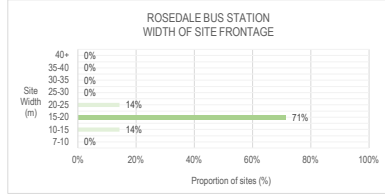
**REMUERA TRAIN STATION**

Area (m²)	No. of Sites	% of Total
Less than 400	23	7%
400-500	29	9%
500-600	23	7%
600-700	49	15%
700-800	32	10%
800-900	45	14%
900-1000	37	12%
1000+	82	26%
<b>TOTAL</b>	<b>320</b>	<b>100%</b>



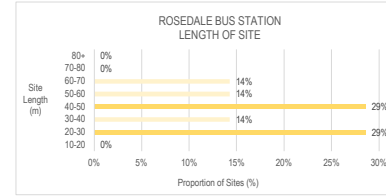
**ROSEDALE BUS STATION**

Width (m)	No. of Sites	% of Total
7-10	0	0%
10-15	1	14%
15-20	5	71%
20-25	1	14%
25-30	0	0%
30-35	0	0%
35-40	0	0%
40+	0	0%
<b>TOTAL</b>	<b>7</b>	<b>100%</b>



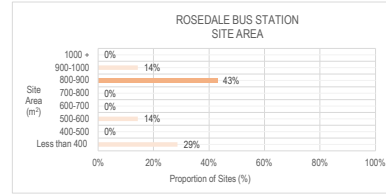
**ROSEDALE BUS STATION**

Width (m)	No. of Sites	% of Total
10-20	0	0%
20-30	2	29%
30-40	1	14%
40-50	2	29%
50-60	1	14%
60-70	1	14%
70-80	0	0%
80+	0	0%
<b>TOTAL</b>	<b>7</b>	<b>100%</b>



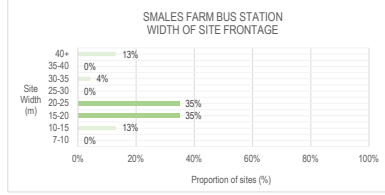
**ROSEDALE BUS STATION**

Area (m²)	No. of Sites	% of Total
Less than 400	2	29%
400-500	0	0%
500-600	1	14%
600-700	3	13%
700-800	0	0%
800-900	3	43%
900-1000	1	14%
1000+	0	0%
<b>TOTAL</b>	<b>7</b>	<b>100%</b>



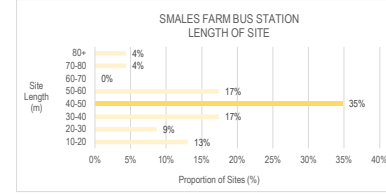
**SMALES FARM BUS STATION**

Width (m)	No. of Sites	% of Total
7-10	0	0%
10-15	3	13%
15-20	8	35%
20-25	8	35%
25-30	0	0%
30-35	1	4%
35-40	0	0%
40+	3	13%
<b>TOTAL</b>	<b>23</b>	<b>100%</b>



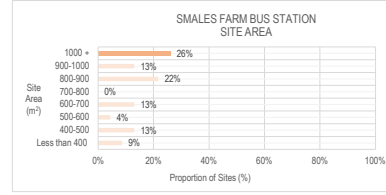
**SMALES FARM BUS STATION**

Width (m)	No. of Sites	% of Total
10-20	3	13%
20-30	2	9%
30-40	4	17%
40-50	8	35%
50-60	4	17%
60-70	0	0%
70-80	1	4%
80+	1	4%
<b>TOTAL</b>	<b>23</b>	<b>100%</b>



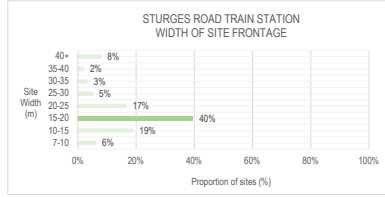
**SMALES FARM BUS STATION**

Area (m²)	No. of Sites	% of Total
Less than 400	2	9%
400-500	3	13%
500-600	1	4%
600-700	3	13%
700-800	0	0%
800-900	5	22%
900-1000	3	13%
1000+	6	26%
<b>TOTAL</b>	<b>23</b>	<b>100%</b>



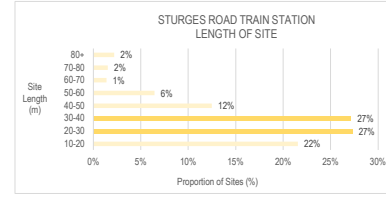
**STURGES ROAD TRAIN STATION**

Width (m)	No. of Sites	% of Total
7-10	47	6%
10-15	144	19%
15-20	300	40%
20-25	127	17%
25-30	39	5%
30-35	25	3%
35-40	15	2%
40+	61	8%
<b>TOTAL</b>	<b>758</b>	<b>100%</b>



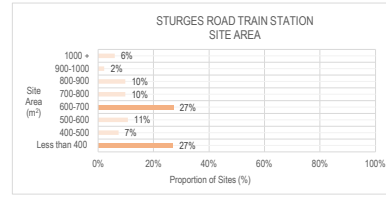
**STURGES ROAD TRAIN STATION**

Width (m)	No. of Sites	% of Total
10-20	157	22%
20-30	199	27%
30-40	198	27%
40-50	91	12%
50-60	47	6%
60-70	10	1%
70-80	11	2%
80+	16	2%
<b>TOTAL</b>	<b>729</b>	<b>100%</b>



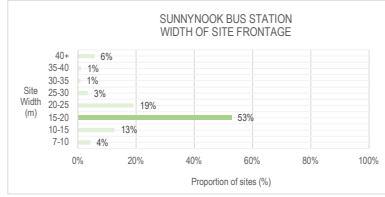
**STURGES ROAD TRAIN STATION**

Area (m²)	No. of Sites	% of Total
Less than 400	204	27%
400-500	56	7%
500-600	81	11%
600-700	205	27%
700-800	74	10%
800-900	74	10%
900-1000	17	2%
1000+	45	6%
<b>TOTAL</b>	<b>756</b>	<b>100%</b>



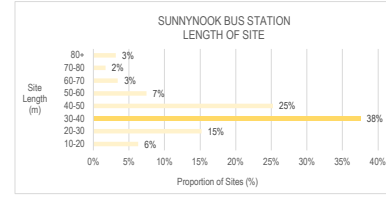
**SUNNYNOOK BUS STATION**

Width (m)	No. of Sites	% of Total
7-10	15	4%
10-15	44	13%
15-20	184	53%
20-25	67	19%
25-30	12	3%
30-35	3	1%
35-40	4	1%
40+	20	6%
<b>TOTAL</b>	<b>349</b>	<b>100%</b>



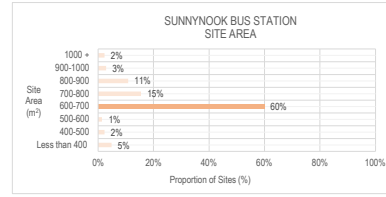
**SUNNYNOOK BUS STATION**

Width (m)	No. of Sites	% of Total
10-20	22	6%
20-30	53	15%
30-40	131	38%
40-50	88	25%
50-60	26	7%
60-70	12	3%
70-80	6	2%
80+	11	3%
<b>TOTAL</b>	<b>349</b>	<b>100%</b>



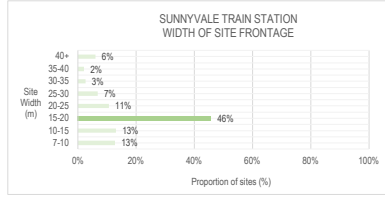
**SUNNYNOOK BUS STATION**

Area (m²)	No. of Sites	% of Total
Less than 400	17	5%
400-500	8	2%
500-600	5	1%
600-700	209	60%
700-800	54	15%
800-900	38	11%
900-1000	10	3%
1000+	8	2%
<b>TOTAL</b>	<b>349</b>	<b>100%</b>



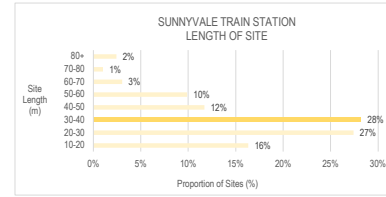
**SUNNYVALE TRAIN STATION**

Width (m)	No. of Sites	% of Total
7-10	67	13%
10-15	69	13%
15-20	240	46%
20-25	56	11%
25-30	36	7%
30-35	14	3%
35-40	11	2%
40+	32	6%
<b>TOTAL</b>	<b>525</b>	<b>100%</b>



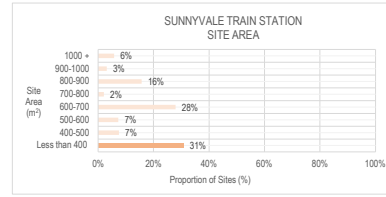
**SUNNYVALE TRAIN STATION**

Width (m)	No. of Sites	% of Total
10-20	81	16%
20-30	136	27%
30-40	140	28%
40-50	58	12%
50-60	49	10%
60-70	15	3%
70-80	5	1%
80+	12	2%
<b>TOTAL</b>	<b>496</b>	<b>100%</b>



**SUNNYVALE TRAIN STATION**

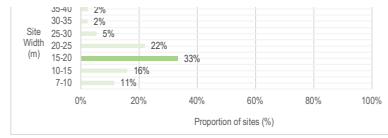
Area (m²)	No. of Sites	% of Total
Less than 400	161	31%
400-500	39	7%
500-600	38	7%
600-700	11	2%
700-800	146	28%
800-900	82	16%
900-1000	16	3%
1000+	30	6%
<b>TOTAL</b>	<b>523</b>	<b>100%</b>



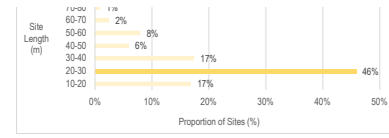
**SWANSON TRAIN STATION**

Width (m)	No. of Sites	% of Total
7-10	106	26%
10-15	61	15%
15-20	112	27%
20-25	65	16%
25-30	11	3%
3		

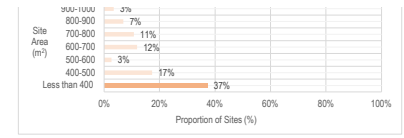
10-15	146	16%
15-20	305	33%
20-25	201	22%
25-30	49	5%
30-35	21	2%
35-40	22	2%
40+	66	7%
<b>TOTAL</b>	<b>915</b>	<b>100%</b>



20-30	408	46%
30-40	155	17%
40-50	53	6%
50-60	71	8%
60-70	22	2%
70-80	8	1%
80+	23	3%
<b>TOTAL</b>	<b>890</b>	<b>100%</b>

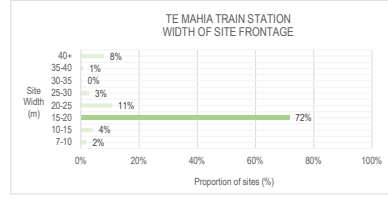


400-500	158	17%
500-600	24	3%
600-700	109	12%
700-800	98	11%
800-900	63	7%
900-1000	32	3%
1000+	90	10%
<b>TOTAL</b>	<b>915</b>	<b>100%</b>



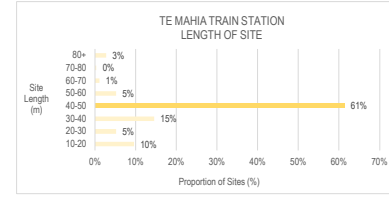
**TE MAHIA TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	7	2%
10-15	15	4%
15-20	262	72%
20-25	39	11%
25-30	10	3%
30-35	1	0%
35-40	3	1%
40+	29	8%
<b>TOTAL</b>	<b>366</b>	<b>100%</b>



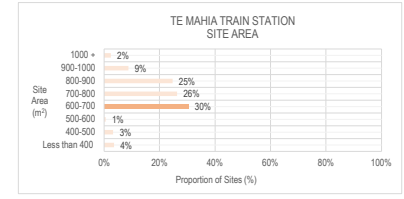
**TE MAHIA TRAIN STATION**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	35	10%
20-30	19	5%
30-40	53	15%
40-50	224	61%
50-60	19	5%
60-70	4	1%
70-80	1	0%
80+	10	3%
<b>TOTAL</b>	<b>365</b>	<b>100%</b>

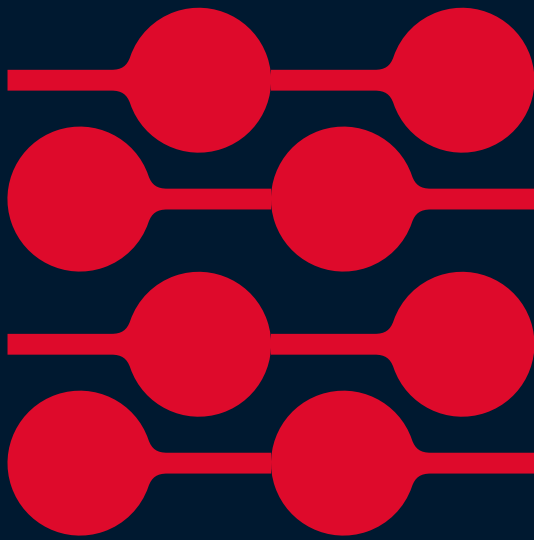


**TE MAHIA TRAIN STATION**

SITE AREA (m²)	NO. OF SITES	% OF TOTAL
Less than 400	13	4%
400-500	12	3%
500-600	2	1%
600-700	111	30%
700-800	96	26%
800-900	90	25%
900-1000	32	9%
1000+	9	2%
<b>TOTAL</b>	<b>365</b>	<b>100%</b>



Appendix 6: Auckland Council.  
Auckland Unitary Plan Section 35 Monitoring: B2.3 A  
quality built environment, July 2022, Technical  
Report TR2022/11, Plans and Places Department,  
Auckland Council.



Te Aroturukitanga o te  
Mahere ā-Wae ki Tāmaki  
Makaurau

**Auckland  
Unitary Plan  
Section 35  
Monitoring:**

B2.3 A quality  
built environment

July 2022

Technical Report





439

# Auckland Unitary Plan Section 35 Monitoring:

## **B2.3 A quality built environment**

July 2022

Technical Report TR2022/11

Plans and Places Department, Auckland Council

Auckland Council  
Technical Report

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This report has been peer reviewed by the Auckland Council Review Panel.	
Review completed on December 2021	
<i>REVIEW STEP</i>	<i>DATE COMPLETED</i>
1. <i>Review by Project Leads</i>	<i>19 August 2021</i>
2. <i>Review by Portfolio Lead</i>	<i>7 September 2021</i>
3. <i>Review by Plans and Places Senior Lead Team, Resource Consent Department representative(s)</i>	<i>8 October 2021</i>
4. <i>Auckland Council Peer Review Panel (one internal and two external reviewers)</i>	<i>1 November 2021</i>

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# Executive summary

The Auckland Unitary Plan (AUP) became operative in part in November 2016. This report considers how effective and efficient the objectives, policies, rules and other methods of the AUP have been in meeting the outcomes intended by the Regional Policy Statement – Chapter B2.3 A Quality Built Environment.

This monitoring work will contribute to our knowledge base – what is working in the plan and where there may be challenges. This knowledge will help to inform future plan changes and fulfill the policy cycle. Additionally, this report will address the Section 35(2)(b) plan monitoring requirements of the Resource Management Act 1991 (RMA).

## Auckland's growth

Auckland's growing population increases demand for housing, employment, business, infrastructure, social facilities and services. Growth needs to be provided for in a way that enhances the quality of life for Aucklanders and their communities.

The regional policy statement B2.3 A Quality Built Environment incorporates the expectations of The Auckland Plan and Auckland Unitary Plan (AUP) for quality development across all types and scales of development – be it site, street, block, neighbourhood or city. It provides a framework for the role of the built environment to support people's lives - their health, safety, well-being, choices, accessibility and travel. The policy statement also recognises the need to innovate, maximise resources, provide efficient infrastructure and adapt to climate change. These are particularly important considerations for residential development which is the predominant form of development in Auckland. As new residential developments increase in number, scale and density, they have a greater influence on the city's built environment.

The monitoring for the B2.3 A Quality Built Environment topic focuses on the quality of residential developments in the more intensive residential zones - Mixed Housing Suburban (MHS), Mixed Housing Urban (MHU) and Terrace Housing and Apartment (THAB) zones. It also looks at the quality of residential developments in Business – Mixed Use zones. Residential development is where the highest proportion of constructed developments are occurring and creating rapid and visible changes to Auckland's built environment. The speed and quantum of new residential development from council consenting through to the completed development enabled a broad housing sample from across suburban and urban areas to be selected within the three-year monitoring period – 2018-2020.

The monitoring evaluated aspects of other regional policy statements - B2.1 Urban Growth and Form and B2.4 Residential Growth topic. This included the extent of intensification to achieve a quality compact urban form as well as attractive, healthy and safe housing with a range of choices to meet the diversity of Aucklanders needs.

The residential sample selected from the three residential zones looked at 130 developments comprising at least four dwellings on a site, with some over 150 dwellings. This produced a combined total of 2,339 dwellings from across the Auckland urban region. These developments were either completed or in the construction phase to qualify for the monitoring sample. There were 33 residential developments in the Business – Mixed Use sample which could produce 1,665 dwellings when built. The majority of these developments had not been completed during the monitoring phase. Development in business zones (which includes our centres) tend to be larger-scale and have longer timeframes between design, consenting and construction. For this reason, they were not included in this monitoring analysis, but will be included in the next monitoring programme.



The research findings from the monitoring help determine whether the AUP has enabled quality outcomes for residential development across the city. The analysis takes an aggregated approach because assessing residential developments is complex. To do this, the analysis looked at over 50 aspects of each housing development as no one measure can conclusively determine whether quality has been achieved. The monitoring attempts to subjectively evaluate quality by quantifying terms such as 'attractive' used by the AUP into assessing design elements such as 'variation in roof forms and 'modulation of building façades'. Site visits to completed developments also focused on aspects which contribute to well-designed housing rather than the style of a development. The approach enabled specific standards or in some cases the lack of standards, to be identified and provide direction for recommended changes to the AUP. The analysis helped determine the AUP's effectiveness as well as identify trends, opportunities and issues across different housing types, densities and zones.

The effects from recent Government legislation - the National Policy Statement – Urban Development 2020 and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 are not considered in the monitoring analysis. These were issued after the monitoring began and the purpose of the monitoring is to evaluate the effectiveness and efficiency of the Auckland Unitary Plan over the 2018-2020 period. However, the Government's new requirements have a significant influence on the validity, scope and timeframes of some recommendations in the monitoring report. This includes the national Medium Density Residential Standards which limit the scope of potential changes to address AUP issues identified through the monitoring. Those recommendations that are affected, may be investigated and progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded from further changes because they are superseded or limited by legislation.

Six themes with twelve performance indicators were developed to evaluate the AUP's effectiveness and efficiency. For each indicator, a series of measures were applied to determine whether the developments were achieving quality outcomes anticipated by the plan's objectives, policies and standards. Site visits to nearly 50 residential developments provided further opportunities to consider the quality of housing at the site, street and neighbourhood scale.

### **Theme 1: The quality of site development, built form, appearance and setting**

Theme 1 analyses site development, built form, appearance and relationship to the street and adjacent sites. The B2.3 A Quality built environment objectives and policies for this theme seek to ensure development responds to its site and surrounds as well as through the form and appearance of buildings.

The analysis looked at how developments manage the intrinsic qualities and physical characteristics of the site, topography and setting. Most sites were already modified when they were developed for previous buildings, although not necessarily to the extent required by new intensive development. Some large-scale developments were able to retain intrinsic landscape features such as streams or vegetation. Earthworks created flat building platforms to provide for different housing types. This sometimes improved privacy, outlook and reduced the visual dominance of the development within the site or on adjacent sites. Conversely, deep cuts and significant retaining walls in some cases, negatively affected on-site amenity by reducing natural light into dwellings and shading outdoor living space.

To assess the quality of buildings in terms of appearance, form and scale of development in the residential zones, the analysis focussed on elements of design that contribute to well-designed housing. This included the appearance of dwellings when viewed from the street and how a development responds to adjacent sites. Consideration was given to the privacy, dominance and shading effects on existing dwelling as well as the redevelopment potential for future higher density housing on adjacent sites. Site observations were also valuable for assessing quality in the completed development

The findings showed that the AUP is variable in terms of managing the form and appearance of more intensive residential development. Development responses to the unlimited density provisions and

standards that manage the building envelope (such as height and height in relation to boundary) had a significant influence on outcomes.

The generic set of residential standards that apply to standalone houses as well as terraces and apartments are inadequate for complex medium to large scale developments. This can be compounded by Auckland's existing subdivision pattern of long, narrow sites which were initially developed for standalone houses – not high-density housing. Accommodating greater building lengths and heights on narrow sites can limit the ability for apartments and terrace housing to achieve appropriate building forms and scale for their site or location. This can cause shading, privacy and dominance effects of adjacent sites which can influence existing uses as well as future redevelopment potential of those sites.

## **Theme 2: Building Auckland's planned built form with more intensive housing**

This theme investigates the range of housing types and the amount of residential development to accommodate the city's growing and diverse population. It also looks at land use efficiency and the implications of higher density development to address the RPS B2.1. growth issues. The types and density of multi-unit developments with four or more dwellings being built in the more intensive residential zones were analysed. These influence the planned suburban and urban built character of the street and neighbourhood.

The findings showed that there was a largely even split across housing types in the sample from MHS, MHU and THAB zones. The types identified were standalone houses, duplex/town houses, terraces, apartments, and some developments had a mixture of all of the types. The AUP residential zone descriptions and provisions have been effective in enabling a range of housing types to support the intensification anticipated for each zone. The amount of new residential development in some areas is starting to produce street environments that allude to the future planned form of Auckland.

The AUP has been effective in achieving intensification at levels promoted through the zoning principles and standards to reinforce the hierarchy of centres and corridors. The analysis showed a broad transition of increasing density through the MHS, MHU, THAB and Business – Mixed zones. There is a clearer transition of increasing building bulk as a consequence of the amount of building coverage rather than height. Some sites were underdeveloped – usually with less height than the zone enabled due to site constraints or other factors. While the zone standards broadly achieve the intensification enabled by the zone objectives in terms of housing types, they are less effective in achieving the planned character through height and site spaciousness.

The analysis looked at whether the AUP is encouraging efficient use of land and resources. The number of dwellings per site facilitated through the land use led subdivision consent (that enables unlimited density) was assessed. The findings showed that 130 developments in the residential zone sample produced 2,339 new dwellings. Collectively, the new developments replaced approximately 275 existing dwellings across the sample. Seventy per cent of developments were for between 4-15 dwellings per site, 20 per cent were for 16-40 dwellings per site and 10 per cent were for developments with 40 – 150 or more dwellings. This shows that the unlimited density provisions in the AUP have been very effective. In the Business – Mixed Use zone, consents for 33 developments – primarily apartments, would produce a theoretical number of 1,655 dwellings.

Zone provisions, unlimited density and increasing height/building coverage is enabling higher density development with smaller site sizes. However, site functionality and quality can be compromised if sites become too small. This includes the quality of outdoor living spaces, solar access, privacy, landscaping, provision for rubbish bins, clotheslines and so on. Higher density developments do not inherently produce

poor outcomes. Issues can arise from not appropriately addressing the unique interrelationship of housing types, amount of housing and site conditions.

### **Theme 3: Supporting the health, safety and wellbeing of residents**

Aspects of residential developments that influence people's health, safety and wellbeing was the focus for this theme. This includes growth that enhances the quality of life for individuals and communities. The analysis looked at how the AUP residential provisions support housing that is safe, has sunlight, functions well and is pleasant to live in. Specific standards were monitored from the residential zone provisions that contribute to the regional policy statement objectives focusing on the health and safety of people and communities.

The analysis looked at whether the AUP requirement for outlook spaces from primary living areas and to a lesser degree, other habitable rooms in dwellings in the residential zones were achieving quality outcomes. The focus on primary living area outlook reflects an assumption that residents will spend longer periods of time in this space which will have a greater effect on the quality of their day-to-day lives - including their health and wellbeing.

The outlook space requirement for principal living areas and habitable rooms in the AUP is an effective and efficient method for ensuring daylight, pleasant outlook and a degree of privacy. Seventy per cent of developments in both the residential zones and the Business – Mixed Use zone samples complied with the AUP standards for size and dimensions. Those developments that did not comply, often infringed the standard for just a small number of their dwellings.

Analysis showed that compliance with the AUP standards can still result in potential issues with the outlook spaces from principal living areas. Those with outlook spaces facing the street were sometimes interrupted by fences that reduced the sense of spaciousness. In some cases, structures such as sheds, utilities, or shading from high retaining walls reduced the quality and functionality of outlook spaces. Other issues arise from principal living area outlooks facing towards adjoining sites (this applied to approximately one third of the sample in the residential zones) and could compromise privacy for both properties. This was most evident when principal living area outlooks were above ground level – especially if there were balconies. Primary living areas with outlook spaces over driveways or car parking areas also produced poorer quality outlook for residents. The monitoring showed that the location of the outlook is not as effectively managed by the AUP as it could be.

The analysis also looked at the quality of outdoor living spaces to support the health, safety and wellbeing of residents. The purpose of the outdoor living area is to provide spaces for people to enjoy the outdoor environment within their properties. The analysis showed that most developments complied with the outdoor living space requirements for either 20m<sup>2</sup> for a ground level space or 8m<sup>2</sup> for a balcony. Most developments in the sample provided ground level outdoor living spaces. However, outdoor living spaces in many developments were cluttered with rubbish bins, hot water cylinders, rainwater tanks and other housing infrastructure which affected the quality and functionality of the space. The amount of outdoor living space required by the AUP standard is not adequate to accommodate this additional household infrastructure such as rainwater tanks.

Primary outdoor living spaces in the form of balconies were prevalent in higher density THAB and Business – Mixed Use zones where there were more apartments. Balcony sizes were assessed for functionality based on the number of bedrooms to gauge the number of likely users. The majority of balconies in the residential zones complied with the standard. In the Business – Mixed Use zone, where the AUP does not require any outdoor living space, 95 per cent of residential developments did provide outdoor living spaces for the majority of dwellings. The analysis showed 15 per cent of balconies in the residential zones were inadequate sizes, and approximately 30 per cent were inadequate in the Business – Mixed Use zone.

The AUP requires sunlight to outdoor living spaces at the equinox but not in mid-winter when residents most need sunlight for their health and wellbeing. Up to a quarter of primary outdoor living areas in the residential sample could have sunlight compromised during mid-winter. Observations from site visits also highlighted potential privacy issues (visual and acoustic) arising from the configuration and location of outdoor living spaces facing towards adjacent sites. Privacy was a more significant issue when balconies at upper levels faced towards and overlooked adjacent sites. The monitoring indicates that the AUP could be more effective at ensuring outdoor living spaces are providing for quality spaces to support the health and wellbeing of residents.

#### **Theme 4: Providing choice through a diversity of housing**

Theme 4 focuses on whether developments provide choice for Aucklanders to meet their housing needs. A range of housing sizes and types are critical to a well-functioning city with a diverse population and urban fabric that allow communities to change in place. The analysis considered the types and variety of houses that are being built in developments. Many developments had a mix of different house types and sizes which for larger developments, contribute to a sense of community.

The monitoring shows that the AUP is effective and efficient in delivering a diversity of housing for Aucklanders. The plan provisions enable a wide range of housing types and dwelling sizes. The findings show an even split across all developments between housing types of standalone houses, duplexes/terrace houses, apartments, and a mixture of these in the sample. The zone influenced the predominance of a particular housing type - there were more apartments in the THAB zone.

There was a broad range of dwelling sizes and numbers of bedrooms – often with a mix of different sized dwellings in a development to provide more choice. Across the monitoring sample, there was a good spread of dwelling sizes from one to five bedrooms. In most developments, the dwelling sizes well exceed the AUP's minimum standards.

Another aspect of the analysis was the ability of housing to meet changing needs of residents. An important consideration is whether people can access and live in their house if they experience a temporary mobility impairment through an illness or accident for example. Residential intensification is producing more dwellings that are two or more storeys high which can exacerbate this situation. Enabling people to live in their homes on the ground level (or an accessible level such as lift-accessed apartments) during a period of limited mobility rather than needing to find alternative accommodation can improve recovery and wellbeing. Each dwelling was assessed for its ability to provide a habitable room (that fits a bed) and toilet and handbasin, on the ground floor or a fully accessible level.

An important consideration is whether people can access and live in their house if there are temporary limitations to their physical capabilities, such as an accident. Residential intensification is producing more dwellings that are two or more storeys high which could exacerbate this situation. The analysis show that new dwellings are generally adaptable to the changing needs of residents despite the AUP not requiring this. Most developments could provide for temporary changes in residents' mobility needs by avoiding steps between the street and dwelling front door, and with a minimal step over the entry threshold. Eighty per cent of dwellings in the sample had a habitable room, toilet and hand basin at ground level or an accessible floor (such as a lift accessed apartment).

#### **Theme 5: Responding to climate change and environmental sustainability**

This theme focuses on aspects of residential development that may help reduce the effects of climate change and contribute to environmental sustainability. Limiting the amount of impervious surfaces,

managing stormwater better, providing quality landscaping and managing waste in residential developments can reduce the impact of residential intensification on the environment.

The analysis looked at ways development can minimise environmental effects caused by stormwater in the residential zones. This includes the management of stormwater runoff and supporting water quality where it enters natural environments such as coasts and streams. Collecting on-site rainwater is another way that stormwater run-off can be reduced and has the added benefit of providing water for gardens or other outdoor uses. The findings showed that approximately a third of the sample in the residential zones did not comply with the maximum impervious area standards. In many cases this enabled a site-specific response to be pursued to satisfy the purpose of the standard. This was more prevalent in the higher density zones of MHU and THAB. Nearly half the developments had rainwater tanks to provide for exterior household use or as detention devices to manage on-site stormwater. Without clear evidence of the cumulative effects of more intensive residential development, it is not possible in this monitoring analysis to evaluate whether the plan is effective or efficient.

Quality landscaping supports biodiversity and provides privacy, shade, shelter, food sources, improves amenity. It is important for reducing stormwater run-off, reducing contaminants (air and water), carbon absorption and the reducing the urban heat effect to support climate change resilience.

The monitoring showed the AUP is not sufficiently effective or efficient in achieving quality landscape areas in residential developments. Approximately 35 per cent of the residential zone developments in the sample did not comply with the landscaping requirement – the majority of which infringed it by up to five per cent. The extent of low compliance with the landscape area standard reflects a similar level of infringement for the maximum impervious surface standard. In many cases, alternative solutions may have been proposed to meet the purpose of the standard but it is unclear whether this could undermine the anticipated landscape outcomes. This could be an issue in terms of managing stormwater and in the MHS zone where landscape is considered an attribute to the site and neighbourhood character. The amount of landscape area and the quality of landscaping is also fundamental for achieving biodiversity and climate change resilience in the urban environment.

Site observations showed many sites were poorly landscaped and lacked the amount of planting shown in the consented landscape plans. This suggests shortcomings in monitoring and compliance to ensure approved landscape plans are properly implemented. There were also issues around the types of landscaping (particularly lack of trees or planting for future mature trees) and the lack of thought for the ongoing maintenance of sites – especially terrace housing.

Effective waste management is an essential part of well-functioning sites and urban environments. The provision of waste storage, its visibility within the site and how on-site waste management and provision of waste-collection and recycling facilities impact the functions of the site and surrounding urban environment were all assessed. The majority of developments showed some consideration for on-site waste management although site observations in the residential zones showed that these often weren't sufficient to address effects on the functionality of outdoor living spaces, site access, on-street amenity and pedestrian safety.

## **Theme 6: Supporting safe access and travel choice**

Theme 6 analyses the safety and functionality of site access and circulation for pedestrians and vehicles. It also looks at the safety issues and opportunities of new developments on public streets and places. Pedestrian safety within a site is a particular concern given the high incidence of driveway accidents involving pedestrians (particularly children).

The findings showed that 65 per cent of developments with 10 or more parking spaces in the residential zone sample provided a separated footpath. Only a quarter of those developments that had footpaths were separated from the driveway by a kerb or other physical barriers. Most chose to use an alternative material or colour on a level flush with the driveway. Only half the footpaths (of those developments that had them) were designed to avoid the reversing space of cars.

The majority of developments avoided having front doors opening directly onto a driveway. Some forms of parking such as centralised communal parking areas are not adequately designed for pedestrian safety within the site. This suggests that the AUP is not managing on-site pedestrian safety effectively or efficiently, with respect to pedestrian access and circulation.

Most developments fronting streets optimised passive surveillance with windows or/and balconies overlooking the street. Seventy per cent of developments in the residential sample had up to half their dwellings overlooking the street. Most front doors for street facing dwellings were visible or partially visible from the street. This demonstrates that the AUP is effective and efficient in ensuring that dwellings in residential zones are well-designed to provide passive surveillance of the street to make neighbourhoods safer.

## **Conclusion**

The broad scope and complexity of the monitoring for the B2.3 A Quality Built Environment topic has meant it is challenging to draw a single conclusion on the performance of the AUP in achieving the B2.3 A Quality Built Environment objectives and policies. Notwithstanding this, the monitoring has provided some overall trends and observations.

### **Successes**

Analysis has shown that the AUP is both effective and efficient in many aspects of development in the residential and the Business – Mixed Use zones. These mainly relate to:

- residential intensification at levels promoted through the zoning principles and zone standards support AUP and Auckland Plan growth objectives
- residential developments and zones progressively intensify towards centres and transport corridors, reinforcing the AUP hierarchy of centres and corridors
- enabling sites to maximise housing yield with unlimited density provisions enabled through the land use led subdivision consenting process
- enabling a wide range of housing types and sizes to meet the diverse needs of Aucklanders
- achieving good form, design and function in many developments across all suburban and urban residential areas of Auckland, regardless of location, socio-economic, market or other external factors
- achieving good quality street frontage appearance for most developments in the residential zones.

### **Issues**

The analysis also revealed potential issues and emerging trends where the AUP is less effective or efficient. These mainly relate to:

- managing the effects (e.g. shading, privacy, dominance) of new development on adjacent sites, which could affect the existing and the future re-development potential of these sites
- the pressure of high-density residential developments compromising site amenity and functionality
- recognising complexities and uniqueness of housing types – currently a single generic set of standards is applied to all housing types whether it's a standalone house or an apartment building
- issues with building form, scale and bulk relative to site conditions (eg. size, dimensions) to accommodate more intensive terrace housing and apartment developments

- type and scale of earthworks producing poor site amenity and functionality in some developments
- insufficient standards to address climate change at a site-specific level – particularly the need for better stormwater management and quality landscaping
- Inadequate waste management within the site and street environment
- managing the safety of pedestrians within sites and the street.

The above conclusions should be considered in conjunction with the specific conclusions and recommendations for each indicator in the report.

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Abbreviations in this report include:

<b>Abbreviation</b>	<b>Meaning</b>
AUP	Auckland Unitary Plan (Operative in Part)
the council	Auckland Council
RMA	Resource Management Act 1991
RPS	Regional Policy Statement
resource consents database	Plans and Places resource consent decision tracking database
compliance database	Resource consent compliance and monitoring database
building consents database	Building consent decisions database
AT	Auckland Transport
Watercare	Watercare Services Limited
council-controlled organisation	CCO
MHS	Residential - Mixed Housing Suburban (zone)
MHU	Residential - Mixed Housing Urban (zone)
THAB	Residential - Terrace Housing and Apartment Building (zone)
IHP	Independent Hearings Panel (for the Auckland Unitary Plan)
HIRB	Height in Relation to Boundary (planning standard)
AHIRB	Alternative Height in Relation to Boundary (planning standard)



# Introduction

This report considers how effective and efficient the objectives, policies, rules and other methods of the AUP have been in meeting the outcomes intended by the Regional Policy Statement – B2.3 Quality built environment. The monitoring is in accordance with 35(2)(b) of the RMA.

Section 35(2)(b) specifies that monitoring results are published every five years. The AUP became operative in part in November 2016 and will have been operative in part for five years in November 2021.

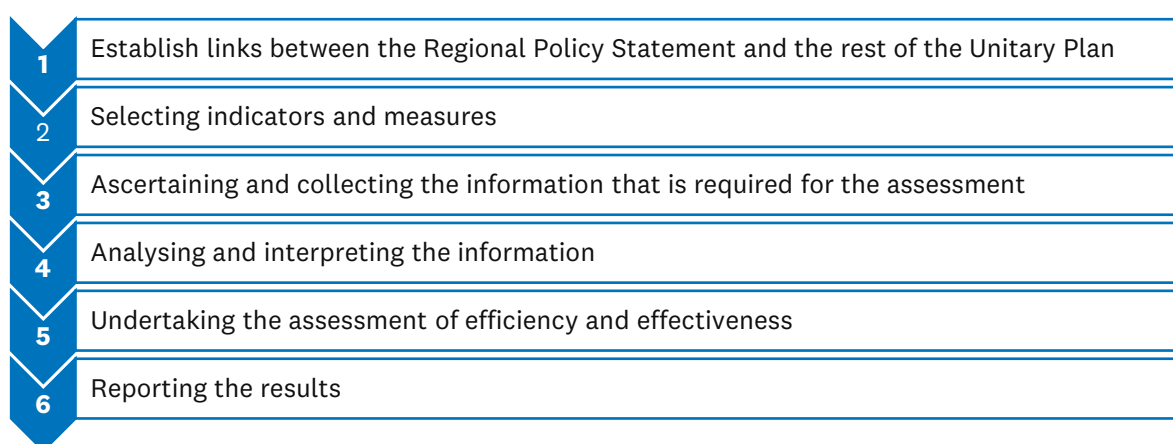
The research findings seek to tell a story of what the AUP is achieving and where challenges may be. Monitoring is a key link in the policy development lifecycle providing data and the evidence base for taking appropriate action where necessary.

The terms ‘effectiveness’ and ‘efficiency’ are not explicitly defined in the RMA. For the purposes of this monitoring report the terms are generally interpreted as<sup>1</sup>:

**Effectiveness** is the contribution that the provisions make towards achieving the objective, and how successful they are likely to be in solving the problem they were designed to address when compared with alternatives. The difficulty when assessing effectiveness is to be able to answer the question ‘how do we know that implementing the policy, rule or method led or contributed to the outcome?’

**Efficiency** is an assessment of whether the provisions will be likely to achieve the objectives at the lowest total cost to all or achieves the highest net benefit relative to cost to all.

The steps undertaken in this monitoring work are briefly summarised in Figure 1.



*Figure 1 Steps in the monitoring process*

<sup>1</sup> Auckland Unitary Plan Monitoring Strategy 2018

# RPS Chapter B2 Urban Growth and Form overview

Auckland's growing population increases demand for housing, employment, business, infrastructure, social facilities and services. Growth needs to be provided for in a way that enhances the quality of life for individuals and communities. It must also support integrated planning of land use, infrastructure and development, and optimise the efficient use of the existing urban area. New growth needs to enhance the quality of the environment, both natural and built.

The B2.2 Urban Growth and Form chapter has a wide scope. It seeks a quality compact urban form that enables a higher-quality urban environment. B2.3 Quality built environment sets the parameters around how it will be delivered at every scale. B2.4 Residential Growth focuses on the quality, efficiency and amount of housing to be delivered. B2.5 Commercial and Industrial Growth concentrates on employment areas and the role of centres.

The regional policy statement for B2.3 A quality built environment has a broad reach – seeking quality outcomes across all scales of development – site, street, block, neighbourhood and city. It sets a framework for considering the role of the built environment in supporting people's health, safety, well-being, choices, accessibility and travel. It also recognises the need to innovate, maximise resources, infrastructure efficiency and adapt to climate change. These are particularly important considerations for residential development which is the predominant form of development in Auckland.

The regional policy statement objectives are:

## **B2.3 A quality built environment**

- (1) A quality built environment where subdivision, use and development do all of the following:
  - (a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;
  - (b) reinforce the hierarchy of centres and corridors;
  - (c) contribute to a diverse mix of choice and opportunity for people and communities;
  - (d) maximise resource and infrastructure efficiency;
  - (e) are capable of adapting to changing needs; and
  - (f) respond and adapt to the effects of climate change.
- (2) Innovative design to address environmental effects is encouraged.
- (3) The health and safety of people and communities are promoted.

Refer to Appendix A for the full policy statement objectives and policies.

The built environment in Auckland's urban area is heavily influenced by the activities which they contain. This informs that building type, form and scale of business, industrial and residential development. Business development tends to be concentrated in centres and along transport corridors with a wide variation in scale and form. Auckland's city centre provides the most visibly intense version of the city's built form with some tower heights over 150m that are occupied by business and residential activities. In contrast, industrial development is characterised by large floor-

plates and lower heights concentrated around transport corridors – including the airport and ports. Residential development predominates Auckland’s wider urban-scape and is particularly concentrated as apartments in the centres and along transport corridors. Change has been rapid in some residential zones since the AUP became operative in 2016.

As new residential developments increase in number, scale and intensity, they have a greater influence on the city’s form at every scale. Quality housing also has an essential role in providing for the health, safety and wellbeing of residents. For these reasons, monitoring of the effectiveness and efficiency of B2.3 Quality built environment concentrates on individual housing development in residential zones where rapid growth is occurring.

Future S.35 monitoring will look at development in business zones which tend to follow longer timeframes between design, consenting and construction. The influence of development on the site, neighbourhoods and wider area is best assessed when they are completed. At this stage of AUP implementation, there has been adequate residential development completed to undertake a robust assessment of whether quality built form outcomes are being achieved.

The research findings from the monitoring will help determine whether the AUP has enabled quality outcomes for residential development across the city with regards to health, safety, wellbeing, choice, functionality, design of built form and the amenity of the site. It also assesses how well new residential developments respond to the site, street, neighbourhood and area to gauge whether the future planned form anticipated for the various zones is being achieved. The monitoring does not seek to review the individual performance of planning rules and instead, focuses on the collective outcomes they produce in the built environment.

Auckland’s growing population increases demand for housing, employment, business, infrastructure, social facilities and services. AUP Chapter B2.1. Urban Growth and Form sets out eight key issues. Growth needs to be provided for in a way that does all of the following:

- enhances the quality of life for individuals and communities
- supports integrated planning of land use, infrastructure and development
- optimises the efficient use of the existing urban areas
- encourages the efficient use of existing social facilities and provides for new social facilities
- enables provision and use of infrastructure in a way that is efficient, effective and timely
- maintains and enhances the quality of the environment, both natural and built
- maintains opportunities for rural production
- enables Mana Whenua to participate and their culture and values to be recognised and provided for.

The RPS2.3 Quality Built Environment monitoring evaluates how effectively and efficiently the plan is addressing these issues. The focus of this monitoring topic is on achieving ‘higher-quality urban environment’ through the evaluation of a residential development sample across four specified zones (see below).

Other S.35 monitoring topics address different aspects of urban growth. As this is an assessment of the AUP effectiveness and efficiency, the monitoring is closely but not explicitly aligned with the residential provisions in the plan. This focus provided consistency in the data collection while enabling the influence of external factors to surface. For example, apartment development was more concentrated in areas with good public transport, access to goods, services and community facilities. This correlated with the AUP zoning provisions which enabled more intensive development to occur

in these locations. References to similar, concurrent or future monitoring topics are identified in this report where relevant.

## Connections with other parts of the plan

This topic has close connections with three other sections of the RPS. The relevant sections are:

- B2.2 Urban growth and form
- B2.4 Residential growth
- B3.3 Transport

Refer to Appendix D for the objectives relevant to this topic in chapters B2.2 Urban growth and form, B2.3 A quality built environment, B2.4 Residential growth and B3 Transport.

These sections are particularly relevant as they influence the policy direction in B2.3 Quality built environment. The monitoring results from this topic are necessary to present a high-level analysis on which parts of B2.2.2 and B2.4 require further investigation.

Lower tier objectives, policies and provisions are also relevant to monitoring for B2.3 A quality built environment in terms of residential development. The zones relevant to this monitoring are:

- Residential - Mixed Housing Suburban zone (MHS)
- Residential - Mixed Housing Urban zone (MHU)
- Residential - Terrace Housing and Apartment Building zone (THAB)
- Business - Mixed Use zone (BMU)

The plan provisions for each zone influence the scale, form and quality of the built environment. The performance of individual standards in zones are not the subject of the monitoring. However, the purpose statements of some standards specify the outcomes sought and these informed the indicators. This approach enables an assessment of the collective effect of packages of residential zone standards and other provisions.

## Auckland context

The Auckland Plan 2050 identifies 'Homes and Places' as one of the key outcomes for Auckland. The outcome is for 'Aucklanders to live in secure, healthy and affordable homes, and have access to a range of easily accessible public places.'

There are currently about 540,000 dwellings in Auckland. These are made up of stand-alone houses, duplex/townhouses, terraced housing and an increasing number of apartments. The Auckland Plan highlights the need for more good quality housing to be built, and to ensure that a range of housing types, sizes and price points are built across the region. This includes for individuals, couples, groups (such as flatters) and families. Warm, dry, quality housing is a key determinant of a healthy community - a healthy home is a core foundation for positive health and wellbeing. Conversely, poorly designed residential developments can have negative effects on the quality and functionality of dwellings and neighbourhoods.

This monitoring focusses on the quality of residential developments and provides a 'short snapshot' across urban Auckland. The monitoring sample includes developments with four or more dwellings that were consented after April 2018 and primarily constructed before December 2020 in the higher density residential zones. This includes Residential - Mixed Housing Suburban (MHS), Residential -

Mixed Housing Urban (MHU), Residential - Terrace Housing and Apartment Building (THAB), and Business - Mixed Use zones.

In addition to the implementation of the Unitary Plan provisions, there are many other factors that influence the quality, location, development and construction of housing in Auckland. Many of these are beyond the control of the AUP. This includes the selection of location, building typology, scale, materials, style and other externalities such as:

- market demand, trends and preferences
- population changes - demographics, growth, employment etc
- development funding
- mortgage lending - amount, restrictions on types of housing, the ability to buy off plans, timeframes for unconditional borrowing, restrictions on progress payments associated with new builds, etc
- insurance
- construction industry - skills, capacity, and competency
- construction costs - and the impact that significant rises have on housing choice, affordability, location and transport costs
- supply chains
- taxation penalties and incentives
- legislation such as the Building Code and Unit Titles Act 2010.
- Provision of and funding for infrastructure - water supply, waste-water, stormwater, power supply, street networks and public transport provision.

Determining the degree of influence these externalities may have on the quality of housing outcomes is a challenge. A limitation of the monitoring programme is understanding to what extent the quality of housing is a consequence of the AUP provisions or/and a result of market and cultural influences around housing typology, development economics and build capacity.

The AUP seeks to accommodate growth in Auckland through a quality compact urban form. RPS B2 Urban Growth identifies this approach as enabling the following:

- (a) a higher-quality urban environment
- (b) greater productivity and economic growth
- (c) better use of existing infrastructure and efficient provision of new infrastructure
- (d) improved and more effective public transport
- (e) greater social and cultural vitality
- (f) better maintenance of rural character and rural productivity; and (g) reduced adverse environmental effects.

As noted above, the focus of this monitoring topic is to evaluate how residential development contributes to Auckland's goal of achieving a higher-quality urban environment.



# Indicators

Indicators and measures have been developed to assess the progress toward achieving the RPS's objectives and outcomes.

An **indicator** (for the purposes of this report) is a qualitative or quantitative gauge that displays degrees of progress to determine whether or not the AUP is moving in the right direction toward meeting its objectives. An indicator should be used to assess the condition of the environment, to identify changes to that condition, to diagnose problems and then to guide future changes to objectives, policies or methods (via plan change or plan review).

A **measure** is the selected information that enables evaluation of the indicator. Methods of measurement will differ depending on the indicator.

The indicators developed for this topic have been shaped by limitations. It was not possible to develop a set of indicators which encompassed all facets of the topic – this is due to constraints on time, resource, and data availability.

Development of the indicators and measures took into account the following:

- the B2.3 objectives and policies
- the relevant B2.2 and B2.4 objectives and policies
- provisions in the MHS, MHU, THAB and Business – Mixed use zones
- overlaps in the coverage of the objectives
- data availability
- the need for both quantitative and qualitative assessments
- emerging issues identified by planners, urban designers, councillors, local boards, public concern (correspondence, media)
- time and other resource constraints.

## Evaluating quality

The research findings from the monitoring help determine whether the AUP has enabled quality outcomes for residential development across the city. The analysis takes an aggregated approach because assessing residential developments is complex. To do this, the analysis looked at over 50 aspects of each housing development as no one measure can conclusively determine whether quality has been achieved. The monitoring attempts to subjectively evaluate quality by quantifying terms such as 'attractive' used by the AUP into assessing design elements such as 'variation in roof forms and 'modulation of building façades'. Site visits to completed developments also focused on aspects which contribute to well-designed housing rather than the style of a development. The approach enabled specific standards or in some cases the lack of standards, to be identified and provide direction for recommended changes to the AUP. The analysis helped determine the AUP's effectiveness as well as identify trends, opportunities and issues across different housing types, densities and zones.

Determining housing quality requires the evaluation of various aspects of a development. A range of key factors were developed from the AUP RPS B2.3 and residential zone objectives, policies, standards, purpose statements and assessment criteria to evaluate residential quality. They individually and collectively influence the quality of housing and neighbourhoods including:

- onsite amenity
- building scale, housing typology
- appearance
- functionality – dwelling size, outdoor living
- health and wellbeing – outlook, solar access
- safety – access to and within the site, passive surveillance
- level of intensification
- street and neighbourhood interface.

Designing indicators and measures to produce statistical outputs enabled trends to emerge and issues to be quantified. These may show the effects of AUP residential provisions, how they are implemented or the influence of other conditions and pressures. This includes externalities such as market preferences (developers and buyers), the emergence of new construction and landscaping materials, changes to legislation etc.

Twelve indicators were developed. Most of the indicators relate to more than one B2.3 objective and some also respond to other RPS growth topics. This is summarised in a matrix set out in Appendix 4.

### Themes

The indicators and the respective objectives and policies have been arranged into six themes as follows:

Theme 1: The quality of site development, built form, appearance and setting

Theme 2: Building Auckland's planned built form with more intensive housing

Theme 3: Supporting the health, safety and wellbeing of residents

Theme 4: Providing choice through a diversity of housing

Theme 5: Responding to climate change and environmental sustainability

Theme 6: Supporting safe access and travel choice

## B2.3 indicators and measures

### Chapter B11 Monitoring and environmental results anticipated

Chapter B11 in the AUP sets out the monitoring and environmental results anticipated (ERA) of a regional policy statement. B11 is not exhaustive, an ERA is not listed for every objective in the RPS. Chapter B11 explains:

Environmental results anticipated identify the outcomes expected as a result of implementing the policies and methods in the regional policy statement and provide the basis for monitoring the efficiency and effectiveness of those policies and methods as required by section 35 of the Resource Management Act 1991.

Environmental results anticipated are not additional objectives, policies or rules: they are indicators to be used when assessing progress towards achieving the objectives in the regional policy statement. These indicators should be used:

- to assess the condition of the environment
- to identify changes to that condition

- to diagnose the causes of environmental problems
- to guide future changes to objectives, policies and methods.

In the absence of prescribed AUP indicators for this topic in chapter B11, the RPS B2.3 objectives and policies inform the following indicators. The measures for each indicator are specified in Section 4 of this report.

Table 1

Reference	Primary objective:	Indicators
B.2.3.1(1)(a)	<i>A quality built environment where subdivision, use and development do all of the following:  (a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;</i>	Indicator 1 – Extent that developments respond to the physical characteristics of sites  Indicator 2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings
B.2.3.1(1)(b) & (d)	<i>A quality built environment where subdivision, use and development do all of the following:  (b) reinforce the hierarchy of centres and corridors;  (d) maximise resource and infrastructure efficiency;</i>	Indicator 3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors  Indicator 4 – Maximising land and building resources and infrastructure efficiency
B.2.3.1(3)	<i>The health and safety of people and communities are promoted.</i>	Indicator 5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight.  Indicator 6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces
B.2.3.1(1)(c) & (e)	<i>A quality built environment where subdivision, use and development do all of the following:  (c) contribute to a diverse mix of choice and opportunity for people and communities;</i>	Indicator 7 – Diverse mix of housing choice for people and a range of built form to suit changing needs

	<i>(e) are capable of adapting to changing needs;</i>	
<i>B.2.3.1(1)(f) B2.3.1(2)</i>	<i>A quality built environment where subdivision, use and development do all of the following:  (f) respond and adapt to the effects of climate change  Innovative design to address environmental effects is encouraged.</i>	Indicator 8 – Managing stormwater to mitigate adverse environmental effects  Indicator 9 – Quality of landscaping to address the effects of subdivision and climate change  Indicator 10 – Location and appearance of on-site waste management
<i>B.2.3.1(3)</i>	<i>The health and safety of people and communities are promoted.</i>	Indicator 11 – Safe access to residential developments  Indicator 12 – Promoting safety and travel choice on-site and in the movement network – people and vehicles

# Data and information

## Monitoring Sample

The monitoring sample included multi-dwelling medium (4-9 dwellings) and large-scale (10 or more dwellings) developments. Medium and large scale developments are the focus for monitoring because issues concerning quality, scale and effects on the environment have been raised by council staff, councillors, local boards and the public. The developments are in the MHS, MHU and THAB residential zones and residential developments in the Business – Mixed Use zone. This enabled analysis of residential developments consented under different sets of provisions – residential and business.

### Residential zones sample

Samples of residential developments were selected from the three relevant residential zones. The effects of change are most evident in these zones because they have no density controls and allow for a significant amount of residential intensity to occur. For this analysis all the sample developments were approved through resource and building consent processes under the AUP. The residential zone provisions in the AUP became fully operative on the 6<sup>th</sup> April 2018. The samples of residential developments reviewed were selected from the period April 2018 – December 2020.

Figure 1 shows a map with the locations of the selected developments in these residential zones. In January 2020, Plan Change 16 to the AUP modified the standards for Outdoor Living Space (H64.6.13, H5.6.13, H6.6.13). In particular, it removed the standard requiring the primary outdoor living space to be directly accessible from the living areas. The plan change enabled outdoor spaces to be accessed from any room in the dwelling – including from a garage. The monitoring included a measure to evaluate the effects of this plan change.

Residential development samples in the THAB, MHU and MHS zones that conformed to the following parameters were selected:

- Residential developments within the Auckland urban area. Smaller towns such as Warkworth, rural and coastal settlements, or other places are not included in the samples.
- Developments must not be within a precinct or an overlay (such as Special Character Areas or the Waitakere Ranges Heritage Area). This is because the planning mechanisms in precincts and overlays generally contain additional provisions responding to unique characteristics. Exclusion of these developments from the sample allows for a 'like-for-like' comparison on how the built environment is shaped by AUP's zone provisions.
- Residential developments with four or more dwellings.
- Residential developments with a Resource Consent and Code of Compliance Certificate (CCC) issued between April 2018 and December 2020. Data set supplied by Auckland Council Research, Investigation and Monitoring Unit (RIMU).
- The short timeframe between consenting and construction potentially restricted the sample range to small to medium scale developments. To address this, larger scale residential developments were selected by the Urban Design Unit. The selection criteria ensured that all developments were for 10 or more dwellings per site,

consented after April 2018 and were in the construction phase in December 2020, and were randomly selected from across Auckland.

As a result, a total of 130 developments were selected for analysis from the residential zones. These came from two sources:

- Research and Evaluation Unit (RIMU): 102 developments were randomly selected from a possible 179 developments which met the parameters. This equates to 57 per cent of the possible sample. Developments were also selected where they formed clusters or a concentration of developments in an area. This enabled the monitoring team to observe the cumulative effects of more intensive development in neighbourhoods. These clusters were from all parts of the city. Refer to figure 3.
- Urban Design Unit: 28 developments were selected on the basis that they were consented after April 2018 and were in the construction phase (most yet to receive CCCs). These provided more large-scale developments in the sample while recognising that such developments take a longer time to complete than the monitoring timeframe allowed.

Developments included brownfield (redeveloped from existing sites) and greenfield sites (newly developed from rural land or sites without previous development) across urban Auckland. The majority of developments in the sample were on brownfield sites.

The residential zone sample of 130 developments comprised of:

- 51 developments in the MHS zone (39 per cent of the sample)
- 56 developments in the MHU zone (44 per cent of the sample)
- 23 developments in the THAB zone (17 per cent of the sample).

Developments in the THAB zone are often larger scale with longer timeframes for consenting and construction than developments in other zones. This meant that fewer developments in the THAB zone qualified for the sample selection.

Figure 1 shows the location and housing typologies of developments in the residential zone that qualified for the sample selection. Those developments that were in clusters were prioritised for selection as these provided an opportunity to see the influence and cumulative effects of new development in streets and neighbourhoods.

The concentration of developments in South Auckland shows a greater amount of development activity. There may also have been market influences such as cheaper land, larger properties, or higher residential demand in these areas.

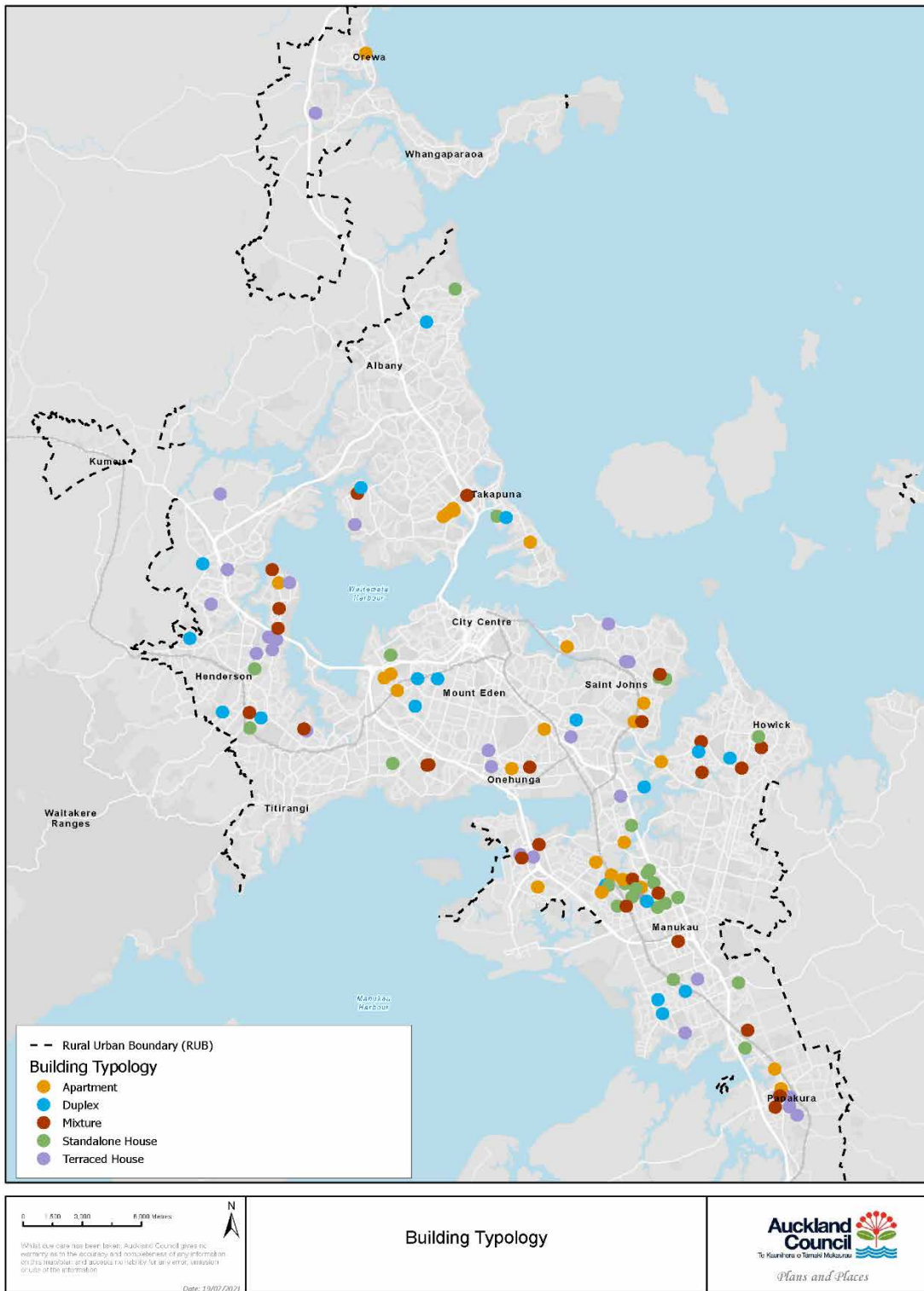


Figure 1 Residential developments that qualified for the sample selection.

The residential zone sample comprised:

- 30% of developments had 4-6 dwellings
- 23% of developments had 7-9 dwellings
- 21% of developments had 10-20 dwellings
- 12% of developments had 21-30 dwellings

- 8% of developments had 31-50 dwellings
- 3% of developments had 51-100 dwellings
- 3% of developments had 101-150+ dwellings

Standards set limits on the extent to which an activity is permitted or may be assessed as a controlled or restricted discretionary activity. Exceedance of a standard normally results in the activity being considered as a more restrictive class of activity. In the residential zones, these exceedances or infringements will be restricted discretionary. Most standards in the residential zones however are 'non-core' standards and so do not require compliance but are assessment matters guided by the AUP's assessment criteria. Specific matters for discretion are set out in the AUP are what the planner is limited to considering when determining the proposal. Outcomes are negotiated through this assessment process.

Consent planners and urban designers often work with developers at the pre-application stage when design decisions are still being considered. However, many developers do not seek pre-application meetings for smaller developments less than 10 dwellings. Once the resource consent application is lodged, the scope for changes becomes very limited.

Planners, urban designers and other specialists undertake a comprehensive assessment of the application against the AUP standards and assessment criteria. In many cases, non-compliance with the standards and additional consents for activities such as earthworks require more consideration and increase the complexity of consenting. The Auckland Urban Design Panel also provides advice on some significant large-scale residential developments.

There are approximately 16-17 standards in the residential zones with five of these set out as 'core' standards to be complied with for developments comprising four or more dwellings in MHS and MHU, and for all dwellings in THAB. Compliance with other standards can be negotiated through the Restricted Discretionary consenting process when applying for consents for four or more dwellings (or for all dwellings in THAB). The core standards for compliance for the MHS, MHU and THAB zones are:

- building height
- height in relation to boundary
- alternative height in relation to boundary
- yards
- THAB and MHU zones only: Height in relation to boundary adjoining lower density zones.

The AUP Independent Hearings Panel limited the number of core standards to encourage a more flexible approach to multi-unit developments. The core standards were selected to manage developments from directly affecting adjoining and nearby sites. Non-compliance with a one or more of these standards can be assessed for public or partial notification of the resource consent. All other development standards were non-core standards and matters for assessment rather than compliance. The core and non-core standards are listed in Appendix D AUP references.

### **Business - Mixed Use zone sample**

The Business – Mixed Use zone was monitored as it is part of the transition towards the more intensive centre zones. Typically, this zone is located along transport corridors and between the THAB zone and centre zones. More height and building bulk is enabled in this zone.

Residential development samples in the Business – Mixed Use zone that conformed to the following parameters were selected:



- Resource consents used for this analysis were filtered to remove any developments which were significantly affected by a plan overlay or precinct. This ensured a more accurate reflection of the outcomes generated by the Business – Mixed Use zone rules.
- Developments which consisted solely of visitor accommodation units were removed from the sample. This is because the design of these were strongly influenced by very specific functional requirements and produced a quite different built form from the wider sample. This did not make these developments useful for comparative analysis. However, developments which included a mixture of permanent dwellings and visitor accommodation units were retained.

This resulted in a final sample of 33 granted resource consents from Business – Mixed Use on sites across the Auckland region, with approval dates ranging from April 2018 to February 2020. Collectively, these consents would produce 1,655 new dwellings when constructed.

The monitoring evaluated whether the Business – Mixed Use provisions were producing quality residential developments with less standards in the AUP than for the residential zones. In the business zones, eight standards manage the building bulk, form and effects. These include building height, height in relation to boundary, building setback at upper floors, maximum tower dimension and tower separation, yards, landscaping (as a buffer to street frontage carparking only), maximum impervious area in the riparian yard, wind, outlook space and minimum dwelling size. These are all standards to be complied with.

### Recent Government legislation

The influence of recent Government legislation - the National Policy Statement – Urban Development 2020 and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 were not considered during the monitoring analysis. The legislation was issued after the monitoring began and the purpose of the monitoring is to evaluate the effectiveness and efficiency of the Auckland Unitary Plan over the 2018-2020 period. However, the Government’s new requirements have a significant influence on the validity, scope and timeframes of some recommendations in the monitoring report. This includes the national Medium Density Residential Standards which limit the scope of potential changes to address AUP issues identified through the monitoring.

## Methodology

Section 35 of the Resource Management Act 1991 requires Council to monitor plan processes. The analysis recognises that different council consenting processes including building consents, compliance monitoring and enforcement can influence the end quality of development. The results of this monitoring could show whether the level of quality is influenced by the plan provisions, by the respective council process or a combination of both.

For the purposes of this analysis, the definition of ‘quality’ as defined in the Oxford Dictionary is used:

‘The standard of something as measured against other things of a similar kind: the degree of excellence of something’

This analysis gauges whether the high-level Regional Policy Statement aspirations for a quality built environment are being achieved in various scales of residential development. While the AUP residential provisions are considered in the analysis, it is not intended to be a review of the residential standards. The built form outcomes produced by the AUP provisions and consenting process are the focus of this report.

There were two drivers which set the scope for monitoring:

- The first was whether the current AUP provisions were performing as anticipated.
- The second was to investigate a range of developing issues that are not controlled by the AUP. This additional research goes beyond the S.35 monitoring requirements to consider some of the issues raised by Auckland Council staff, councillors, local boards and the public. Refer to Appendix B. The investigation will help to quantify if these issues were a matter of perception or supported by evidence. Likewise, it can help identify whether there are any relationships with the AUP or other factors such as market pressures. Research on the implications of externalities was limited and most clearly identified through statistical trends that emerged through the monitoring.

However, to consider some issues emerging from either the data or from other sources, the analysis delves deeper in some topics. This includes references to the Proposed Auckland Unitary Plan and the legacy council district plans for the purposes of clarification, context and to inform recommendations. In some cases, this helps provide the context by which the effectiveness and efficiency of the AUP can be assessed.

The monitoring did not interview or survey residents or neighbours on sites adjoining new developments (e.g., to record their preferences and lived experiences of their homes and developments) due to resource limitations. This would provide a more robust assessment of the social, economic, health, safety and well-being aspects of housing provision. It is recommended that this be included in future S.35 monitoring for this topic.

### **Data collection method**

The resource consent documents used to inform the analysis were the decision report, planners report, urban design report and approved plans for each development. For more complex developments, the applicant's Assessment of Effects, engineering reports and other documents were sometimes referred to.

The approved consents have already been assessed against the AUP standards, but this analysis goes further to see whether developments are achieving the wider aspirations of the Regional Policy Statement – B2.3 A quality built environment. Measures were included to help identify good, poor or unintended consequences that were occurring (see also discussions on indicators above). This is to see whether the AUP provisions are delivering what is intended or whether there are other factors such as plan implementation or external influences. While there is a degree of subjectivity in the analysis, it is minimised and identified in the findings.

### **RPS B2.3 dataset**

The categorisation of various aspects of residential development into measures enables the majority of built form design elements to be assessable and measurable. An Excel spreadsheet assessment matrix was used to evaluate each development against the common set of measures. An example is 'whether the principal outdoor living space is orientated for sunlight'. A list of measures is contained in Appendix A.

Two assessment matrices were designed:

- MHS, MHU, THAB residential zone developments – 58 measures.
- Business – Mixed Use zone residential developments – 6 measures.
- Where relevant, residential development in the Business Mixed Use zone was also evaluated using the same measures as the residential zones.

The purpose of the statistical analysis is to provide an aggregation of results across a range of outcomes to evaluate whether residential developments are achieving the RPS B2.3 objectives and policies. It also gives an indication of trends and issues rather than explicit performance results of any particular residential standard or development.

The monitoring also looks at some elements of built form design governed by specific standards that are producing variable outcomes. This helps evaluate whether the AUP and consenting processes are effective and efficient.

The AUP policy framework and standards do not assume that infringing a standard equates to an adverse effect that must be mitigated. In processing consent applications not meeting a standard in the residential zones, an alternative response may be negotiated with the applicant to achieve a similar or better outcome than the standard. This flexibility is a feature of the AUP and the planning process. This is enabled through the Restricted Discretionary consenting process for four or more dwellings in MHS and MHU, or all dwellings in THAB and Business – Mixed Use zones. It facilitates the specific site and development conditions and outcomes to be addressed through a case-by-case basis.

In the S.35 monitoring, the number and extent of non-compliance with the standards as assessment matters were recorded (refer to the explanation of the core standards earlier in this section). This was to gauge the performance of the non-core standards and evaluate planning practice with regards to AUP efficiency.

To record data in the Excel spreadsheet, many of the measures required filtering from prescribed ‘drop-down’ menus. This improved consistency and streamlined data collection. For many measures, a percentage finding was used. These were usually rounded to the nearest 5-10 per cent. Where a variable was measured such as site size, density or dwelling size, the findings are bundled into cohorts or bands for the purpose of clarity and identifying trends. For example, site sizes were recorded in bands – 501-600m<sup>2</sup>/601-700m<sup>2</sup>/701-800m<sup>2</sup> and so on. Each measure was designed to provide the level of detail necessary to assess the performance of the plan.

One of the limitations of the evaluation method was that for most measures, the focus was on the majority of dwellings in a development. The ‘majority’ was set to be representative of ‘at least 70 per cent of dwellings’ within a development or parent site. The parent site refers to the site prior to subdivision or unit titling. Another limitation of the data was that the cumulative effects of non-compliance with multiple standards or measures for a development were not identified. This would have required more in-depth analysis of each development which resources did not allow for.

Specific assessment measures were designed to extract data on the exceptions in a development where this is important. There were also measures that sought to understand the validity or scale of an identified issue. For instance, ‘how many dwellings in the development had south facing outdoor living spaces’ expanded on a measure regarding the ‘proportion of dwellings on a site with east, west or north facing outdoor living spaces’. This provided more accurate statistical data and valuable qualitative information.

### **Resource consent database**

The resource consents database records resource consent decisions through data entry processes in the Plans and Places Department. This database was used to calibrate the RPS B2.3 monitoring data against the rest of urban Auckland. This was to determine whether the findings from the monitoring sample is representative of all residential development across Auckland.

The calibration exercise essentially looked at the remainder of residential developments (1 – 3 dwellings per consent) which met the monitoring parameters (that is, consented between April 2018 Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 16

and December 2020, and not affected by an overlay or precinct)<sup>2</sup>. Data was extracted only for the residential zones relevant to this monitoring.

The limitations of this data set were that non-compliance with the core standards are accurately recorded but less so for the non-core standards. This is because the non-core standards are an assessment matter that could be satisfied through mitigation measures to achieve the purpose of a standard. Given that mitigation satisfied the standard, these were not necessarily recorded as non-compliances in this database.

The non-compliance with the Height Limit and Height in Relation to Boundary (HIRB) core standards are used for calibrating the findings in this research. The non-compliance rate for these standards were similar to those seen in the monitoring sample - within 5 per cent . This provides some confidence that the findings in this report are likely to reflect what is happening across residential development in the MHS, MHU and THAB zones.

This calibration method has not been undertaken for developments in the Business – Mixed Use zone as there was insufficient data.

### **Site visits**

An important aspect of the residential monitoring was evaluating the development quality of the finished (or near finished) buildings. Achieving quality building appearance to the street frontage is a key urban design principle and underpins many AUP provisions. This is because the quality of the building design and site (such as landscaping) have a significant influence on the street amenity, character and neighbourhood safety.

The site visits occurred between February – May 2021. On-street reviews were undertaken for 49 developments by teams of planners and urban designers (see areas outlined in black in Figure 2). Site visits to developments in Papakura are not shown as a group in Figure 2 because these were more dispersed. No sites were entered due to lack of landowner permission, however reference to site plans and visibility into some sites was possible. The quality of street frontages are an important aspect of the AUP provisions and could be assessed without entering a site.

Sets of consent plans were taken to each development to provide the team with detailed information on the site layout and internal arrangements of dwellings. It also provided the opportunity to see whether the plans (and imagery) were an accurate depiction of the final development.

Each development was discussed by the team using site visit assessment criteria to ensure consistency and minimise subjectivity. Refer to Appendix C for the site visit assessment form. A concluding qualitative result was agreed by the team for each development. Collectively the results provide a 'snapshot' of development quality across different zones, locations, building scales and typologies. All photos used in the monitoring report were taken during site visits.

No site visits were undertaken to residential developments in the Business-Mixed Use zone due to resource limitations.

### **Issues and trends**

Over the past 2-3 years, Auckland Council staff, politicians, local boards and the public raised issues and identified emerging residential trends. Alongside the S.35 indicators and measures, further measures were developed to see whether these issues or trends were valid and to understand the scale and effects of issues. As discussed in the methodology section of this report, a key limitation

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<sup>2</sup> The methodology and limitations to this data source are set out in greater detail in the overarching monitoring report. Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 17

was the lack of resources to conduct resident surveys. This would have revealed residents' lived experiences and attitudes towards perceptions of quality and help quantify what is a reasonable benchmark for 'high quality built environment' in the context of a 'live' housing market.

Appendix B contains the full list of observations and issues raised by councillors, local boards and the public that are summarised below:

- need for a more equitable planning system – s.35, wider concerns
- level of intensification and cumulative effects of higher density developments – S.35
- subdivision and effects of smaller site size – wider concerns
- large number of dwellings per site – S.35
- building height – inconsistent with zone and community expectations – S.35, wider concerns
- increase in building bulk – S.35
- need for quality building design for all housing typologies – S.35
- loss of privacy and access to sunlight – within site and adjoining sites – S.35, wider concerns
- excessive earthworks – S.35
- inadequate landscape area, tree cover and vegetation – S.35
- council consenting processes – S.35.

In many cases, these issues complement the AUP B.1 issues and contribute to the evaluation of the AUP's effectiveness and efficiency. All these issues are considered during the analysis and some guide the intent of recommendations.

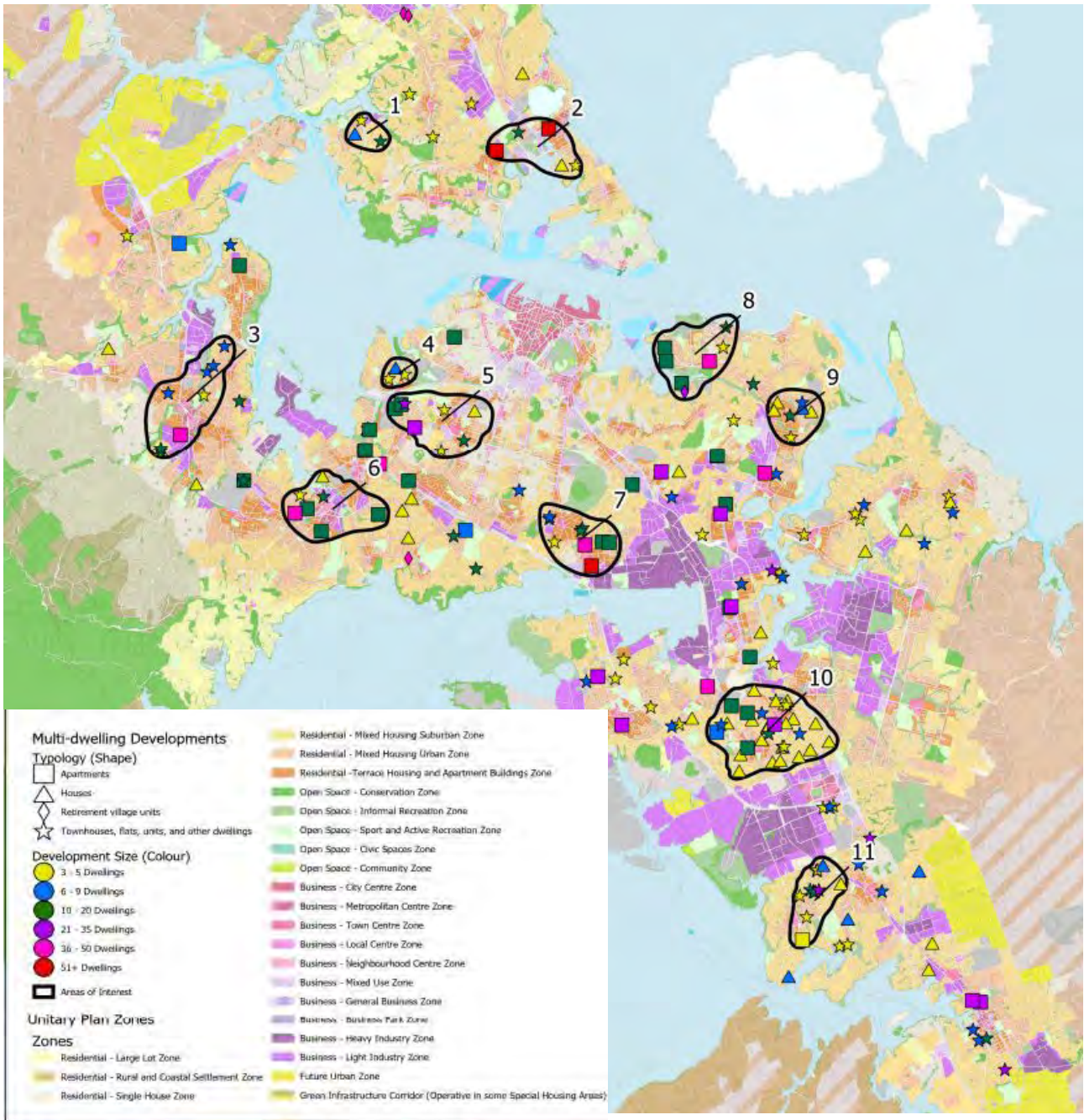


Figure 2. The black loops circle development clusters that were the focus of site visits. The key provides information on the types and size of developments.

### Explanations, limitations and caveats

- All references to ‘residential development’ or ‘development’ refer only to the samples unless otherwise stated.
- Residential developments in this analysis are defined as ‘four or more dwellings’ – this aligns with the Restricted Discretionary activity status for the level of development.
- All references to the ‘residential zones’ refer only to the MHS, MHU or THAB zones unless otherwise stated.
- Medium scale developments are defined as 4-9 dwellings and large scale as 10 or more dwellings. This differentiates between the two forms of council processing and the increase in complexity.

- Data in this report is not intended to be scientifically accurate. The purpose of the data is primarily to provide qualitative evidence to evaluate plan effectiveness and efficiency in addressing the B2 Urban Growth and Form issues, achieving the RPS B2.3 and specified B2.4 objectives and policies. In addition to this, the findings also provide evidence on the extent of issues and trends identified through observations.
- Where statistical findings are represented as percentages, they are rounded up or down to the nearest 5 per cent. It should be noted that the rounding up or down of percentages has meant results may total more or less than 100 per cent.
- The data in this report can be referred to for Section 32 reports but should not be relied upon as the sole evidence.
- For references to the ‘majority’ in this report, assume a finding of at least 70 per cent. This threshold was considered to provide a clear indication of an outcome or finding.
- Any reference to the data in this monitoring report for other purposes must also include supporting information regarding the data sources, methodology and these caveats.
- Unless otherwise specified, assume findings are for the residential zones. Specific references are made to Business – Mixed Use zone findings.
- The monitoring report does not consider any implications for the AUP by the introduction of the National Policy Statement on Urban Development 2020.
- This is not independent research. It presents Council’s assessment of the effectiveness and efficiency of the AUP through a specific study topic (RPS 2.3 Quality Built Environment) – as it applies to a Restricted Discretionary residential development sample from four specified zones. Its purpose is to satisfy the RMA S.35 monitoring requirement. It does not consider plan performance from the perspective of the development sector or the lived experiences of residents in these new developments or residents on adjoining sites. This is a recognised limitation of the monitoring report. This could be considered in future monitoring programmes.
- This monitoring report does not include a cost-benefit analysis. Therefore, it is limited on the extent to which it can evaluate plan efficiency for this topic.
- The recommendations in this report do not take into consideration the Government proposal for Medium Density Residential Standards under the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act (December 2021). The monitoring and report had been completed before these standards were proposed in October 2021. The Government’s new provisions have a significant influence on whether some of the recommendations in this monitoring report can be progressed. A review of the viability of recommendations has been undertaken in February 2022. Those recommendations that cannot be progressed are retained in the report but recognised as being superseded by the national Medium Density Residential Standards.

# Findings and analysis

This section reports on the data findings, and considers how effective and efficient the objectives, policies, rules and other methods of the AUP have been in meeting the outcomes intended by the Regional Policy Statement. Where appropriate, recommendations are also provided. For the purpose of this analysis, effectiveness and efficiency are defined as:

**Effectiveness** is the contribution that the provisions make towards achieving the objective, and how successful they are likely to be in solving the problem they were designed to address when compared with alternatives. ‘How do we know that implementing the policy, rule or method led or contributed to the outcome?’

**Efficiency** is an assessment of whether the provisions will be likely to achieve the objectives at the lowest total cost to all or achieves the highest net benefit relative to cost to all. Benefits and costs can be monetary or non-monetary (aligning with the definition of benefits and costs in section 2 of the RMA). A benefit or cost can be expressed as qualitative or quantitative. It may not be possible to quantify (with confidence) whether a provision is achieving a benefit relative to the cost – if information (or time) is limited. The assessment of efficiency is likely to be tailored to certain provisions. The evaluation of efficiency and effectiveness can be either qualitative, quantitative or monetised depending upon the topic. Topics like amenity values are likely to be better suited to qualitative assessment whereas water quality will be a mix of qualitative and quantitative. The evaluation will be supported by evidence.

Recommendations are proposed for each indicator in response to the findings. To better understand which recommendations are considered a higher priority than others, each recommendation can be flagged as either ‘high’, ‘medium’, ‘low’ or ‘superseded by recent Government legislative amendments’. The Resource Management (Enabling Housing Supply and Other Matters) Amendment Act (Dec 2021) and the National Policy statement – Urban Development (July 2020), require Council to provide more intensive housing and to update the AUP accordingly. The RM Amendment Act includes new Medium Density Residential Standards. While these supersede some recommendations in the monitoring report, the findings may influence those changes required to update the AUP. The prioritisation below highlights those recommendations where a plan change or other initiative may need to be investigated and placed into work programmes.

Delivery timeframe	Action
High	Investigate a plan change as a priority. <i>It is considered that the plan issue should be addressed earlier than plan review stage. The issue has adverse implications on plan outcomes.</i>
Medium	Further investigate at plan review stage (2026) <i>The issue needs to be further investigated, however adverse implications arising from the issue are not seen as critical to achieving intended plan outcomes.</i>
Low	Further monitoring advised. <i>A plan issue may or may not be identified. A greater time period is needed to observe trends in data.</i>
Affected by recent Government legislative changes	Recommendations may be progressed as part of Auckland Council’s response to the National Policy Statement on Urban Development or precluded by the legislation.



All recommendations will need to be tested fully through an RMA Section 32 assessment and be considered alongside recommendations from other topics and the Plans and Places Department work programme. As already noted, recent Government legislation may influence the validity, scope and timeframes for recommendations in this report.

# Theme 1: The quality of site development, built form, appearance and setting

Theme 1 analyses site development, built form, appearance and relationship to the street and neighbours. The relevant B2.3 Quality built environment objectives and policies for this theme seek to ensure development responds to its site and surrounds. The relevant B2.4 Residential Growth objective seeks to create residential areas that are ‘attractive’ with ‘quality development that is in keeping with the planned built character of the area’. In short, this theme assesses whether developments can bridge the fabric of existing neighbourhoods as it changes in response to Auckland’s growing needs.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1 (1)	A quality built environment where subdivision, use and development do all of the following: (a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;
RPS Policy B2.3.2 (1)	Manage the form and design of subdivision, use and development so that it does all of the following: (a) supports the planned future environment, including its shape, landform, outlook, location and relationship to its surroundings, including landscape and heritage; (b) contributes to the safety of the site, street and neighbourhood; ... (e) meets the functional, and operational needs of the intended use;
RPS Objective B2.4.1 (2)	Residential areas are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area.

This theme uses two indicators:

- Indicator 1 – Extent that developments respond to the physical characteristics of sites
- Indicator 2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings

## Indicator 1 – Extent that developments respond to the physical characteristics of sites

*Measures:*

- Number of sites requiring Chapter E Natural resources consents for land disturbance
- Amount of land disturbance – by volume removed
- Extent of site modification – cut, fill, retaining walls

### *What indicator 1 tells us*

This indicator looks at the extent to which the physical characteristics of sites are modified to accommodate new residential development. The extent of earth movements on a site has many variables such as site size relative to development size and typology, modifications to natural topography to enable access or building platforms and so on. This indicator is primarily focussed on the topography of the site, which for the majority of developments had already been modified to accommodate an existing dwelling. A resource consent is required for all earthworks so the monitoring assesses the amount of earthworks. One of the implications of earthworks can be the requirement for retaining walls to stabilise cut faces where soil is removed or to support terraces where new flat areas are created.

The AUP has provisions to manage the adverse effects of land disturbance (including earthworks). It recognises that the cumulative adverse effects from a number of small earthwork sites can be significant as can single large areas of exposed earth. The Chapter E12.2(1) objective requires that 'Land disturbance is undertaken in a manner that protects the safety of people and avoids, remedies or mitigates adverse effects on the environment'.

This indicator and its measures provide an understanding of the scope of earthworks on sites within the residential zone sample. The focus is on the consequential effects of earthworks on the site with regard to the height of retaining walls. This is an issue that has been raised by Auckland Council staff, local boards and the public.

### *Findings*

The analysis looked at the number of sites requiring earthworks. All 130 developments required some form of earthworks – even on level sites. To understand the level of land disturbance, the volume (in cubic metres) of earthworks was measured. This was not measured as a ratio of the site so provides only an indication of earthwork volumes for the sake of comparative analysis. The findings were:

- under 500m<sup>3</sup> – 50 per cent of sites
- 500-1000 m<sup>3</sup> – 20 per cent of sites
- 1000-25000 m<sup>3</sup> – 20 per cent of sites
- over 2500 m<sup>3</sup> – 10 per cent of sites.

Although the monitoring has not linked the earthworks specifically to the context of the development site size, collectively they provide an indication of the prevalence and extent of earth movements occurring on development sites. The findings showed that the majority of developments (70 per cent or more) undertook small to medium scale earthworks. The level of modification in and of itself does not necessarily represent positive or negative effects.

Site visit observations showed most developments used concrete slab foundations which require a flat site. Naturally flat sites retained the physical characteristics with most earthworks requiring no more than a surface scrape. Sites with larger volumes of earthworks tended to be sloping so the site preparation needed to create flat building platforms may have affected the site's physical characteristics. This was confirmed by some site visits where sloping sites were heavily modified with retaining walls to accommodate buildings platforms. In other instances, variation in development platforms enabled a range of housing typologies and provided effective visual and physical separation between dwellings within the site or to adjacent sites.

Some large-scale master-planned developments undertook substantial earthworks while also retaining some physical characteristics of the natural site. This included retention of natural stream courses, vegetation and topographical features. These enhanced the quality of the development.

Also investigated was the extent to which developments retained earth to enhance the site or remove the earth from the site. The measure for this was whether developers did ‘cut and fill’ earthworks (retaining the earth within the site), a cut and removal of earth, or brought fill into the site. The findings showed that 85 per cent of developments undertook cut and fill on sites in preparation for developments. Another 15 per cent cut and removed earth and one site brought in fill.

Sites undertaking substantial cut and fill operations often result in the need for retaining walls. The AUP standards only apply to retaining walls for fill – not for the cut walls. Depending on the retaining wall height and its location, these can produce poor quality site conditions – especially where they adjoin outdoor living spaces or block outlooks from habitable rooms. The combination of retaining walls on side boundaries with high fences above can have a significant impact – particularly shading. For example, a retaining wall of 1m with a 1.8m fence would have a combined height of almost 3m. Figure 3 shows the effects of a high retaining wall and fence on outdoor living spaces.

To gauge the scale of retaining walls in developments, their maximum heights were investigated. The findings showed:

- no retaining wall 20 per cent of sites
- less than 0.5m high 15 per cent of sites
- 0.6-1m high 25 per cent of sites
- 1.1-1.5m high 25 per cent of sites
- 1.6-2m high 10 per cent of sites
- 2.1-3m high 5 per cent of sites.

This shows the majority of developments within the samples analysed have some form of retaining wall. Consent plans did not always show boundary fences so it was not possible to see if these would be added above a retaining wall. Site visits provided an opportunity to see the built outcomes and consequences of retaining walls coupled with 1.8m fences – particularly on side boundaries where privacy is a factor. This was the case for a number of sites seen on site visits which created poor quality outdoor living environments and outlook spaces from habitable rooms within new developments. There are currently no provisions within the AUP to assess potential shading and outlook effects from retaining walls or retaining walls combined with boundary fences.



*Figure 3: This photo shows a high retaining wall combined with a fence can cause both shading and dominance effects on the amenity of the outdoor living space. However, privacy and dominance effects of the new development on the adjoining site are reduced with the change in level created by the earthworks. This shows there can be positive and negative outcomes from earthworks.*

## *Effectiveness and efficiency of the plan*

Most sites were already modified when they were developed for previous buildings. The findings showed that responses to the physical characteristics of the site are often driven by other factors and can affect other outcomes of the development both positive and negative.

Some earthworks contributed to better quality outcomes such as terraced building platforms. These were necessary to enable different housing types or provided visual and/or physical separation to improve privacy and outlooks or reduce dominance effects. This could benefit dwellings within the development site or adjoining sites. Some earthworks also caused outcomes that reduced the quality of the amenity for residents with depths of cut that required significant retaining walls. This caused negative effects such as loss of light into dwellings or sunlight to outdoor living spaces.

Observations from site visits to developments in the residential zones showed some sites also had high fences atop retaining walls – particularly on side or rear boundaries. The potential shading on outdoor living areas and the poor amenity of outlooks from living areas can impact the health and wellbeing of future residents.

Therefore, it is an omission that the AUP does not currently contain provisions to manage or assesses how retaining walls and fencing will interact. Resource Consent plans do not necessarily show the form or combined height of retaining walls and fences. Consents for the quantity of earthworks and site mitigation (including retaining walls) does not require consideration of the onsite effects, and the effects of cut walls.

The AUP's Daylight standard could be modified to apply to the proximity of structures such as the height of retaining walls or the combined height of retaining wall and fences. Alternatively, the Outdoor Living Space standard could consider the height of buildings and structures on adjoining sites or where there is a combined fence and wall.

In conclusion, the AUP is enabling site development efficiencies but in some cases, it can be at the cost of effectiveness in managing how development responds to the physical characteristics of the site – particularly those with significant retaining walls or where these are combined with high fences. This may be in part exacerbated by the issuing of land disturbance consents prior to consideration of land use consents.

## *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be investigated as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To manage the heights of retaining walls or combined retaining walls and fences surrounding outdoor living spaces or affecting outlook spaces consider but not be limited to the following options:

- Update the AUP Fence standard to manage the total height where retaining walls and fences are combined.  
OR
- Modify the AUP Daylight standard to apply to the height of retaining walls, and retaining walls with fences where they are built on top. Investigate the scope for:

- applying the standard to retaining walls and fences where relevant, of a specified height where the combined height or height of just the cut or fill retaining wall affects the quality of daylight, sunlight, privacy, amenity, sense of space of the dwelling or where the retaining wall and or fence is at the perimeter of outlook spaces, outdoor living spaces, or if it affects the outlook of living areas and light penetration into habitable rooms.
- outdoor living spaces could be no more than 0.5m – 1.0m below the natural ground level as that is a key indicator of whether it is likely to be enclosed by fences and retaining walls.
- The term ‘height’ in the AUP Daylight standard would need to be redefined to allow the consideration of excavations and cuts into the ground i.e. where the boundary fence is actually at the original ground level and with the wall and outdoor living space excavated out beneath that. For instances, a 2m fence and a 2m wall ‘beneath’ the ground level creating a 4m top-to-bottom effective height. Currently the AUP considers this to be only 2m high.
- identifying an appropriate separation space such as using a built height to special depth ratio (e.g. 2:1) between the façade of the dwelling and the opposing retaining wall/fence. Also
- The Outdoor Living Space standard could consider the height of buildings and structures on adjoining sites or where there is a combined fence and wall exceeding a specified maximum height.
- Consider a standard requiring horizontal stepping of fences and walls.

#### *High priority*

- Grant resource consents for land disturbances at the same time as land use consents. The separation of bulk earthworks from the activity which the earthworks are required for, prevents any ability to influence the scale of earthworks and hinders ability to change building designs when platforms have already been established. *Medium priority*
- Investigate a new standard in the AUP Chapter E12 Land disturbance – District.  
For instance, a new E12 standard could be developed and applied in conjunction with updated AUP Outlook standards for all zones and the Outdoor Living Space standard for residential zones District. This could support outlook and outdoor living spaces to achieve good quality outcomes (daylight, sunlight, privacy, spaciousness, quality amenity) where adjoined by retaining walls and fences constructed on top of them. *Medium priority*
- investigate the application of a maximum retaining wall height or/and length where negative effects on the built form or site amenity can be identified. *Medium priority*

To manage land disturbance outcomes more effectively in residential developments, undertake further research to consider the following:

- Investigate whether there is a causal link between the scale of earthworks and the application of the rolling height limit. *Low priority*

## Indicator 2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings

### *Measures for residential zones and Business – Mixed Use zone*

Built form:

- Site size and shape (influence of frontage width)
- Height and extent of non-compliance (by zone)
- Number of storeys (by zone)

- Building coverage and extent of non-compliance (by zone)
- Number of Height in Relation to Boundary (HIRB) non-compliances

Appearance and response to surroundings:

- Variation in roof form or roof ridgeline
- Variation in façade/s – modulation with recessions and protrusions
- Continuous building length
- The percentage of dwellings within a development that had the primary living outlook facing towards adjoining sites
- Whether windows and balconies were located and offset to avoid direct views into adjacent dwellings and private outdoor spaces
- Whether dwellings respond positively to the street – including orientation, façade treatment and minimal garage or carpark dominance

### *What indicator 2 tells us*

In addition to delivering on the RPS 2.3 Quality built environment objectives, this indicator addresses RPS Issues B2.1. where growth seeks to:

- (1) enhance the quality of life for individuals and communities
- (6) maintain and enhance the quality of the environment, both natural and built

The monitoring also evaluated aspects of B2.4 Residential growth topic. This included the extent of intensification to achieve a quality compact urban form as well as attractive, healthy and safe housing with a range of choices to meet the diversity of Aucklanders needs.

The ‘built form’ aspect of this indicator provides an insight into the design, form and scale of development in the residential zones. Data on site size was not collected for the Business – Mixed Use zone sample.

Auckland’s existing residential areas are historically very large urban blocks. Consequently, there are at least as many rear sites as there are front sites (often there are more rear sites than fronts). Many rear sites are also larger and include more marginal land. The strong focus on residential developments fronting streets and public open spaces results in less consideration for rear sites developments where there may be negligible or modest effects on streets.

This can be contrasted with new greenfield residential subdivisions where blocks are often smaller and where rear lots are far less prevalent. Most sites get the guaranteed spatial amenity and rhythm of street widths for outlook. This also helps limit how long building rows can get.

The design, form and scale of development is dictated by a combination of factors including the site size and shape, building coverage, height limit and the height in relation to the boundary. Collectively these create the envelope within which buildings can be constructed.

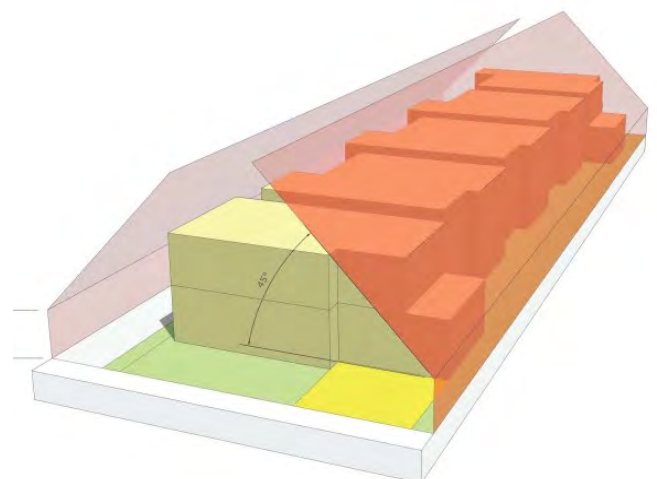


Figure 4 illustrates the building envelope for an 18m wide x 60m deep site with an 8m height limit using the Height in relation to boundary (HIRB) standard in the MHS zone. In the residential zones, the building coverage and height limits progressively increase with the THAB zone supporting more intensive development near centres and transport corridors.

*Figure 4 Diagram shows a building envelope using the HIRB (red) applied to a site with an 18m width – illustrates how building bulk at upper floors is managed by this standard.*

The second aspect of the indicator considers the appearance of development. To minimise subjectivity in the assessment of appearance, the measures focus on elements of design (as opposed to the *stylistic aesthetics* of a development) that contribute to well-designed housing. These elements draw from Council's Auckland Design Manual which provide guidance on best practice housing design. Site observations were also valuable for assessing the quality of development.

The third aspect of this indicator considers how well building design responds to the surroundings. This includes:

- the appearance of building form when viewed from the street
- how a development responds to adjoining sites – considering the existing dwelling and the potential form of future higher density developments should that site be redeveloped. Visual privacy between sites was a key aspect of this.

## Findings

### Site width, size and shape

In residential zones, Auckland's subdivision pattern is characterised by long narrow sites. Another common site form are rear sites accessed down driveways.

The size and shape of sites influences the amount and form of multi-dwelling development. An Auckland Council GIS analysis of site widths in the residential zones showed the most common site width is between 15-20m and a shape factor is usually a dimension ratio of 2.5:1 or 3:1. This means that a site with a frontage width of 18m will have a depth of around 45m.

Findings from the monitoring sample showed the most common site sizes were:

- 600-800m<sup>2</sup> – accounting for 10 per cent of developments
- 800-1100m<sup>2</sup> – accounting for 40 per cent of developments.
- 3000-4000m<sup>2</sup> – accounting for 10 per cent of developments

The remaining 40 per cent of site sizes not accounted for above, were disparate and ranged widely from 500m<sup>2</sup> – 25,000m<sup>2</sup>.

There were very few rear sites in the residential sample. One of the issues with rear sites or buildings at the rear of sites is many of the standards and assessment criteria influencing quality design are focussed on buildings positively contributing to streets. Without a street frontage, these design criteria do not apply to developments on rear sites so the AUP assessment for quality can be lower than on front sites.

Although information on site amalgamation was not specifically collected, observations when reviewing the data showed that most of the parent sites analysed were individual lots, typically with one house. The AUP has no influence on site amalgamation. Large scale developers sometimes amalgamated sites. Within the sample:



- 70% of developments were single sites
- 10% of developments were two amalgamated sites
- 10% of developments were 3-4 amalgamated sites
- 10% of developments were multiple amalgamated sites or large-scale sites with multiple houses in a single land parcel ownership (the majority of these were Kainga Ora developments – turning low density state housing neighbourhoods into comprehensive medium-density housing).

Site width is also a key determinant on the type and amount of housing, access and orientation of dwellings. The most common site widths in the sample were:

- 15-18m site width – 35 per cent of developments
- 19-25m site width – 25 per cent of developments.
- 30-40m in nearly 15 per cent of developments – many of these were corner sites.



*Figure 5: The limited width of this site influenced the number of street facing dwellings and the site arrangement of buildings around vehicle access and parking areas. The central driveway is the primary access to rear carparking and a row of terraces at the rear of the site.*

On narrow sites, building to the full height limit in the MHU and THAB zones is often constrained by the height in relation to boundary (HIRB) standard. This is a significant issue in the THAB zone and for apartment developments seeking more height on narrow sites.

Wider sites give developers more design flexibility, the ability to concentrate height in the centre of the site, away from side boundaries and limit the risk of limited notification. These sites are sought after by developers – particularly in THAB zones.<sup>3</sup>

Corner sites are popular for more intensive residential development. The AUP height in relation to boundary standard does not apply to street frontages so taller buildings can be built towards the two street boundaries. Nearly 30 per cent of developments in the sample were located on street corners. Observations from site visits confirmed that corner sites were popular locations for apartments and terraces.

<sup>3</sup> July 2021 *Herald-One Roof* article. <https://www.oneroof.co.nz/news/39711>

## Built form

### Height

Height is another key determinant of built form. This is a core standard for developments with four dwellings or more and for all dwellings in the THAB zone. The AUP sets height limits in metres rather than storeys. This enables more design flexibility which may include more floors to use the site more efficiently – particularly on sloping sites. Conversely, the zone descriptions refer to building height by the number of storeys because this is how most people experience height. The flexibility enabled by using meters can result in the number of storeys varying within the height limits.

The monitoring looked at both height in metres and storeys. The three residential zones also allow for 1m extra roof height to encourage better design (and avoid flat roofs).

Translating the AUP height limits to storeys generally produces two storeys within the 8m height limit in the MHS zone, three storeys within the 11m height limit in the MHU and up to five storeys within the 16m height limit in THAB. In the Business – Mixed Use zone 6-7 storeys are possible within the 18m height limit.

The combined findings across the three residential zones showed 3 per cent of developments in the sample were one storey, 65 per cent were two storeys and 30 per cent were three storeys. Only 2 per cent of developments in these zones were between 4-6 storeys. This contrasts with the Business – Mixed Use zone where more height and less restrictive height to boundary standards enabled 60 per cent of developments to achieve 4-6 storeys (up to 18m)

The key findings by zone were:

- MHS – 90 per cent of developments were two storeys or 8m.
- MHU – 60 per cent of developments were two storeys (8m) and 35 per cent were three storeys or 11m.
- THAB – 25 per cent of developments were two storeys (8m), 60 per cent were three storeys (11m) and 10 per cent were between 4-6 storeys (up to 18m)
- Business – Mixed Use – 30 per cent of developments were 2-3 storeys (11m); 60 per cent of developments were 4-6 storeys (up to 18m); 10 per cent of developments were 7-11 storeys (up to 35m).

These findings show the majority of developments are 2-3 storeys in all the residential zones. This reflects the dominance of terrace housing and ‘walk-up’ apartment building typologies (typically three floors). This contrasts with the Business – Mixed Use zone where the majority of developments are taller apartment buildings with lift access. As a result, there is no ‘clear’ delineation in terms of built form, especially with regards to height, between the residential zones. This suggests that the current provisions (in combination with how the development sector is responding to them) are delivering developments which are largely similar irrespective of zoning. The limitations of the reporting programme means that it does not examine how the development sector responds to the provisions – which is another key factor.

Less than 10 per cent of developments in the residential zones did not comply with the height limit and most were for less than 1m. Data from the resource consents database showed this finding is consistent with the 5 per cent of height standard non-compliance seen in commensurate developments across Auckland. This shows that height limits were largely complied with in all residential zones.

This could be for two reasons. The first is that the activity status of infringing the height and the HIRB standards mean that as core standards, they must be complied with or may be subject to notification depending on the effects of the non-compliance. The second is building height trends observed from findings across the different residential zones suggest that the relationship between site width and HIRB standards (see below) has a stronger influence on building height than the height limit itself.

In the Business – Mixed Use zone, height is measured differently to the residential zones. In this zone, 18m is the occupiable building height plus an additional 2m unoccupiable building height for roof forms that enables design flexibility. The habitation of this additional ‘unoccupiable height’, is often contentious in applications for developments in this zone. Around 20 per cent of developments in this zone infringed the height standard by up to 1m. Another 20 per cent of developments infringed the height limit by more than 2m to accommodate more floors. Most of these were located near the city centre or metropolitan centres where greater height is enabled.

There are other issues worthy of further investigation regarding height in the Business – Mixed Use zone. For instance, the costs and delay associated with limited notification can affect a developer’s decision to not infringe height, even if it was of a typology or scale that was attractive to the market. . Another issue is around the time and costs of larger scale development. Additional height may be necessary to achieve a viable development but the uncertainty of notification is too great a risk. It is indicative of a very sensitive market where there are very fine margins.

### Height in relation to boundary standards

The AUP ‘height in relation to boundary’ standard (HIRB) is a core standard that must be complied with for developments of four dwellings or more. The purpose of the standard in the MHS and MHU zones is to manage the height and bulk of buildings at boundaries to maintain a reasonable level of sunlight access and minimise adverse visual dominance effects to adjoining sites.

In the THAB zone, the purpose of the standard is to minimise the adverse effects of building height on adjoining sites (i.e. dominance and shading) and reduce the overall visual dominance of buildings at upper levels. There are two issues concerning the HIRB and Alternative Height in relation to Boundary (AHIRB) standards. The first is the extent of non-compliance with the HIRB and the use of the AHIRB. The second is the performance of the HIRB standard to minimise dominance and shading effects (THAB) and maintain sunlight access to immediate neighbours (MHS/MHU). The findings showed 60 per cent of developments (across all three residential zones) in the sample, did not comply with the HIRB standard. Analysis of the council’s resource consents database showed this finding is consistent with 55 per cent non-compliance with the HIRB standard seen in commensurate residential developments across wider Auckland. While the quantum of non-compliance is significant, the extent of infringements for each site was not considered significant in consenting processes. It is likely that developers want to avoid notification and therefore comply with the HIRB standards where possible. Small variances are likely to be considered low risk when the consent is sought.

The AHIRB standard allows for more generous building scale for the first 20m from the street boundary. The purpose of the AHIRB, is to enable the efficient use of the site by providing design flexibility where a building is located close to the street frontage, while maintaining a reasonable level of sunlight in the MHS and MHU zones and a reasonable level of daylight access in the THAB zone. The findings showed that 85 per cent of developments complied with this standard. This indicates that the standard is effective at encouraging building bulk towards the front of the site.

The second issue is the performance of the HIRB and AHIRB as standards for managing effects (such as visual dominance, loss of privacy and shading or loss of daylight) on adjoining sites in residential zones. Members of the public have raised concerns regarding the effects of new development on

sunlight access to neighbouring sites. Winter sun was considered the most important for residents' health and energy efficiency (e.g., lighting, passive heating of dwellings and drying washing outside). Access to sun is also important for dwellings within development sites.

The MHS and MHU zone assessment criteria for the AHIRB standard consider shading at the equinox for four hours of sunlight to be retained between the hours of 9am – 4pm for varying proportions of the outdoor space on the adjoining site. In the THAB zone, a 'reasonable' amount of daylight access to the immediate neighbours is stated in the purpose statement for the AHIRB standard but there are no parameters for assessing it. Without this, new developments in the THAB zone may not sufficiently mitigate effects to the same extent as the other residential zones. Any changes to the standard would also need to consider its application to developments on sloping sites.

In terms of the performance of the standard, observations from the analysis of shading diagrams in some developments showed that sunlight admission to adjoining sites was more restricted in mid-winter by new developments (buildings or structures) than at the equinox. An analysis of 2-3 storey or 8-11m developments on sites with narrow widths of less than 20m showed that non-compliance was minor for 2-3 storey buildings at the equinox. However, if those same developments were assessed against the winter solstice, the effects on adjoining sites would be more significant. At the equinox the 4pm afternoon sun angle (at 30 degrees) is equivalent to the sun angle at noon on the winter solstice. Shading on outdoor living spaces can also be caused by high fences.

The diagrams below show the difference in shading effects on the adjoining site and on dwellings within the site between a complying 3 storey building (11m) in the THAB zone at the 22 Sept equinox and 22 June winter solstice. The AUP does not have assessment criteria regarding shading of adjoining sites in the THAB zone.



Figure 6 The shadow diagrams for this HIRB complying three storey apartment building in the THAB zone show the extent of shadow on the adjoining site at the equinox (22 Sept) and winter solstice (22 June).

Some of the legacy district plans had provisions requiring assessment for mid-winter sun for dwellings within the site. For example, the Waitākere District Plan design guidelines for apartments specified the following<sup>4</sup>:

<sup>4</sup> <http://www.aucklandcity.govt.nz/council/documents/districtplanwaitakere/text/text/urbandesignrules.pdf>

*“habitable rooms and outdoor spaces allow for solar admission and sun access during the shortest winter day (As a guide habitable rooms for at least 70 percent of the units should receive sun access for a minimum of three hours between 9 am and 3 pm on the winter solstice (June 21);”*

Other legacy district plans in the Auckland region (e.g. Manukau, Auckland, Waitākere) used ‘recession planes’ with angles tailored to different boundary orientations (north, east, west, south) of development sites. These were designed to manage dominance and shading effects of new development on adjacent sites. The AUP’s HIRB and AHIRB standards do not have the flexibility of these methods to respond to this level of site condition.

In the Business – Mixed Use zone, the HIRB standard was not applicable to 60 per cent of the residential developments. This is because it is only applied where a site abuts a residential zone. Of those development sites subject to the HIRB standard, 35 per cent complied with it and 5 per cent infringed it. This zone relies primarily on a setback standard that steps the building 6m away from the side and rear boundary when above 27m in height.

### Building coverage

The purpose of the building coverage standards is to manage the extent of buildings on a site to achieve the planned suburban (MHS, MHU) or urban (THAB) character of buildings surrounded by open space to varying degrees according to a zone’s intensity. Building coverage is a key standard that governs the bulk of buildings – in combination with the height and HIRB/AHIRB standards.

The diagram below shows the relative differences in building coverage between residential zones. Most legacy district plans applied a maximum 35% building coverage to suburban zones. This is the same as the AUP Single House zone.



*Figure 7. This diagram shows the percentage of building coverage (black area) for each residential zone applied to a theoretical 600m<sup>2</sup> site with an 18m site width and 33m site depth (space around the building is shown by the grey area). This illustrates the relative difference in building to open space ratio between the zones enabled through the building coverage standard.*

Building coverage in the AUP is measured using the net site area. The AUP standards for the maximum building coverage vary according to zone (MHS 40 per cent of net site, MHU 45 per cent of net site, THAB 50 per cent of net site).

The findings on the building coverage standard are summarised for each zone below:

Zone	Findings
<b>MHS</b>	<ul style="list-style-type: none"> <li>• 65 percent of developments complied with the 40 percent building coverage standard</li> <li>• 15 percent infringed the standard by up to 5 percent.</li> <li>• 20 percent infringed the standard by between 5-10 percent.</li> </ul>
<b>MHU</b>	<ul style="list-style-type: none"> <li>• 75 percent of developments complied with the 45 percent building coverage standard</li> <li>• 5 percent infringed the standard by up to 5 percent.</li> <li>• 10 percent infringed the standard by between 5-10 percent</li> <li>• 5 percent infringed the standard by between 11-15 percent.</li> </ul>
<b>THAB</b>	<ul style="list-style-type: none"> <li>• 65 percent of developments complied with the 50 percent building coverage standard</li> <li>• 5 percent infringed the standard by up to 5 percent.</li> <li>• 20 percent infringed the standard by between 5-10 percent.</li> <li>• 10 percent infringed the standard by between 11-20 percent.</li> </ul>

The findings for the residential zone sample show that non-compliance with the building coverage is increasing the size of buildings relative to surrounding open space. Non-compliance of 5 percent or more would create building scales commensurate with more intensive residential zones. Although the effects of not meeting the quantitative specification for this standard were not considered significant, the cumulative effects of larger scale buildings and less surrounding open space have the potential to influence the planned built form of the residential zones.

There are no specific requirements in the AUP directing where the building bulk is located within the site. However, the HIRB and yard standards usually ensure there are setbacks from boundaries. Buildings can also be designed with central courtyards or other building forms that create the appearance of bulkier building form while still complying with the standard. This shows that building bulk is not always caused by greater building coverage.

Building coverage is not a core standard for 4 or more dwellings so mitigation can be negotiated. Non-compliance with the building coverage standards enables bigger floor plates with consequently bulkier buildings relative to open space – especially where height limits are more generous. This can exacerbate the cumulative effects of larger scale buildings on planned built form as noted above.

Infringements to the building coverage standard that encroach on the amount of private open space can affect compliance with other standards. For instance, a reduction in open space could compromise the amount of outlook space or outdoor living areas. The AUP is not effective at managing the effects of consequential encroachment by building coverage on landscape area and site amenity. However, infringements to landscape area or outdoor living space is considered under separate assessments and can address issues caused by a reduction in open space.

The effects of progressive increase in building coverage towards the higher density residential zones could have a significant influence on the character of an area with buildings that are bulkier with less surrounding open space than in the past. By way of comparison, under the legacy district plans, most residential areas in Auckland applied 35 per cent building coverage to a defined net site area for each residential zone.

Further to this, the 35% building coverage standard in legacy district plans was in relation to a set net site area e.g. a 500m<sup>2</sup> vacant lot, with most plans requiring a minimum site size. Now the coverage is in relation to a parent site through the land-use led approach in the AUP, which after subdivision and the creation of child sites results in much higher building coverages. This is discussed further below.

The lower ratio of built area to open space enabled in the past (which still characterise most existing neighbourhoods) can appear a stark contrast to developments with 40-50 per cent building coverage enabled by the AUP.

The findings show that the zone standards in the AUP can be said to be efficient in terms of enabling land use, scale and density. Neighbourhood character will continue to evolve and align more closely with the zone descriptions as more intensive development in the form of terrace housing and apartments occur.

The Business – Mixed Use zone does not have a building coverage standard. Side yards and other standards that manage the developable site area and are only applied where sites abut residential zones.

#### **Building coverage per site following subdivision**

The outcomes from the land-use led subdivision approach enabled by the AUP were evaluated to understand the extent to which a zone's building coverage standard would still apply to the newly created sites. In this analysis, the 'parent' site refers to the total site prior to subdivision and a 'child' site is the product of the subdivision of the parent site. Most calculations for assessing standards in resource consents are applied to the parent site, which would include for example, space set aside for public roads or jointly owned access lots created following subdivision. These may be for the 'gross' site – the total site or the 'net' site.

For a resource consent in the residential zones, building coverage is calculated using the net site area of the parent site. This is done prior to subdivision into smaller 'child' sites following completion of the development. Those developments which exceeded building coverage tended to produce subdivided sites which also exceeded the zone standard. The findings showed building coverages for some subdivided 'child' sites were between 60-70 per cent of the site. This was particularly evident in mid-terrace dwellings. The amount of net site building coverage per dwelling indicates the level of intensity that some developments are achieving.

To evaluate the extent of this, the child site with the highest building coverage for each development was recorded. The child site with the highest building coverage was typically mid-block in a row of terraces. This evaluation was not applied to apartments as these are unit titled with a common share of the parent site (a third of MHU developments and half the THAB developments were exempt).

The key findings were:

Zone	Findings
<b>MHS</b>	<ul style="list-style-type: none"> <li>• 95 percent of developments had at least one subdivided ‘child’ site that exceeded the maximum 40 percent building coverage for that zone.</li> <li>• Following subdivision, building coverages ranged from 41 percent to 95 per cent for a child site.</li> <li>• The most prevalent (65 per cent of the sample) had child sites with building coverages between 41 percent – 60 percent. This is greater than the maximum building coverage for the MHU and THAB zones.</li> </ul>
<b>MHU</b>	<ul style="list-style-type: none"> <li>• 90 per cent of developments had at least one subdivided site that exceeded the maximum 45 per cent building coverage for that zone.</li> <li>• Following subdivision, building coverages ranged from 46 per cent to 55 per cent for a child site.</li> <li>• The most prevalent (65 per cent of the sample) had child sites with building coverages between 46 per cent – 60 per cent of the site.</li> </ul>
<b>THAB</b>	<ul style="list-style-type: none"> <li>• 40 per cent of developments had at least one subdivided site that exceeded the maximum 50 per cent building coverage for that zone.</li> <li>• Following subdivision, building coverage ranged from 51 per cent to 70 per cent of the site for a child site.</li> </ul>

This demonstrates the effectiveness of the plan to enable intensification and provides data on the size of sites following subdivision. Infringements to some standards may have implications for the functionality of dwellings on smaller sites.

### Appearance

The AUP relies on assessment criteria rather than standards for building appearance. These include attractiveness and safety of the street and visual dominance. For four or more dwellings there are specific matters of discretion including building intensity, scale, location, form and appearance. Auckland Council also provides design guidance in several forms. Developments with more than 20 dwellings are assessed by specialists including urban designers. Large scale developments may be reviewed by the Auckland Urban Design Panel who are a group of industry experts who provide independent advice to developers. Council’s Auckland Design Manual also provides design guidance.

The monitoring analysis of developments in the residential zones considered a range of features that contribute to the appearance of buildings, reduce visual dominance effects on adjoining residential sites, and create attractive and safe streets. These are:

- Variation in façade/s – modulation with recessions and protrusions
- Variation in roof form or roof ridgeline
- Continuous building length

The variation in façade design using modulation with recessions and protrusions to create more visual interest was evident in 80 per cent of developments. A further 15 per cent of developments had partial variation in façade design.





*Figure 8: This apartment development shows good variation in façade design and roof modulation.*

The findings showed that 60 per cent of developments had variations in the roof form or roof ridgeline and 25 per cent had partial variations. This is particularly desirable in terrace or townhouse developments. The remaining 15 per cent of developments had no variation in roof form but the majority of these were apartment buildings.

Continuous building length can be extensive in multi-dwelling developments of terraces and to a lesser extent, apartments. This can create large-scale wall-like buildings which, if lacking appropriate design elements, can result in overly dominant building forms, a non-human scale environment and undermine the future planned quality of built form anticipated for a zone in the AUP. There are no standards specifying how long a building can be.

The findings show:

- 50 per cent of developments had building lengths of 20m or less
- 25 per cent had building lengths between 21-30m and
- 15 per cent had lengths between 31-40m.
- 10 per cent of building lengths were greater than 40m and one of these was over 60m.



*Figure 9: This 11 dwelling terrace housing development on a 809m<sup>2</sup> site in the THAB zone has a site width of 15m and 54m depth. There is no on-site parking, so a footpath provides access to dwellings and the majority of terraces face the adjoining site. There are three buildings of different lengths - 6.5m, 21.4m, 17m with two spaces of 1m and 1.4m between the three buildings.*

The findings reflect the residential monitoring sample which had approximately 50% of developments as smaller scale developments of 4-9 dwellings. Larger scale developments were more likely to have longer building lengths. Building lengths greater than 40m (i.e. measured perpendicular to the street, which occurs frequently given Auckland's historic site dimensions) can influence privacy, dominance and shading effects on adjoining sites and neighbourhood character. The significant length of some buildings highlights one of the problems with developing on long narrow sites, with the average Auckland site length being 45 metres. This is particularly evident with terrace housing developments. Excessive building length can be a greater issue for terrace housing than apartment developments as the latter can achieve yield via height.



*Figure 10: A wide street frontage enables rows of terraces to face the street with individual entrances and landscaping. Short building lengths and spaces between buildings enable daylight to more rooms within dwellings.*

Different measures were used to evaluate appearance in the Business – Mixed Use zone. Visual dominance created by the bulk and height of apartment buildings was analysed in terms of façade quality from all aspects. These were evaluated using the following criteria – the presence of façade modulation, arrangement of windows, balconies and architectural elements. There are effective assessment criteria in the Business – Mixed Use zone. Refer to Appendix D.

Based on the inclusion of these elements, the analysis showed that 50 per cent of buildings were considered to have attractive facades on all four sides. This is important as the scale of apartment buildings means they are visible from a multitude of public and private viewpoints. The remaining 50 per cent of developments were considered to be partly designed to be viewed from a multitude of viewpoints and included two or three facades with windows, façade modulation or attractive wall treatments.

Specialist reports by council’s urban designers were extracted from consent files to determine whether there was support for developments in the Business – Mixed Use zone. Not all developments underwent this level of scrutiny due to the limitations on resourcing. Auckland Council’s Urban Design Panel provided another level of scrutiny – usually for the largest or more significant developments.

A challenge for the AUP and the planning process is the separation of personal preferences when controlling for building appearance. The AUP uses subjective terms like “attractive” which are difficult to define as it can be highly personal. A more objective and neutral assessment such as “visual interest” “variation” or standards governing continuous surface planes (i.e. mandating modulation) might be more effective. Even with refinements to the AUP, there will continue to be uncertainty on what constitutes a quality appearance through the design, application and consenting process.

## Response to surroundings

Ensuring a good level of privacy for dwellings within a site as well as those on adjoining sites is a concern for many residents in the residential zones. The RPS qualifies the 'intended use' and 'planned built character' which may suggest that change is to be expected with more intensification. The residential provisions such as yards, HIRB and Outlook Space are intended to manage the effects of new development on the privacy of adjoining sites. The consenting process evaluates the specific site and adjoining site conditions and the proposed development design to determine whether reasonable privacy is being achieved. The orientation and location of windows and location of outdoor living space are assessed.

Many developments on long narrow sites result in living areas being designed with outlooks that face towards adjoining sites on the side boundaries (and often over driveways too). While they comply with the AUP Outlook Space standard, this can create a sense of privacy loss on the adjoining site. This can affect visual and acoustic privacy. The analysis looked at the percentage of dwellings within a development that had the primary living outlook facing towards adjoining sites.

The findings showed that half of the developments analysed had between 50 per cent to 100 per cent of their dwellings facing adjoining sites. A quarter of all developments were designed to avoid living area outlooks facing adjoining sites.



*Figure 11: This development has four dwellings with the principal living area and outdoor living space in the form of a balcony at the first level, overlooking their driveway and facing the adjoining site.*

The AUP Outlook Space standard requires dwellings in the residential zones to have a reasonable standard of visual privacy between habitable rooms of different buildings, on the same or adjoining sites. To assess whether building designs were providing adequate privacy, the analysis looked at whether windows and balconies avoided direct views into adjoining dwellings and private outdoor spaces. The AUP has assessment criteria to assess the extent to which the height, bulk and location of the development maintains a reasonable standard of sunlight access, privacy and minimises visual dominance to adjoining sites. The assessment criteria for the AHIRB looks at the extent to which

direct overlooking of a neighbour's habitable room windows and outdoor living space is minimised to maintain a reasonable standard of privacy, including through the design and location of habitable room windows, balconies or terraces, setbacks, or screening.

The monitoring investigated some of the effects of new development on adjoining sites such as privacy. The findings showed that 75 per cent of developments designed the majority of dwellings to avoid direct views from windows into adjacent dwellings and their private outdoor spaces. A further 20 per cent partially achieved this outcome. This was better achieved when the principal living area, outlook space and outdoor living spaces were at ground level. It was more challenging to retain privacy between dwellings and adjoining sites when the principal living area, outlook space and outdoor living area in the form of a balcony were at the first floor or above. When balconies face side boundaries, there can be privacy issues if the balcony is too close to the boundary. This is because mitigation is more challenging to achieve compared to ground level indoor and outdoor living spaces where a fence or landscaping can provide privacy.

The quality of a building's appearance from the street contributes to the amenity of the neighbourhood. The analysis looked at whether dwellings responded positively to the street – including orientation, façade treatment and minimal garage or carpark dominance.

The findings showed that 70 per cent of residential zone developments had dwellings with facades fronting the street and with minimal garages or carparking visible. This contributed to a more attractive street environment. A further 20 per cent partially achieved this outcome.

### **Comprehensive evaluation of built form quality - from site visits**

Site visits to 49 developments in the MHS, MHU and THAB zones provided the opportunity to evaluate whether quality developments anticipated by resource consents were actually being delivered. Developments were appraised from the street against a set of site criteria that aligned with the monitoring indicators and measures. Site visits were undertaken by a team of planners and urban designers. Refer to Appendix C for site appraisal criteria. This method relied primarily on observations and group discussions to determine whether the combined form, scale and appearance of a building were demonstrating quality outcomes appropriate for the site, neighbourhood and zone.

The ratings spanned from 'very good' to 'unanticipated outcomes'. Unanticipated outcomes signalled that there were other issues, such as site conditions, topography, and orientation that affected the overall quality of the development.

- MHS zone – 60 per cent of developments were rated as 'good', 35 per cent were rated as average
- MHU zone – 45 per cent were rated as 'good' or 'very good', 40 per cent were rated as average
- THAB zone – 35 per cent of developments were rated as 'good' or 'very good', 20 per cent were rated as average



Figure 12: These photos show residential zone developments from site visits that were assessed as being good or very good (they are not shown in any particular order).

All developments visited had some merit but those that were considered below par and displayed unanticipated outcomes were primarily in the MHU zone (15 per cent of developments) and the THAB zone (35 per cent of developments). In these zones, there were often issues around site conditions (site proportion, topography, orientation), intensity of development (housing typologies at scales that were incompatible with the site) and effects (privacy, shading, dominance) on dwellings within the site, on adjoining sites or the street interface.

The findings showed that more intensive zones had a greater disparity in the quality of developments. In the MHU and THAB zone, there were issues regarding the intensity of development, scale and proximity of development fronting the street, effects on adjoining sites or the street interface.

There were no site visits to Business – Mixed Use zone developments due to resourcing constraints.

### *Effectiveness and efficiency of the plan*

The extent to which the AUP ‘maintains and enhances the quality of the environment, both natural and built’ (RPS B2.1. Urban Growth and Form issue (6)) is variable. The analysis considered how the site characteristics influence built form and the standards which collectively manage building bulk in the three residential zones. It also looks at the appearance of residential development. The plan Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 43

varies in its effectiveness to achieve quality built outcomes with different standards and development conditions.

In the residential zones, the application of a generic set of residential standards to multiple housing typologies in varying scales to Auckland's existing subdivision pattern of long narrow sites or rear sites is limiting the plan's effectiveness. Site width, shape, size and slope have become key determinants of quality outcomes in many developments, particularly in zones where there is a no density approach to development.

One of the challenges is the extent to which standards can be applied to achieve quality outcomes on long narrow sites, rear sites or sloping sites. Site characteristics can exacerbate issues with excessive building length, the ability to achieve height limits with the restrictions of the HIRB standards and effects on neighbouring sites. The design of apartments and terrace housing or medium and large-scale developments within the constraints of the city's subdivision pattern maybe more effective with standards tailored for these housing typologies.

### *Height and height in relation to boundary*

The findings have shown that there is general compliance with the height limit as well as building heights in the sample - being generally consistent with the zone descriptions. Specifying height limits in metres can enable an extra storey in response to site conditions (such as slopes) and more design flexibility. However, the discrepancy between building height being measured in metres and the zone descriptions referring to height in storeys is potentially leading to confusion as sometimes site conditions (such as slopes) can enable an extra storey within the height limit.

The Height in Relation to Boundary (HIRB) standard aims to manage the effects of dominance and shading on adjoining sites. There is less compliance with the HIRB standard indicating that either this development standard is less effective or there could be market pressures to achieve greater development potential. The findings showed 60 per cent of developments in the sample (across all the MHS, MHU and THAB residential zones) infringed the HIRB.

This finding was calibrated against commensurate developments across Auckland in the council's Resource Consent Database. The extent of non-compliance with the HIRB standard from the monitoring sample (60%) are consistent with the findings from council's Auckland-wide database (55%). The likely cause of non-compliance is the challenge of achieving the permitted height with housing typologies that are poorly suited to the constraints of Auckland's typically narrow long sites. This occurs particularly in developments of three storeys or higher in the MHU and THAB zones. In many cases, the infringements were small. This is probably because non-compliance with the HIRB standard is subject to notification.

The extent to which the AUP manages shading, daylight or dominance effects on adjoining sites through the HIRB standard is limited. The standard does not have the dexterity of the rules, methods or assessment criteria that were in the legacy district plans to respond to different site conditions or compass orientation. Furthermore, MHS and MHU zone assessment criteria apply to the sun's equinox rather than the winter solstice when sun is at its lowest angle. In the THAB zone, daylight access and reducing visual dominance effects to immediate neighbours are the only consideration - not shading effects. Due to the scale of new development in the residential zones, inadequate management of the effects on adjoining sites could impact on existing dwellings as well as reduce their viability for future quality redevelopment. This can affect the health, safety and wellbeing of residents living in sites within new residential developments as well as those in adjoining sites.

## *Appearance*

This monitoring uses a number of architectural design elements to objectively evaluate the appearance of developments. Elements include modulation of building facades, variation in rooflines and the dominance of carparking. The majority of developments included variation in the façade design to create more visual interest. Most also had some form of variation in rooflines. Site visits confirmed that the majority of residential developments were achieving average to good outcomes in their appearance – particularly when viewed from the street.

The length of buildings was investigated because terraces and apartments can create large-scale wall-like buildings. This can affect adjoining sites and influence neighbourhood character. The Proposed Auckland Unitary Plan (PAUP) proposed a standard to limit building length to manage the length of buildings along side and/or rear boundaries and the separation between buildings on the same site. The purpose of the standard was to visually integrate the building into the surrounding neighbourhood. This standard was not included in the AUP.

This analysis has shown that 25 per cent of developments have continuous building lengths greater than 40m. Limiting building length can alleviate the effects on privacy, dominance and shading on adjoining sites.

Site visits evaluated developments from the street against a set of site assessment criteria by a team of planners and urban designers. The findings showed that the majority of developments in the MHS and MHU zones were producing average to good or very good outcomes to demonstrate the AUP's effectiveness particularly regarding street frontages. Those developments that were considered below par and displayed unanticipated outcomes were primarily in the MHU zone (15 per cent of developments) and the THAB zone (35 per cent of developments). In these zones, the effects of building length were often exacerbated by issues around site conditions (site proportion, topography, orientation), intensity of development (housing typologies at scales that were incompatible for the site). In some cases, the effects of long and continuous building lengths (such as privacy, shade, dominance) on adjoining sites or the street interface were more apparent in developments with more height and greater numbers of dwellings.

## *Responding to surrounds*

This section reflects on whether new developments in the residential zones are 'enhancing the quality of life for individuals and communities' (RPS B2.1 issue (1)). To do this, the monitoring looked at how developments responded to surroundings. This included adjoining sites and the street. Site visits enabled developments to be comprehensively evaluated, taking into consideration their appearance and interface between adjoining sites and the street.

The AUP's core standards for the MHS, MHU and THAB zone developments of four or more dwellings (e.g., height, HIRB, yards) are subject to notification tests. These core standards were selected by the IHP for this purpose. However, the monitoring has shown that with the level of intensification occurring, these standards are not always managing the effects on adjoining sites as efficiently as the legacy district plans. This may in part be due to the limitations of the AUP core standards which to be effective in managing effects on neighbouring sites, need to include other standards in the assessment. These are not identified as 'core' standards in the AUP. For instance, in assessing the HIRB, sunlight access to adjoining sites could be a core part of the assessment of effects in the MHS and MHU zones. The AUP measures shading at the equinox rather than the winter solstice when living areas most need the sun.



The IHP limited the number and scope of core standards to minimise possible constraints on enabling development. The findings for the residential zones showed that half of developments in the sample had between 50 to 100 per cent of their dwellings facing adjoining sites. The majority of dwellings were designed to avoid direct views from principal living area windows into adjoining dwellings and private outdoor spaces. This was usually achieved by locating the principal living area outlook and outdoor living space at ground level with a perimeter fence. Where these were located at the first floor or higher and included a balcony, privacy to adjoining sites was more difficult to achieve. Habitable rooms (such as bedrooms) often overlooked adjoining sites from upper floors of dwellings.

The quality of a building's appearance from the street contributes to the amenity of the neighbourhood. The analysis looked at whether dwellings responded positively to the street – including orientation, façade treatment and minimal garage or carpark dominance. Seventy per cent of developments had attractively designed facades fronting the street with minimal garages or carparking visible. A further 20 per cent partially achieved this outcome.

The residential zones in the AUP have a set of common standards for the majority of residential development regardless of site conditions, scale and development typologies. The effective application of AUP standards becomes more challenging when applied to medium to large scale residential developments with typologies such as terrace housing and apartments that require additional considerations to respond well to Auckland's existing subdivision pattern – which was premised on a single standalone house with a garden.

It can be a challenge to achieve quality outcomes if the site size and configuration of the site, scale of development and housing typology are not compatible. These factors, combined with the intensity and scale of development enabled by the AUP's unlimited density provisions do not always produce quality outcomes.

The zone standards in the MHS, MHU and THAB zones enable intensive medium to large scale development. However, this can be difficult to achieve when the standard for building coverage (and other elements such as driveways) leave inadequate space on the site to provide for landscaping of a scale to provide privacy or increased setbacks from boundaries. The AUP is achieving efficiencies by maximising building bulk through building height, HIRB, and building coverage at scales that reflect the zone intensities. However, the level of non-compliance with the other standards has the potential to offset these gains with the loss of privacy and other effects on adjoining sites.

The spaciousness of sites and streets in the more intensive residential zones has become progressively reduced as the scale of developments increase. While this is not in of itself a positive or negative effect, issues arise when developments occur without consideration of the effects of shading, loss of privacy and adequate quality landscaping or well-designed building frontages to the street. Cumulatively, these matters can potentially result in negative outcomes for residents on adjoining sites and the neighbourhood.

The recommendations seek to respond to the issues and achieve better outcomes to achieve the RPS objectives. The cumulative effect of small non-compliances with multiple standards is unknown. While each infringed standard may be mitigated and therefore deemed to comply or the effects are considered minor, there is concern regarding the extent to which the amount of mitigation across multiple sites potentially undermines the effectiveness of the package of AUP residential provisions

The following recommendations also draw from findings in other sections of the monitoring report. This is because very few standards are applied in isolation to the wider package of provisions.

## Recommendations

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

### General plan improvements

To address the level of non-compliance with standards in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Review and consider increasing the number and scope of standards that are subject to notification for four or more dwellings to emphasise and prioritise their compliance in developments. **Medium priority**
- Strengthen residential objectives, policies, matters of discretion and assessment criteria to ensure clarity and align with outcomes sought by purpose statements and standards. **Medium priority**
- Update the current notification rules for the residential zones to enable use in conjunction with earthworks and other incidental activities that need to be undertaken to enable most residential developments. Currently the non-notification clauses are not an incentive because they are unable to be used in most cases. **Medium priority**
- Review standards to ensure the purpose statements are being delivered by the standard. Where necessary, either the standard or the purpose statements should be updated. **Medium priority**
- The statutory weight of the 'purpose' statements for each standard should be made explicit in the AUP to give them the same weight as policies. **Medium density**
- Review some AUP definitions to update in order to respond to issues, new contexts, technologies and conditions, expand scope, clarify meanings, application and/or intent. **Medium priority**
- Further research is needed on the effects of development of terrace and apartment typologies on sites where site width, proportion and size are problematic. **Medium priority**
- A cost benefit analysis is required to determine the appropriateness of the existing standards in the AUP e.g., setbacks, design and appearance of side walls and possible standards that could be added such as managing the length of the building on such sites. **Medium density**
- Publication of practice notes, guidelines and guidance to provide clarification on aspects of the AUP and encourage quality built environment outcomes. **Medium priority**

To address poor quality terrace housing and apartment developments, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Two sets of standards – one for apartments and one for terraces. This could apply to buildings of 2 storeys or higher. It could include standards for building separation controls, design of side/party walls, height relative to street width, setbacks or HIRB, yard controls, minimum site width, outlook provisions, outdoor living, waste management requirements. **Affected by recent Government legislative changes**

- The application of the terrace and apartment standards for developments could apply to MHS, MHU and THAB zones – residential and business mixed use zone. ***Affected by recent Government legislative changes***

To address issues arising from historical site dimensions with building typologies enabled through the residential zones, further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Require a minimum site width applied at the site frontage for developments of three storeys or higher to achieve a better ratio of built form to the site and street – for all housing typologies. ***Affected by recent Government legislative changes***
- Apply a building shape factor based on a ratio of built form width to height to achieve better proportioned buildings – particularly on street frontages. This could encourage more attached dwellings in areas with greater height limits and reduce the predominance of buildings that are out of scale with their site and surroundings. ***Affected by recent Government legislative changes***

### Height

To determine whether height should be the main distinction between zones, review the zone objectives, policies, and description. Undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Refer to metres and possible number of storeys in the zone description or update the standard to explicitly indicate that another storey is possible within the height limit – including the additional allowance for a 1m roof form. ***Affected by recent Government legislative changes***
- Update the height standard to indicate the flexibility enabled by the rolling height or/and extra 1m roof allowance (both enable an extra floor). ***Affected by recent Government legislative changes***
- Update assessment criteria to more accurately evaluate the visual dominance of developments seeking an extra storey above the height limit. This is to ensure development is mitigated through approaches such as design, response to topography, extent of excavation, building setbacks, existing or proposed landscaping / tree planting. ***Medium priority***
- Limit earthworks (through land disturbance consents) that enable additional building height to be achieved to the extent that the majority (or maximum proportion) of the site (and dwellings) are below natural ground level. ***Medium priority***
- Retain the rolling height measurement but add parameters to manage the scope of its application. ***Medium priority***

### Building in relation to boundary

To manage the effects of bulk and high building coverage in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Update assessment of the HIRB and AHIRB in MHS and MHU zones using the winter-solstice (not equinox) for solar access to assess shading on adjoining properties and specify period of the day or the number of hours of sunlight should be achieved to dwellings within the site and on adjoining sites. Shading diagrams would become a special information requirement for the zone. ***Affected by recent Government legislative changes***

- Replace the AHIRB with other standards that force street facing buildings and avoids windows and balconies overlooking adjoining sites with strong design controls to minimise the scale and avoid blank featureless side walls. *Affected by recent Government legislative changes*
- Look at a new standards to replace AHIRB for apartments or in the THAB zone depending on site width and shape and orientation. *Affected by recent Government legislative changes*
- Update the Business Mixed Use zone provisions with building and yard setbacks from the boundary. *Medium priority*
- Reconsider the THAB setback provisions to minimise the adverse effects of building height on adjoining sites (such as dominance and shading) and reduce the overall visual dominance of buildings at upper levels. *Affected by recent Government legislative changes*

### Building coverage

To reduce the extent of non-compliance with building coverage in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Investigate the cumulative effects of widespread non-compliance with building coverage. This includes environmental, functional, visual and amenity effects on-site within the development site, the ‘child’ site, on adjoining sites and at a neighbourhood scale. *Affected by recent Government legislative changes*
- Building coverage should be a core standard – it has a fundamental influence on building bulk, impervious surfaces, landscape area and building proportion relative to the site, street and zone character. *Affected by recent Government legislative changes*

### Building length

To manage the extent of building length in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Develop a new standard to provide for a maximum limit on continuous building length. Further investigation is necessary to establish the length. The following options could be considered:
  - a maximum building length for multi-dwelling developments with a separation of a specified amount between buildings to provide adequate visual separation.
  - apply a building length ratio (e.g. relative to the site length and width).
  - limit the maximum number of dwellings in a block of terraces with a specified separation distance between blocks to provide adequate visual separation.
  - Consider different building lengths for 1-3 storeys compared to 4+ storeys as taller buildings have greater impacts. For instance, 1-3 storey building lengths could be acceptable at 40m, but for 4+ storey buildings length/depth could be limited at 20m to manage their bulk, massing, dominance and shading effects.

*Affected by recent Government legislative changes*

## Theme 2: Building Auckland's planned built form with more intensive housing

Theme 2 investigates the range of housing typologies and the quantum of residential development to accommodate the city's growing and diverse population. It also looks at land use efficiency and the implications of higher density development. The B2.1. issues most relevant to this theme, seek to:

- (1) enhances the quality of life for individuals and communities
- (2) support integrated planning of land use, infrastructure and development
- (3) optimise the efficient use of the existing urban area
- (5) enable provision and use of infrastructure in a way that is efficient, effective and timely
- (6) maintain and enhances the quality of the environment, both natural and built

Relevant RPS Objective and Policies	
RPS Objective B2.3.1 (1)	A quality built environment where subdivision, use and development do all of the following: (b) reinforce the hierarchy of centres and corridors; (d) maximise resource and infrastructure efficiency;
RPS Policy B2.3.2 (1)	Manage the form and design of subdivision, use and development so that it does all of the following: (a) supports the planned future environment, including its shape, landform, outlook, location and relationship to its surroundings, including landscape and heritage;
RPS Objective B2.4.1 (1)	Residential intensification supports a quality compact urban form
RPS Objective B2.4.1 (2)	Residential areas are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area.

Two indicators consider the type of housing being built, the level of intensification and whether development is contributing to the planned built character anticipated for each zone.

- Indicator 3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors
- Indicator 4 – Maximising land and building resources and infrastructure efficiency

## Indicator 3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors

### *Measures*

- Building typologies – by zone
- Number of dwellings per consent (pre-subdivision)
- Whether development is consistent with the planned built character anticipated for its zone

### *What indicator 3 tells us*

This indicator looks at the types of multi-unit developments with four or more dwellings being built in each of the zones. It also looks at the intensity of development. These influence the planned built character of the neighbourhoods. The monitoring considered five residential development typologies:

- Standalone houses
- Terraces (three or more attached dwellings)
- Duplex/townhouses (two attached dwellings)
- Apartments
- Mix of typologies in different versions (apartments and terraces, terraces and duplexes, terraces and standalone houses, duplexes and standalone houses, and terraces, duplexes and standalone houses).

This indicator also investigates the number of dwellings per site enabled by the AUP through its unlimited density provisions to the extent it affects the built form (see indicator 4 below for density in terms of number of dwellings). Neighbourhoods are changing through an increase in apartments and terraces in medium and large-scale developments.

Each residential zone has a description of the planned suburban or urban built character anticipated. The MHS, MHU and THAB anticipate higher density housing. Refer to Appendix D for the zone descriptions.

The monitoring provides a snapshot of the type and density of residential development occurring in the more intensive residential zones. The amount of new residential development in these more intensive zones is starting to produce street environments that allude to the future planned form of Auckland.

Indicator 4 is linked to indicator 3, it looks at whether the AUP provisions are effective in producing housing that uses land, resources and infrastructure efficiently. The focus is on the level of intensification and considers some of the factors that can restrict yields for residential site development. As identified in Theme 1, two factors that have a fundamental influence on the type and amount of housing are the site size and width at the street.

### *Findings*

#### **Building typologies by zone**

Analysis of the sample from the MHS, MHU and THAB zones showed there was an even split across the five development typologies investigated. This shows there is a good range of housing typologies to meet the diverse needs of Aucklanders. The AUP zone descriptions specify the types of housing anticipated for each zone, so this was also analysed. It should be noted that lower density

developments of 1-3 dwellings were not included in the sample. Therefore, the comparative analysis is based on the types of medium to high density housing for each zone.

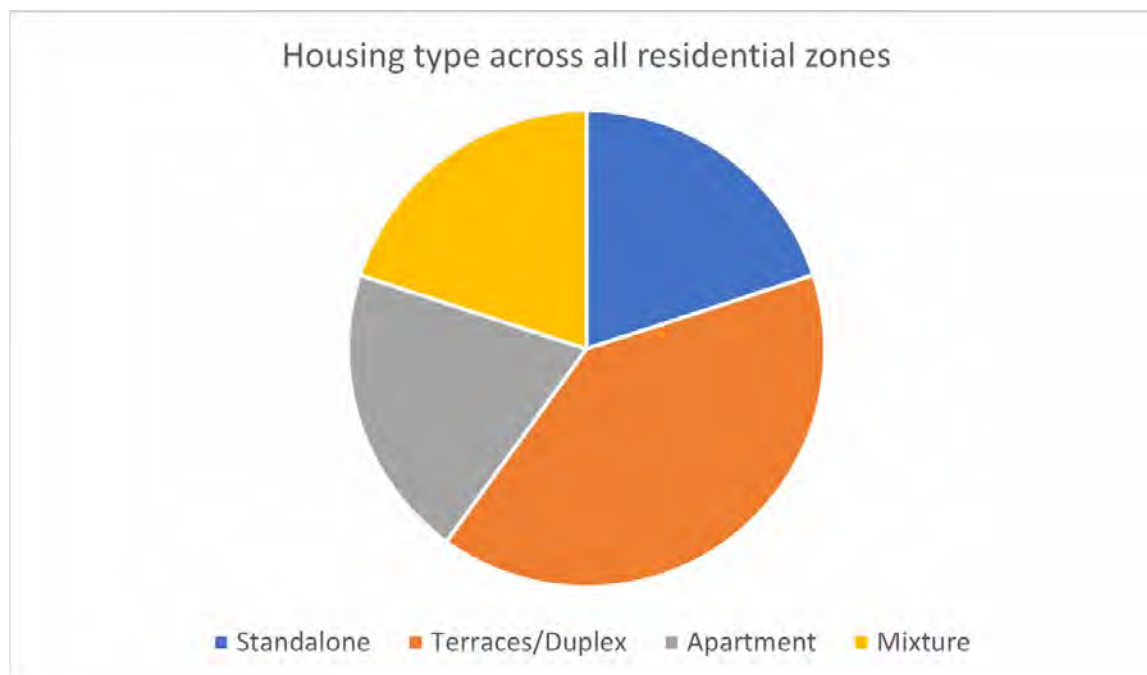


Figure 13: Prevalence of different housing typologies in the residential zone sample.

In the Mixed Housing Suburban zone, the AUP anticipates a suburban built character with standalone houses and attached housing (townhouses, terraces or apartments). The findings confirmed that the MHS zone was the location for the majority of standalone housing – accounting for 30 per cent of all residential developments in the zone sample. There were generally between 4-6 standalone houses on parent sites which had previously accommodated a single house. In this zone, around 20 per cent of developments comprised of duplex/townhouses, 20 per cent were terrace housing and 20 per cent were a mix of housing typologies. Apartments were less common in this zone, accounting for less than 10 per cent of developments.

The MHU and THAB zones are anticipated to have an urban built form with more intensive housing and the findings generally support this.

In the MHU zone, the AUP anticipates fewer standalone dwellings and more terrace and apartment development. In this zone nearly 25 per cent of developments were terraces and 25 per cent were apartments. Less intensive developments with duplexes/townhouses accounted for around 15 per cent and standalone houses were about the same (15 per cent). The remainder – 20 per cent of developments were a mix of housing typologies.

The AUP's most intensive residential zone, THAB had the largest number of apartments, accounting for nearly 50 per cent of developments in the sample. Around 20 per cent of developments had terraces and a further 10 per cent were a mix of apartments and terraces. Just 10 per cent of developments had only duplexes/townhouses but another 10 per cent had a mix of terraces and duplexes. Less than 5 per cent of developments were for standalone housing.

In the Business – Mixed Use zone, the AUP anticipates a mix of apartments and commercial buildings. The majority (80 per cent) of developments in the sample were for apartments. A new building typology emerged with some apartment developments also incorporating terrace housing for the first Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 52

1-2 floors of the building with direct access to the street. Other developments had a mix of apartment and terrace housing blocks. Around 10 per cent of developments were for terraces alone.

These findings show that the housing typologies are consistent with the AUP zone descriptions for each zone.

### Planned suburban or urban built character

The monitoring relied on site visits to evaluate the planned suburban or urban built character in the three residential zones. The observations from site visits are discussed and issues identified in this section.

There were similarities in the housing typologies irrespective of zone. For instance, most terraced housing was based on 4-5m wide terraced houses and these were 2 storeys for 2 -3 bedroom units, or three storeys for 3-4 bedrooms. This suggests that the form of this typology is influenced by market demand and price point sought by the developer. There was more variance with the form of apartments.

Regardless of zone, most developments were in locations currently characterised by 1-2 storey housing on spacious landscaped sites. The majority of sites were in brownfield areas. This often presented a stark contrast to new intensive developments with two or more storeys for building typologies such as terraces or apartments. The MHS, MHU and THAB zones allow between 5 -15 per cent additional building coverage above the allowances under the legacy district plans. The spatial relationship between the built form and site size created tensions between existing and new development in some zones. One of the challenges of the monitoring was envisioning new developments within neighbourhoods of buildings of a similar scale and type in the future.

The MHS zone anticipates predominantly two storey developments that retain some of the spatial qualities that characterise suburban neighbourhoods. Most developments were two storey with at least one or two dwellings fronting the street at a scale and form anticipated by that zone. Quite a few site visit locations already had several intensive developments which provided a better understanding of the planned built character in the area.

Observations in the MHS zone, showed two storey dwellings were generally consistent with the current local neighbourhood character. This character will change as more intensive development occurs. The intensity of site development in terms of the number of dwellings on the parent site sometimes brought a new scale to these neighbourhoods. The spatial qualities that would typically be achieved through landscaped outdoor living areas or front gardens was often limited. Some developments relied on driveways and parking areas to achieve a 'sense of space'. Other developments were designed with limited consideration for a similar scaled development on the adjoining site in future.

The type and form of residential developments in the MHU zone anticipates predominantly three storey terraces and apartments. In this zone, new development was a mix of two and three storey buildings. Site size and width was a likely determinant of whether a building was capable of being constructed to three storeys. Larger sites and corner sites usually achieved three storeys in this zone.

The THAB zone anticipates 5-7 storey buildings. As with the MHU zone, larger sites or corner sites were popular locations for developments of this scale. Developments on corner sites were less constrained by the HIRB and other AUP standards. This is because the HIRB does not apply to street edge site boundaries and developments can also benefit from using the street space for locating the dwelling principal outlook space standard (6m).



Visualising the future planned built form from the AUP zone descriptions can be a challenge. On the site visits it was more difficult to envision the future planned form of the MHU and THAB zones which anticipate greater heights and densities. This was especially difficult where a new development of terraces or apartments of three or more storeys were located in areas of predominantly single storey standalone housing.

Site visits provided opportunities to see whether new development had begun to change the local low density character to the planned built character anticipated for a zone. This was particularly evident where there was cumulative new development MHU zone in Mt Albert (Figure 14).



*Figure 14 Photo shows the AUP planned built form with terraces and apartments in the MHU zone.*

In both the MHU and THAB zones, the spatial quality of sites became progressively reduced by the scale of developments experienced in these locations and zones. There is only a 5 per cent difference in the building coverage between each of the zones but the additional bulk as well as height, more intensive building typologies and building proximity to the street resulted in a marked visual difference – especially with cumulative development.

In the Business – Mixed Use zone, 85 per cent of the developments were consistent with the future planned character. The remaining 15 per cent of developments were deemed to be partially consistent with the zone. Of the 15 per cent, developments tended to be under-developed with either lower heights or/and were terraces rather than apartments.

### *Effectiveness and efficiency of the plan*

The B.2.3.1 Objectives 1(b) seek to reinforce the hierarchy of centres and corridors; and (d) maximise resource and infrastructure efficiency. The RPS B2.1 issue regarding growth that (1) enhances the quality of life for individuals and communities; and (6) maintains and enhances the quality of the environment, both natural and built is more challenging to achieve.

The AUP zone descriptions have been effective in specifying the types of housing anticipated for each zone. The monitoring shows there is a wide range of housing options to meet the diverse needs of Aucklanders.

The AUP has been effective in achieving residential intensification at levels promoted through the zoning principles and zone standards to reinforce the hierarchy of centres and corridors. The analysis showed the lowest densities were in the MHS zone with a clear transition of intensity through the MHU and THAB zones to the highest density in the Business MU zone. This also achieves the B2.4.1(1) objective seeking residential intensification to support a quality compact urban form. There is a general trend in developments in the MHS, MHU and THAB zones of increasing building bulk (as expressed through building coverage), but less clearly with height, with most developments at 2-3 storeys. While the zone standards broadly achieve the intensification enabled by the zone objectives in terms of typology i.e. terraces and apartments, they are less effective in achieving the planned character through height and spaciousness.

## *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To better define the character distinctions between the MHS, MHU and THAB zones, undertake further research and cost benefit analysis to determine the appropriateness for inclusion for a plan change in the AUP review. The scope of research could consider but not be limited to the following options:

- Update the residential zone descriptions (MHS, MHU, THAB) to reflect the built form outcomes enabled by the standards. **Affected by recent Government legislative changes**

## Indicator 4 – Maximising land and building resources and infrastructure efficiency

### *Measures*

- Number of dwellings per development
- Gross site size post- subdivision

### *What indicator 4 tells us*

This indicator expands on the findings in Indicator 3 with measures that evaluate the AUP effectiveness in encouraging efficient use of land. The measures looked at the number of dwellings per site and then focuses on theoretical density as expressed by the number of dwellings and the size of net sites created through the land use led subdivision consent. Apartments were not analysed because there are unit titles with a common share of the land and not usually subdivided. This indicator looks at whether the AUP B2.1 expectation that growth:

(2) supports integrated planning of land use, infrastructure and development

(3) optimises the efficient use of the existing urban area

## Findings

### Number of dwellings per development

The AUP allows for almost unlimited dwelling density within the MHS, MHU, THAB and Business MU zones. It is constrained by the building envelope (established by the height, HIRB and yards) and by the minimum dwelling size standards. The developer determines the appropriate number of dwellings dependent on a range of factors such as economic viability, site characteristics and compliance with the AUP standards.

The Proposed Auckland Unitary Plan (PAUP) allowed unlimited density in the THAB zone and set parameters around unlimited density in the MHU zone and reduced density in the MHS zone. These provisions allowed considerably more intensification than many of the legacy district plans. To do this in the MHS and MHU zones, a set of parameters stipulated minimum site sizes and widths to manage development effectively on Auckland's typically narrow site subdivision pattern. For example, in the THAB zone rules required a minimum parent site size (1200m<sup>2</sup>) and a minimum site width (20m) and shape. In the MHS zone, higher densities were enabled with a minimum post-subdivision site size of 200m<sup>2</sup>. These parameters were included in the PAUP to mitigate the effects on adjacent sites and achieve built quality outcomes

The Independent Hearings Panel extracted the core AUP standards (height, HIRB, etc) for managing the effects of unlimited density – from the PAUP standards<sup>5</sup>. However, those standards that managed the form and scale of density (and unlimited density) were not included in the AUP residential standards. These would have undermined the intent of the 'unlimited density' provisions and the IHP were satisfied that the core standards could manage effects on adjoining sites.

The number of dwellings for each consent prior to any post-development subdivision was investigated to gauge the level of intensification. To encourage comprehensive developments, the AUP enables developers to seek a land use resource consent for buildings prior to or at the same time as a subdivision consent.

The benefits of this are the land use effects and built form volume (established primarily through standards for height, building coverage and height in relation to boundary or alternative height in relation to boundary) is established, regardless of how many dwellings are contained within the building envelope. This allows council to assess all these effects rather than take a more precautionary approach when assessing a vacant site subdivision where the specifics of volume and land use effects of a future development are unknown.

Standalone houses, duplex/townhouses and terrace housing are subdivided from the parent site into smaller separate 'child' sites. Apartments are usually unit titled because they have a common share of the land.

To identify the level of density per site, the number of dwellings were recorded for each development. The key findings were:

- 30 per cent of development sites: 4-6 dwellings
- 25 per cent of development sites: 7-9 dwellings
- 15 per cent of development sites: 10-15 dwellings
- 20 per cent of development sites: 16-40 dwellings

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<sup>5</sup> <https://unitaryplan.aucklandcouncil.govt.nz/Images/Printable%20PDFs%20-%20September/Part%203%20-%20Rules/Chapter%20I/1%201%20Residential.pdf>

- 5 per cent of development sites: 41-100 dwellings
- 5 per cent of development sites: 100+ dwellings.

There are several possible reasons for a predominance of medium-scale developments in the findings. The residential sample covered a three-year timeframe (April 2018 – December 2020) so developments needed to be consented and constructed within this period. Smaller developments don't usually have the complexity of large-scale developments so are faster to consent and build.

Another reason may be that developers can achieve viable development yields with the AUP unlimited density provisions in a timely manner on a typical Auckland 800-1100m<sup>2</sup> site. Large scale developments usually take longer with more complex site arrangements (including site amalgamations), infrastructure provision and multiple housing typologies. These projects often take more than three years to gain planning consents and complete the development.

In the Business - Mixed Use zone, the majority of developments were for apartments which achieve higher dwelling numbers per site than other typologies. The key findings were:

- 40 per cent of developments: 4-20 dwellings
- 20 per cent of developments: 21-40 dwellings
- 30 per cent of developments: 80 dwellings or more.

The Business – Mixed Use zone had larger site sizes. This appears to be a major determinant influencing the prevalence of apartment buildings with high numbers of dwellings. All the developments with 100 dwellings or more were located in close proximity to either a Metropolitan Centre (specifically Newmarket and Manukau) or the City Centre.

In terms of land use efficiency, 130 developments with a wide range of housing typologies in the residential zone sample produced a total of 2,339 dwellings. These replaced a total of 274 dwellings which were removed to make way for new development on sites. This produces an average of 8 new dwellings for every dwelling replaced. The majority of these dwellings have been built or are in the construction phase during the monitoring period.

In the Business - Mixed Use zone the calculations are more theoretical as many are yet to be constructed. There were consents for 33 developments – primarily apartments, which could produce 1,655 dwellings. Assuming an average of 1.5 dwellings per site prior to redevelopment, this would mean that 50 dwellings were replaced by 1,655 dwellings. This produces an average of 33 new dwellings for every dwelling replaced.

This demonstrates the effectiveness and efficiency of the AUP standards – and specifically the unlimited density provisions enabled for 4 or more dwellings.

### Post subdivision site size

The absence of density standards enable multiple dwellings to be built on a parent site and subsequently subdivided into smaller sites. The monitoring investigated the size of sites following subdivision to evaluate land use efficiency of those developments that are not apartments in the three residential zones. The size of sites also showed the differential between the AUP subdivision standards for the minimum vacant site size which is 300m<sup>2</sup> in the MHU zone and 400m<sup>2</sup> in the MHS zone. The THAB zone has a minimum vacant lot subdivision size of 1200m<sup>2</sup> to disincentivise fragmentation of larger sites without a planned comprehensive residential development. Once subdivided, vacant sites must comply with the AUP standards for building coverage, height, maximum impervious surfaces, etc for the respective zone. As discussed above, the AUP envisions two pathways to subdivision: creating vacant site(s), or land use led.

The Business – Mixed Use zone incentivises subdivision in accordance with an approved land use resource consent (complying with Standard E38.9.2.1). In contrast with the residential zones, a vacant lot subdivision can be 200m<sup>2</sup> in this zone. The majority of developments in the Business – Mixed Use zone sample were for apartments which were unit titled and did not create new sites under the plan definition.

The calculation used for the analysis took the total area for the parent site (including driveways) and divided it by the number of dwellings. Apartments were excluded from this analysis because they share a communal land area. While this is somewhat simplistic, it gives an indication of how small site sizes can become under the AUP. For each development, the smallest site size was recorded. It should be noted, these are not actual section sizes as areas in common ownership such as driveways or communal parking were not considered. Site sizes were recorded in 25m<sup>2</sup> bands for example 50m<sup>2</sup>-75m<sup>2</sup> for ease of comparative analysis.

The findings show the spectrum of possible subdivided site sizes ranged between 50-300m<sup>2</sup> with the most prevalent site size between 150-200m<sup>2</sup>. The smallest sites were calculated between 50-75m<sup>2</sup>. Only one site exceeded 300m<sup>2</sup>. Most terrace developments had a number of mid-terrace sites that were consistently smaller than either the end of terrace sites or street facing sites. Below is a more detailed breakdown of the site sizes that developments are subdividing to:

- 20 per cent of developments subdivided at least one site to between 50-100m<sup>2</sup>
- 20 per cent of developments subdivided at least one site to between 101-150m<sup>2</sup>
- 30 per cent of developments subdivided at least one site to between 151-200m<sup>2</sup>
- 25 per cent of developments subdivided at least one site to between 201-250m<sup>2</sup>
- 5 per cent of developments subdivided at least one site to between 251-300m<sup>2</sup>

Small sites are a product of the AUP unlimited density provisions and can be effective in providing large numbers of dwellings using land very efficiently. Issues arise if the effects of intensification cannot be sufficiently managed within the site and significantly affect adjoining sites, street environment or neighbourhood. For instance, the child sites created from the subdivision of a parent site often don't comply with building coverage or landscape areas. This reduces the ability to provide for viable trees/biodiversity/climate change mitigation across an area.

The ability of developers to apply for a subdivision consent concurrently with the land use resource consent is a feature of the AUP. The objectives and policies in the E38 Subdivision chapter set the framework for this form of subdivision. It is designed to incentivise comprehensive and intensive development. Another subdivision method creates 'vacant lots' and is similar to the legacy district plan subdivision rules – it does not incentivise density. This method enables the level of intensification anticipated in Auckland Plan growth models and enables the AUP unlimited density provisions.

### *Effectiveness and efficiency of the plan*

The RPS B2.3 objectives, policies and B2.1 issues seek an integrated approach to development to achieve efficient use of resources and infrastructure in existing urban areas. The findings showed that 130 developments in the residential zone sample produced 2,339 new dwellings. Seventy per cent of developments were for between 4-15 dwellings per site, 20 per cent were for 16-40 dwellings per site and 10 per cent were for developments with over 40 dwellings. Some of these had over 150 dwellings. The new developments replaced approximately 275 existing dwellings across the sample. To illustrate how effective the AUP has been in enabling housing growth, this calculates out to an

‘average’ of 17 dwellings per site in this sample. In the Business – Mixed Use zone, consents for 33 developments – primarily apartments, would produce a theoretical number of 1,655 dwellings.

Across the total monitoring sample, most developments replaced 1-2 houses and some large-scale developments replaced more. In effect, this means that around 350 dwellings were replaced with nearly 4,000 dwellings. This demonstrates that the AUP’s standards, unlimited density and land use led subdivision consenting process is highly effective and efficient in supporting the Auckland Plan and AUP growth objectives. Unlimited density is a key factor in the scale of developments being seen on some sites and the desire to infringe many controls slightly to provide an additional unit can be a strong incentive for some developers. This can sometimes be to the detriment of on-site amenity such as outlook which can also affect adjoining sites.

Land use efficiencies are being achieved where zone provisions enable higher density development such as apartments or intensive terrace housing with small site sizes. Site functionality can be compromised if sites become too small. This includes communal or private space for outdoor living areas, landscaping for trees and biodiversity, rubbish bins, clotheslines, rainwater tanks, gas bottles and so on.

Objective B2.4.1 (2) seeks residential areas that are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area. The absence of density provisions and the land use led subdivision is producing very small sites – particularly for terrace development in the residential zones. This is creating a number of issues including the following.

- Sites are becoming so small that they can be functionality compromised (particularly around private outdoor living spaces, no space for trees or biodiversity).
- Amenity, solar access, privacy (visual and acoustic) and other factors that contribute to quality housing and the health and safety of residents within sites as well as adjoining sites are being compromised for housing yield in some developments. This is evidenced by the large number of dwellings per site and the level of non-compliance with building coverage, landscape area and HIRB and other standards).
- There is a minimum size for the subdivision of a vacant site and a minimum dwelling size but no minimum size for a site established through the land use led consenting process.

These issues suggest that Objective B2.4.1 (2) and the RPS B2.1(1) Issue requiring the plan to manage growth to enhance the quality of life for individuals and communities may not be achieved as well as it could be with this level of intensification. Higher intensity developments do not inherently produce poor outcomes. Issues can arise from not appropriately addressing the unique consequences of several factors – housing typologies, yield and site conditions. This appears to be resulting in a yield-led response rather than the design-led response intended by the AUP. It will require a rebalancing of efficiencies to achieve both growth and quality development. The poor outcomes identified with these issues detract from the positive outcomes of the enabling aspects of the AUP to achieve growth.

The density standards ensured that there was open space available for a number of uses but this is not expressed as standards. Enabling unlimited density has highlighted that specifying outdoor service areas and other requirements like trees or sheds are important and need to be provided for in the standards.

Many of the issues regarding quality are addressed by recommendations in other themes in this report. The recommendations below are specific to the indicators in this theme and address the form and size of sites and subdivision.

## Recommendations

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To address the prevalence of very small site sizes as a consequence of land use led subdivision and unlimited density provisions in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Investigate the cumulative effects of small site sizes created by land use led subdivision. This includes environmental, climate change, functional, visual and amenity effects, effects on within the site and adjoining sites. **Medium priority**
- Investigate a minimum net site size for any post-subdivision/child site created by the land-use led subdivision consenting process. This could be based on the minimum size necessary for site functionality and climate change and could include:
  - A minimum subdivision size specified for each housing typology to respond to the spatial qualities required to support good urban design, provide for household needs, provide for trees and mitigate effects.  
And/or
  - A minimum subdivision size specified for each zone to enable stronger spatial distinctions between zone character.  
And/or
  - Consider minimum site widths or sizes based on the optimum response to climate change objectives – including the application of landscape and maximum impervious area standards to the post-subdivision/child site.
  - Process developments with any post-subdivision sites below a specified minimum net site size as a discretionary activity.

### **Medium priority**

- Monitor the cumulative effects of intensification to determine whether effects are adequately managed within the site, adjoining sites and street. **Medium priority**

# Theme 3: Supporting the health, safety and wellbeing of residents

Health and safety is a broad topic. It includes housing people well in homes that are dry, warm, safe and well-functioning. It also relates to hazard and engineering standards. Many of these aspects are prescribed by the NZ Building Code. This theme focuses on various aspects of residential developments that influence people's health, safety and wellbeing. This theme also addresses the B2.1(1) issue that seeks growth that enhances the quality of life for individuals and communities. The monitoring looked at specific standards in the residential zone provisions that contribute to the Regional Policy Statement objectives focusing on the health and safety of people and communities. In addition to this, Theme 6 also refers to pedestrian safety on driveways.

This theme analyses the size, orientation and quality of outlooks from principal living areas and outdoor living spaces. The analysis also included measures that go beyond the scope of the AUP to determine whether residential developments were providing good quality primary living areas in dwellings. For instance, measures of 'quality' included convenient access to outdoor living spaces from the dwelling, the type of outlook from the main window and whether it is orientated for sunlight. Collectively, these measures provide an indication of whether the residential zone standards are encouraging developments that support the health, safety and wellbeing of residents.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(3)	The health and safety of people and communities are promoted.
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following: (a) providing access for people of all ages and abilities; (b) enabling walking, cycling and public transport and minimising vehicle movements; (e) meets the functional, and operational needs of the intended use;
RPS Policy B2.3.2 (4)	Balance the main functions of streets as places for people and as routes for the movement of vehicles.

This theme has two indicators:

- Indicator 5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight.
- Indicator 6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces

## Indicator 5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight.

### *Measures for residential zones:*

- Extent of compliance with the 6m x 4m principal living outlook space AUP standard.
- Extent of primary living space outlook non-compliance



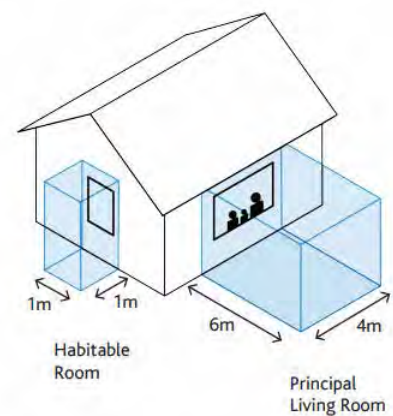
- Number of habitable rooms per dwelling complying with 1m outlook standard
- Number of habitable rooms without direct access to daylight, sunlight and natural ventilation
- Location of the primary living outlook space – street, carpark/driveway/adjoining site
- The proportion of dwellings in a development with principal living overlook spaces towards the street
- Where the principal living space overlooks the street, what is the distance between primary glazing and the street boundary
- The percentage of dwellings with privacy measures between the living outlook space and street
- Percentage of dwellings with principal living outlook space overlooking a driveway or carpark area
- Percentage of dwellings with principal living outlook space overlapping with any outlook from other dwellings within the site
- Proportion of dwellings in a development with a north, east or west oriented principal living outlook space
- Proportion of dwellings in a development with a south oriented principal living outlook space

*Measures for the Business – Mixed Use zone:*

- Extent of compliance with the principal living outlook space AUP standard.
- Extent of primary living space outlook non-compliance

*What indicator 5 tells us*

The AUP has standards and assessment criteria that set the parameters for building outlook in the MHS, MHU, THAB residential zones and Business – Mixed Use zone. The purpose of the outlook requirement is to ensure a reasonable standard of visual privacy between habitable rooms of different buildings on the same or adjoining sites. It can also do this in combination with the daylight standard to manage visual dominance effects within a site by ensuring that habitable rooms have an outlook and sense of space.



In the residential zones, the outlook space is measured from the centre of the largest window in the primary living area for a 6m depth and 4m width as shown in the diagram. The outlook space for a master bedroom is 3m and for a habitable room it is 1m x 1m in the residential zones. In the Business – Mixed Use zone, the outlook space for the principal living area is the same as the residential zones but for all other habitable rooms it is 3m.

The focus of the monitoring was to explore whether these provisions were achieving quality outcomes for the primary living area and to a lesser degree, habitable rooms. The focus on primary living outlook reflects an assumption that residents will spend longer periods of time in the primary living area and will have a larger effect on the quality of their day-to-day lives.

The monitoring programme consider the following parameters as contributing to a ‘quality outlook’:

- the amount of outlook space

- Compliance with the outlook space standard for primary living spaces in MHS, MHU, THAB and Business – Mixed Use zone
- Compliance with the outlook space standard for habitable rooms in the MHS, MHU and THAB zones
- the location of the outlook and what it overlooked
- privacy for the occupants of the dwelling
- solar orientation.

Analysis of outlook spaces must also recognise the standards' roles in acting as a building separation control.<sup>6</sup> While the main purpose of the outlook standard is to ensure privacy, it also helps to mitigate building dominance in the absence of a building separation standard.

## Findings

### Amount of principal living area outlook space

In residential zones, the key findings showed that the majority of developments complied with the AUP requirement for a 6m x 4m outlook space from the principal living area. The effects are evaluated (using assessment criteria) for developments of four or more dwellings where the outlook space extends over an adjoining site or overlaps with the outlook from another dwelling. If the outlook extends over the street or a driveway within the site, it is not an infringement. The level of compliance with the standard and observations from site visits indicate the dimensions – including the 6m depth – are achieving quality outcomes for dwellings. Privacy and a sense of space are successfully achieved where the outlook space is fully contained within the site.



*Figure 15: The 6m x 4m principal living outlook space depth and the 20m<sup>2</sup> outdoor living space orientated for sunlight are located together to create a spacious and healthy living area in this development.*

<sup>6</sup> Graeme McIndoe EIC before the AUPIHP, 9 September 2015  
Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment

The findings showed that across all the zones, 70 per cent of developments complied with the principal living area outlook standards. Developments with **all their** dwellings complying with the principal living area outlook standard are as follows:

- 80 per cent compliance in the MHS zone
- 60 per cent compliance in the MHU zone
- 65 per cent compliance in the THAB zone

In the 30 per cent that did not have full compliance, some developments had only one dwelling infringe the standard while others had a significant proportion of dwellings infringe it.

Further analysis into the proportion of dwellings in those developments that had poor compliance was undertaken. There was a notably large group of developments that had only 20-40 per cent of their dwellings complying with the outlook standard – the rest infringed the standard. By zone, the findings showed:

- MHS – 10 per cent of developments had only 30-40 per cent of dwellings with outlooks that complied with the standard
- MHU – 15 per cent of developments had only 30-40 per cent of dwellings with outlooks that complied with the standard
- THAB – 10 per cent of developments had only 20 per cent of dwellings with outlooks that complied the standard

This lower level of compliance in some developments may be due to the outlook standard not being a core standard for four or more dwellings. Further investigations also showed a link between non-compliance increasing as the site widths became narrow in the MHU and THAB zones.

#### *Extent of non-compliance with the principal living area outlook space*

The extent of non-compliance with the 6m depth dimension across all residential zones in the sample were:

- 45 per cent infringed by 1m or less
- 40 per cent infringed by 1.1-2m
- 10 per cent infringed by 2.1-3m
- 5 per cent infringed by 3.1-4m

In context, a reduction of 1-2m represents a loss of 15-30 per cent of a dwelling's outlook space. The findings show that up to 55 per cent of developments of four or more dwelling are resulting in noticeable reductions in outlook space. The extent and location of infringements may suggest that the outlook space dimensions were close to the minimum of a viable standard within the tight constraints of typical site dimensions – particularly for terrace housing.

#### *Site location of infringements to principal living area outlook space*

The principal living outlook space is measured from the centre of the largest window in the living room. An investigation into where non-compliance was occurring in the residential zones was of interest. The findings showed that 30 per cent of developments had principal living area outlook space areas shown across adjoining sites. The extent of outlook space non-compliance across adjoining sites were:

- 45 per cent infringed the standard by 1m or less

- 40 per cent infringed the standard by 1.1 -2m
- 15 per cent infringed the standard by 2.1 – 4m

Where there was non-compliance of the standard resulting in outlook spaces across adjoining sites, these were often limited to a few dwellings. In most cases, the non-compliance occurred at ground level and the effects were mitigated with a fence or other privacy measure. However, this form of mitigation does not reduce the physical proximity of the dwelling to the site boundary or the dwelling on the adjoining site.

The AUP standard requires that outlook spaces from dwellings cannot overlap to avoid a loss of privacy. The findings showed that 90 per cent of developments were designed to avoid any overlap in outlook from principal living areas.

### *Issues with complying principal living area outlook space*

Observations from site visits and consented plans showed a number of unanticipated outcomes from complying outlook standards.

- Principal living area outlook spaces that extended across streets were truncated by fences – some of which may have been subsequently installed after consent, affecting sense of spaciousness. The dwellings were often located close to the street due to the opportunity to extend outlook space into public space – another factor compromising privacy in some developments.
- The extent of overlooking of adjoining properties with a loss of privacy to both sites was evident from principal living areas and habitable rooms on the upper floors of buildings.
- Some dwellings had the primary living area windows (from which the 6m outlook space measurement was taken) set deep into the dwelling space but the building façade or balcony balustrade were close (e.g. 3.5m) to the boundary. The outlook standard has been a useful tool for managing spaciousness and privacy to and from adjoining sites, particularly when outdoor living spaces and outlook are on the ground floor. However, when outlook and outdoor living spaces are above the ground floor, the occupants of a new dwelling are able to overlook the adjacent site from above, and when standing at the edge of the balcony are closer to the boundary. The photo above illustrates this. The issue is that there is no outlook control related to outdoor living spaces where it is above ground. This is a common occurrence given Auckland’s typically long and narrow sites. The outlook standard does not adequately manage the orientation of long buildings with living rooms and balconies directly facing neighbours rather than being contained on-site.
- Structures such as fences or sheds reduce the sense of spaciousness of principal living area outlook spaces – particularly when co-located with outdoor living spaces. These structures were often not shown on consenting plans.



*Figure 17. This development has dwellings with the principal living outlook spaces and outdoor living area in the form of a balcony at the first level overlooking their driveway towards adjoining sites – poor quality outlook and reduced privacy for residents and neighbours.*

## Habitable room outlook

In residential zones, the AUP standard requires a minimum 3m from the master bedroom and 1m outlook from habitable rooms (such as bedrooms). The standard's purpose in combination with the daylight control, is to manage visual dominance effects within a site by ensuring that habitable rooms have an outlook and sense of space.

The monitoring programme looked at the number of habitable rooms in a dwelling that infringed the 1m standard. The findings showed 90 per cent of developments complied with the 1m outlook spaces from habitable rooms. In the few cases where the distance was less than 1m, it only applied to one habitable room in the dwelling.

Observations from site visits showed that complying outlooks from some habitable rooms did not achieve an outlook or sense of space due to the presence of high retaining walls, fences or buildings. A change to the AUP daylight standard to include building separation between structures such as retaining walls and fences could achieve better quality outlook. This is a recommendation for indicator 1.

In the Business – Mixed Use zone, the outlook space requirement is one of only three residential-specific standards. The outlook space from the principal living area is the same as the residential zones – 6m x 4m and is also measured from the centre of the largest window. Habitable rooms in this zone require a 3m outlook space.

There are several possible reasons for the lack of compliance with the outlook standard in the residential zones. The first is it is not an AUP core standard for the residential zones (for all dwellings in THAB, and 4 of more dwellings in MHS and MHU) so without the risk of notification, developers may not consider this a priority in the design of dwellings. Another is that the number of dwellings on a site may compromise the amount of space available to accommodate outlook space. Conversely, minor non-compliance may provide better overall outcomes in some circumstances. For example, by allowing a building to be placed in a way that provides better connection to the street frontage, avoiding shading on a sensitive part of an adjoining site etc.

The findings for the Business – Mixed Use zone showed 70 per cent of developments complied with the Outlook Space standard. Non-compliance with the outlook space standard for principal living areas were:

- 5 per cent of developments infringed the depth requirement by up to 1m
- 15 per cent infringed it by between 1m and 2m
- 10 per cent infringed it by between 2m and 3m.

The 3m outlook space standard in the Business – Mixed Use zone reflects the higher densities and more intensive typologies such as apartment buildings. Therefore, the 3m outlook space is applied to provide adequate privacy, ventilation, daylight and sense of space. This amount of outlook is appropriate to avoid privacy effects between adjoining sites if developed to the same intensity in the future. The 3m outlook space from habitable rooms was complied with in 55 per cent of developments and infringed by 45 per cent of developments. Non-compliance was considered minor.

To increase the number of bedrooms in dwellings, some developments (particularly apartments) were internalising habitable rooms which resulted in no exterior windows or natural ventilation. Some were intended as for purposes other than a bedroom but there was a risk that they could be used for that purpose. There is more potential for this in the Business – Mixed Use zone due to the large number of apartments. Monitoring showed less than 5 per cent of dwellings with this form of

habitable room occurred in the residential zones while this could apply to around 20 per cent of habitable rooms in the Business – Mixed Use zone. Assessing habitable rooms in apartments was complicated by labelling rooms as a study or media room – many with ensuites and wardrobes suggesting possible use as a bedroom. Ventilation and daylight access are managed by the NZ Building Code.

### Location of principal living area outlook space

The AUP outlook standard does not specify where the principal living area outlook space should face. However, the quality of the outlook is influenced by the location of the principal living space outlook. The monitoring looked at various locations for principal living area outlook spaces to ascertain the range and quality of outlooks in developments. The data includes all outlooks, regardless of non-compliance.

In the residential zones, the location of principal living area outlook spaces were:

- 65 per cent of developments had the majority of outlook spaces across a ground level outdoor living space
- 20 per cent of developments had the majority of outlook spaces across balconies
- 10 per cent of developments had the majority of outlook spaces across driveways or parking areas
- 5 per cent of developments had the majority of outlook spaces across the street.

The location of principal living outlook spaces in the Business – Mixed Use zone was analysed differently to the residential zones. This is because the majority of developments were apartments and there was a greater range of outlooks from dwellings on each façade.

The findings showed the variety of outlook spaces from principal living areas as a proportion of the number of developments analysed. By way of example – 90 per cent of residential developments in the Business – Mixed Use zone sample had some dwellings with the principal living area outlook across the street. The range of outlooks are as follows (if a development includes at least one dwelling, it was allocated to the location category, hence results add up to more than 100 per cent):

- Towards the street – 90 per cent
- Driveways – 60 per cent
- Balconies – 55 per cent
- Ground level landscaping – 45 per cent
- Ground level communal space – 30 per cent
- Ground Level outdoor living space – 30 per cent
- Towards neighbouring property – 25 per cent
- Towards a railway line or motorway – 10 per cent
- Rainwater tanks or communal rubbish bins – 10 per cent

### Principal living area outlook space across driveways and carparks

The AUP does not stipulate the aspect for the principal living outlook space so outlook across a driveway or parking area complies with the standard. In the residential zones, the findings showed that 10 per cent of developments had the majority of principal living area outlook spaces across driveways. There were also many developments that had a proportion of their dwelling outlook spaces across driveways or parking areas.

Where the principal living outlook space was on the first level or higher, they were often co-located with balconies (that were the principal outdoor living spaces) in both terrace housing and apartments. And in many cases, these were over driveways. Outlooks over driveways often occur because the driveway widths on large sites are 6m and the width to enable a vehicle to turn into a garage is also 6m. Both scenarios correlate with the required living area outlook space 6m depth dimension. This often achieves the most efficient spatial arrangement for the development.

A detailed analysis shows:

- 15 per cent of developments had between 30-50 per cent of dwelling outlooks across driveways or parking areas.
- 15 per cent of developments had between 60-80 per cent of dwelling outlooks across a driveway or parking area
- 5 per cent of developments had 100 per cent of dwelling outlooks across a driveway or parking area.

Observations from site visits in the residential zones showed that principal living area outlook spaces were often linked with primary outdoor living spaces on balconies on the first level or higher. In this scenario, the outlook space correlates with the 6m width driveway space. The outdoor living standard requirement for sunlight to south facing outdoor living spaces in this scenario causes driveways to be located in the sunniest site locations (which would have been better suited to ground level outdoor living spaces). This illustrates just one way the requirements of other standards can complicate the ability to achieve quality outcomes. The image below shows this a common scenario.



*Figure 18. This three storey terrace development shows the outdoor living spaces (in the form of a balcony on the first level) and principal outdoor living space taking advantage of the driveway space to meet the AUP standards. The AUP requirement for sunlight to outdoor living spaces plus the requirement for a 6m outlook space from the living area has caused the 6+m wide driveway to be located in the central core of the development. The outlook spaces and outdoor living spaces (balcony) of each terrace block face each other across the driveway which can affect privacy.*

In the Business – Mixed Use zone, around 40 per cent of developments avoided outlook spaces from principal living rooms facing driveways or carparks altogether. Of those developments with outlooks across driveways or carparking:

- 50 per cent had up to a quarter of their dwellings with this outlook
- 10 per cent of developments had between three-quarters to all their dwellings with outlook spaces across driveways or carparks.

Driveways and carparks offer a low-quality outlook from the principal living room for those developments. This is because these areas are usually barren concrete expanses, some with parked cars blocking the outlook as well as vehicle movements creating air pollution and noise. Privacy into living areas can also be compromised with inadequate separation from driveway activity.

### Principal living area outlook space across a street

In the residential zones primary living area outlook space can extend across the street space without infringement to the standard. The proximity of the outlook to the street creates the presence of large windows or glazed doors which in turn have a significant influence on the appearance of dwellings. There are both positive and negative outcomes of large windows overlooking the street. Firstly, the positive outcomes for the neighbourhood are that large windows usually contribute to an attractive façade and increase passive surveillance to improve pedestrian safety on the street. The unintended consequence of large street facing windows can be residents' desire for privacy (and sometimes security).

Around 50 per cent of all developments had between 1-3 dwellings on the site that overlooked the street. Approximately 40 per cent of these dwellings had 4m or greater separation between the principal living space window and the street, and 20 per cent had less than 4m separation. Analysis of plans showed that many street facing dwellings had some form of privacy measure such as shutters, landscaping or fences.



*Figure 19. In this terrace development, the AUP outlook standard enables the principal living area outlook space to extend over the street boundary into the street space. The photo shows terraces with a 4m outlook space from the ground level living room within the site and a further 2 metres beyond the fence, extending into the street space. The close proximity to the street can affect privacy with residents sometimes choosing to draw their blinds or use other privacy measures. A benefit of the close proximity of the internal and outdoor living areas to the street is it can feel safer for pedestrians, knowing residents may be close by.*

Observations from site visits showed that dwellings with smaller distances from the street often resulted in drawn blinds or higher fences which can compromise the attractiveness of the street



frontage and passive surveillance benefits. Council has standards for fence height but these were not always complied with. Similarly, residents may subsequently erect high fences or change from semi-permeable to fully opaque fencing, after the statutory consenting process. Mitigation measures such as fences can truncate the outlook space and increase the physical proximity of the dwelling to the street boundary, exacerbating privacy issues.

### Orientation for sunlight

There is no AUP requirement for the principal living outlook space in the residential and Business Mixed Use zones to be orientated to receive sunlight. However, sunny living spaces are generally considered an essential aspect of healthy homes. On the importance of staying warm and healthy in winter, the Ministry of Social Development recommends the following<sup>7</sup>:

*Open windows and curtains on sunny days and close them when the sun goes down to trap heat in your home. Trim any trees that prevent sun entering your house.*

The Ministry of Health promotes healthy homes through its 'Healthy Homes Initiative'. The Ministry identifies health issues with cold, damp homes<sup>8</sup>:

*Cold, damp, crowded homes can increase the risk of respiratory issues and other preventable health conditions, such as rheumatic fever and skin infections. There is strong evidence, nationally and internationally, of improved health outcomes resulting from warmer and drier homes.*

*Improving housing is also an equity issue, with Māori and Pacific families being over-represented in low-income households in areas of poorer quality and crowded housing.*

Ensuring living areas in dwellings have access to sunlight to be warm through passively heating homes and to support a range of health benefits. It also supports climate change objectives to reduce reliance on energy use for heating, clothes driers, etc.

In the residential zones, the monitoring looked at whether the outlook spaces for principal living areas were orientated to receive sunlight for at least part of the day in midwinter. The analysis estimated the potential for sun, based on the proportion of dwellings in a development with principal living outlook spaces with a northern, eastern or western orientation. The results showed:

- 75 per cent of developments orientated all their living areas for sunlight.
- 15 per cent of developments had most (80-90 per cent) of their living areas orientated for sunlight
- 10 per cent of developments had 70 per cent or fewer living areas orientated for sunlight.

Those developments that had some living areas facing south generally minimised that number to less than 20 per cent of the dwellings. While some sites will create south facing dwellings due to practicalities of development, around 5 per cent of developments had the majority of their dwellings with living areas facing south.

One of the reasons why the majority of principal living areas receive sunlight could be market desirability. Another possibility is that most principal living areas directly access the outdoor living space. The AUP requires the outdoor living space to have solar access for a specified period measured from the equinox. The co-location of these spaces has additional benefits for solar access to the primary internal living spaces. There is a risk that when adjoining sites are developed with a

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<sup>7</sup> <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/brochures/keeping-warm-healthy.html>

<sup>8</sup> <https://www.health.govt.nz/our-work/preventative-health-wellness/healthy-homes-initiative>

similar form and intensity, the location of new buildings could cause shadowing on outdoor living areas and outlook spaces on these developments.

### *Effectiveness and efficiency of the plan*

The incorporation of a specified outlook space for principal living areas and habitable rooms in the AUP is an effective and efficient method for securing quality living outcomes for 70 per cent of developments in both the residential zone and the Business – Mixed Use zone samples. While this is a generally positive finding, one third of developments had dwellings that did not comply with the standard.

The analysis also showed that dwellings complying with the standard were not exempt from poor quality outlook spaces. This included principal living area outlook spaces across driveways or parking areas. Those with outlook spaces facing the street were often truncated by fences with residents seeking privacy which in turn compromises the privacy and sense of space envisioned by the purpose of the standard. Principal living area outlook spaces facing adjoining sites – particularly above ground level – can compromise the privacy (visual and acoustic) for the adjacent dwelling and neighbours (existing and future). It is important to note that the effects associated with outlook as experienced by residents on the site (i.e. not effects on adjacent neighbours) is difficult to accurately measure without surveys (which were beyond the scope of this monitoring).

Modifications to the principal outlook standard could achieve the following:

- Ensure the level of spaciousness signalled by the AUP is not compromised – even a small reduction in dimension has a significant effect on the spaciousness of the outlook
- Better quality of outlook spaces from principal living areas
- Improve privacy of street facing principal living area outlook spaces
- Improve privacy between principal living area outlook spaces and the adjoining site
- Integrate the principal living outlook space with the ground floor outdoor living space through alignment of dimensions
- Orientation of principal living area outlook for solar access. This needs to be considered in light of an adjoining site being developed with a similar built form and intensity.
- Prevent structures such as fences that encroach on principal living area outlook spaces in complying or infringing developments.
- Outlook spaces could be orientated towards the front or back of the site to avoid overlooking adjoining sites.

### *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** – Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve the quality of outlook spaces in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis. The scope of research could consider, but not limited to, the following:

- Require the outlook standard to be a core standard where it is not already. *Affected by recent Government legislative changes*
- Outlook spaces could be orientated towards the front or back of the site to avoid overlooking adjoining sites. *Medium priority*
- Align the outlook living space with 6 x 4m dimensions and 6m minimum depth with an increased ground level outdoor living space of 24m<sup>2</sup>. An exclusion for apartments may be necessary where ground level conditions differ to other housing typologies. *Affected by recent Government legislative changes*
- Clarify the statutory weight of purpose statements to be equivalent to policies and include explicit reference to this weighting in the AUP. Refine policies for clarity and more consistent alignment with standards as these are used for assessing consents. *Affected by recent Government legislative changes*

To address issues concerning privacy and a sense of spaciousness principal living area outlook space standard in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis.

The scope of this research could consider but not be limited to the following options:

- Retain the method of measurement from the centre of the largest window in principal living area but where the window is set back from the primary façade, require measurement from the building façade or balcony edge (to be determined). This is to achieve privacy between dwellings and the adjacent sites and retain a sense of spaciousness where the outlook is compromised by being measured from windows set into the building. The purpose statement would also need to be updated to recognise its additional purpose of achieving better privacy between sites.

Or

- Principal living area outlook space above ground level facing towards adjoining sites could have specified minimum yard separation (e.g., 5m) between façade of the building or balcony balustrade (whichever is closer) and the boundary. This would replace the outlook measure from the largest area of glazing for this circumstance.

Or

- Review the dimensions to determine whether a change (including an increase) may achieve better outcomes such as spaciousness and privacy as envisioned in the purpose of the standard. *Affected by recent Government legislative changes*

To improve the quality and functionality of the principal living area outlook space in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis. The scope this of research could consider, but not limited to, the following options:

- Update the principal living area outlook space standard to:
  - Exclude outlooks over driveways, private ways or parking areas for the first three levels of a building (this includes ground level but above this, the negative effects of driveways are mitigated with greater separation and more expansive outlooks). *Affected by recent Government legislative changes*
- Or
  - Require a design response where driveways are designed with similar characteristics to streets with setback from the driveway edge, landscaping/trees and other qualities to improve privacy, a sense of space and amenity. *Affected by recent Government legislative changes*
- Co-locate principal outlook space with outdoor living spaces where at ground level (for housing typologies excluding apartments). Consider aligning the dimensions of the principal living area

outlook space with the outdoor living space - 6 x 4m (24m<sup>2</sup>). *Affected by recent Government legislative changes*

- Limit the number of dwellings (as a percentage) in a development with south facing principal living space outlook. *Affected by recent Government legislative changes*
- Require a specified amount of area in the principal living area outlook space to be devoid of structures or household infrastructure (align with same requirement for outdoor living space). *Affected by recent Government legislative changes*
- For separation between buildings or structures, update and apply the daylight standard in conjunction with the outlook standard to ensure appropriate building separation. This could reduce shading and improve privacy on between dwellings. This standard could be updated to include retaining walls and structures such as fences. *Medium priority*
- The AUP currently require greater setbacks for south facing outdoor spaces. This principle could be applied to all outlook spaces. *Affected by recent Government legislative changes*

To improve compliance and the quality of the principal living area outlook space in the Business – Mixed Use zone, undertake further research and cost benefit analysis. The scope of this research could consider but not be limited to the following options:

- Replacing the zone’s existing Outlook space standard with the Outlook space standard used in the City Centre and Metropolitan Centre zones. The key differences with the Outlook space standards in those zones are that:
  - the Outlook space applies not from the glazing but from the ‘face of the building’, so you can’t reduce the distance of a building to a boundary by recessing the glazing within the face of the building. Notably, the standard explicitly states that the outlook space does not apply from the room’s window (H8.6.32(4)) *Medium priority*
- For principal living room outlook space progressively increase the outlook space depth as the building height rises – as follows:
  - 6m outlook space depth at heights 0-10m,
  - 10m outlook space depth at heights 10-16m, and so on.

This will ensure adequate daylight to those dwellings at the lower storeys and could encourage buildings to face the street. This also futureproofs the quality of outlook space in dwellings from adjoining sites if they are developed to the same intensity. *Medium priority*

## Indicator 6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces

### *Measures*

- Form of primary outdoor living space – ground level space, balcony etc.
- The adequacy of balcony size where they are the primary outdoor spaces – relative to the number of bedrooms.
- Degree of non-compliance (m<sup>2</sup>) to the size of the primary outdoor living space.
- Access to outdoor living space.
- Outdoor living space orientated for sunlight.
- Whether outdoor living spaces were overshadowed by buildings or structures such as fences at noon in mid-winter.
- Structures in the primary outdoor living space.

### *What indicator 6 tells us*

The AUP requires residential developments in the MHS, MHU and THAB zones to provide a primary outdoor living space in the form of a ground floor area or balcony with minimum dimensions. The purpose of the outdoor living area is to provide spaces for people to enjoy the outdoor environment within their homes. The AUP requires dwellings to have a space that is of a functional size and dimension with access to sunlight and is accessible from the dwelling. It must also be separated from vehicle access and manoeuvring areas. The standards specify the following.

- The dimensions for the ground floor outdoor living space are 20m<sup>2</sup> with a minimum dimension of 4m. This can be split between a balcony and ground floor outdoor living space.
- For a studio or one bedroom dwelling, 5m<sup>2</sup> and a minimum dimension of 1.8m is required for a balcony.
- For two bedroom or larger dwellings, 8m<sup>2</sup> with a minimum dimension of 1.8m is required.
- Dwellings can internalise the area (5m<sup>2</sup>) that would have been used for an outdoor living space.

A range of factors were used to determine the elements that comprised a 'quality' outdoor living space. These included:

- type and size,
- how residents access their primary outdoor living space,
- the functionality of the space,
- amount of overshadowing.

There is no AUP requirement for an outdoor living space for residential developments in the Business – Mixed Use zone. However, many developments did provide outdoor living spaces, so these follow the residential zone analysis.

## Findings

### Type and size of outdoor living spaces

In the residential zones, 80 per cent of dwellings have ground level open spaces – usually in the form of a garden or courtyard. Balconies were the primary outdoor living space for approximately 20 per cent of developments – mainly in the more intensive MHU and THAB zones.

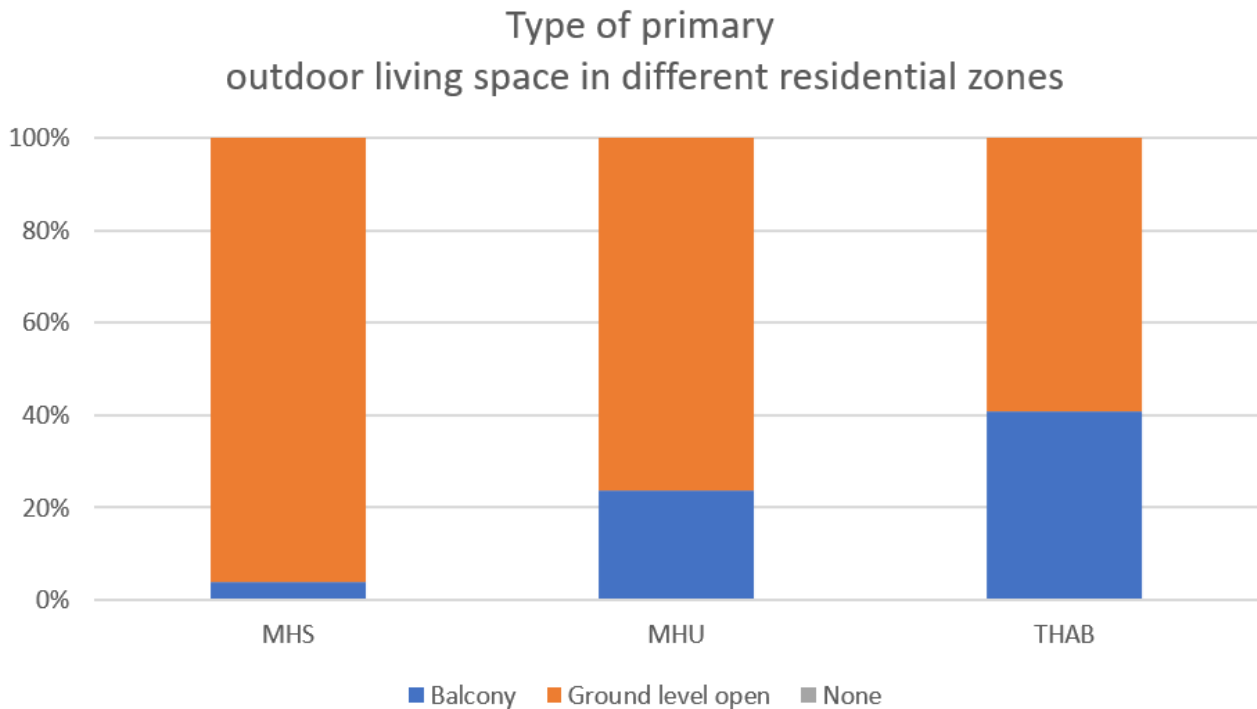


Figure 20. This graph shows the types of primary outdoor living spaces for each residential zone. Those zones with more apartment buildings have a greater proportion of balconies for the primary outdoor living space.

For ground level primary outdoor living spaces, the findings showed:

- 80 per cent of developments complied with the standard
- 10 per cent infringed the size although most were for a shortfall of less than 5m<sup>2</sup>
- 10 per cent of developments infringed the dimensions.

For balconies that are the primary outdoor living spaces in dwellings with two or more bedrooms, the findings showed:

- 25 per cent of developments infringed the minimum area although the majority of balconies were no less than 6m<sup>2</sup> in size.
- 35 per cent of developments provided more than the minimum size with balconies with most around 10m<sup>2</sup>.

Balcony sizes were also evaluated for their functionality. This was based on the number of bedrooms to gauge the number of occupants potentially using the space. The findings showed:

- 50 per cent the balconies were considered an adequate size
- 30 per cent were considered a generous size
- 15 per cent were judged to be inadequate.

In the Business – Mixed Use zone, where the AUP does not require any outdoor living space, 95 per cent of residential developments did provide outdoor living spaces for the majority of dwellings. These were in the form of:

- 80 per cent had balconies
- 10 per cent had ground level outdoor living spaces
- 5 per cent had sunrooms (usually these were semi-enclosed glazed spaces)

The large number of balconies in the Business – Mixed Use zone residential developments is consistent with the predominant apartment typology. To evaluate whether balconies were adequately sized, the minimum balcony standards in the residential zones were applied as they represent a balance between ensuring positive residential amenity and helping to achieve intensification anticipated by the AUP (for example there are no balcony requirements in the Business – Mixed Use zone).

The findings showed that 70 per cent of balconies in the Business – Mixed Use zone sample were of an appropriate size and proportion for the size of dwelling. The remainder were considered too small, or the proportions and shape limited their functionality. The majority (90 per cent) of developments had outdoor living spaces accessed from the living room and 5 per cent of developments had outdoor living spaces accessed from the kitchen. In addition to private outdoor living spaces in the Business – Mixed Use zone, around 20 per cent of developments also provided communal outdoor living spaces.

### Access

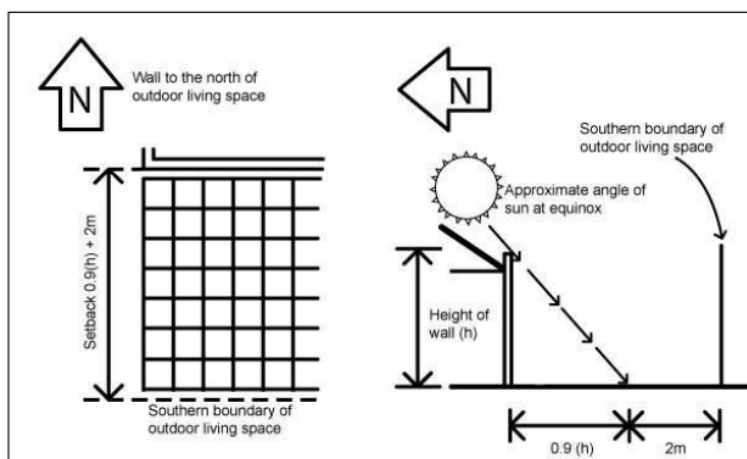
Between 2016 and 2019, the AUP outdoor living standard in the residential zones also required outdoor living spaces to be accessed directly from the primary living areas. In the sample, nearly 90 per cent of outdoor living spaces were accessed from the primary living areas in dwellings.

In January 2020, Plan Change 16 removed the requirement for direct access between the primary living area and the outdoor living space. The findings showed the emergence of access to outdoor living spaces from dining rooms, kitchens, bedrooms and halls. More recent observations (beyond the data collection period) show access to outdoor living spaces from garages and other spaces such as laundries is becoming more common. The disconnection between primary indoor and outdoor living spaces reduces the functionality and amenity of both spaces. This is because the sense of space, use and enjoyment, access to sunlight and daylight in living areas to create an ‘indoor-outdoor flow’ relies on a direct access to the outdoor living space in the form of a balcony or ground level space.

### Sunlight

The AUP requires sunlight to the primary outdoor living spaces for south facing units to be considered for consents. The diagram is extracted from the residential standards.

Where outdoor living space is provided at ground level and is located south of any building located on the same site, the southern boundary of that space must be separated from any wall or building by at least  $2m + 0.9(h)$ , where (h) is the height of the wall or building. For the purpose of this standard south is defined as between 135 and 225 degrees.



Beyond this, the AUP focuses on minimising external effects of development on adjoining sites. Standards only address whether a proposal will affect sunlight access to the outdoor living space of a neighbouring property.

The AUP standards currently require only *daylight* access for living areas and bedrooms in new developments between buildings on the same site and is managed together with the outlook provisions. The distinction between daylight and sunlight is important because they affect the quality of residents' health, safety and wellbeing. Daylight and solar access have many benefits including vitamin D for health, passive heating for the dwelling, reduction in the use artificial lighting, heating and the need for clothes driers, supports plant growth and mental health and well-being.

The monitoring looked at whether dwellings were orientated for sunlight. The findings showed that 90 per cent of developments had the majority (70% or more) of dwellings with principal living spaces orientated towards the north, east or west. However, many developments had a few dwellings with outdoor living spaces that were either orientated to the south or would become overshadowed by buildings or structures in mid-winter. This was particularly evident where outdoor living areas were surrounded by 1.8m fences sitting atop high retaining walls. While cognisant of the realities of having some south facing dwellings, observations reveal there are instances where such overshadowing effects could have been avoided or mitigated.

Further analysis looking at whether structures or buildings could overshadow even a portion of outdoor living spaces in developments at noon in mid-winter. This is the coldest time of year when indoor and outdoor living spaces most need the sun to provide passive heating, enable washing to dry outside (to avoid dampness inside), reduce energy use with less lighting requirements during the day and support residents wellbeing. The equinox – currently used for AUP sunlight assessments is a time of year with plenty of sunlight and daylight so it is not achieving the outcomes needed to support residents health or reduce the effects of climate change by reducing energy use. It should be noted that these findings were estimated as very few consent plans included shadow diagrams.

The proportion of dwellings across all developments in the residential zone sample with primary ground level outdoor living space likely to be overshadowed by buildings or structures at the noon winter equinox were:

- 70 per cent of dwellings had all outdoor living spaces designed to avoid overshadowing
- 15 per cent of dwellings lost up to half the sunlight to outdoor spaces due to overshadowing
- 10 per cent of dwellings lost more than half the sunlight to outdoor spaces due to overshadowing.

This shows that a quarter of outdoor living areas in the sample could have compromised sunlight access in winter. The analysis did not consider the effects of new development on adjoining sites at the winter solstice.

Overall, the findings suggest that the outdoor living space requirements for sunlight are succeeding to the extent that it is ensuring access through the orientation of outdoor living spaces for most dwellings for at least half the year (spring, summer and autumn between equinoxes) in new developments.

An additional benefit of sunny outdoor living spaces was that most principal living spaces were connected to their primary outdoor living area and consequently would also receive sunlight. This is not necessarily the case for the outdoor living areas in sites in the THAB zone. This is because there are no assessment criteria for assessing sunlight on outdoor living areas of adjoining sites.



## Function of primary outdoor living spaces

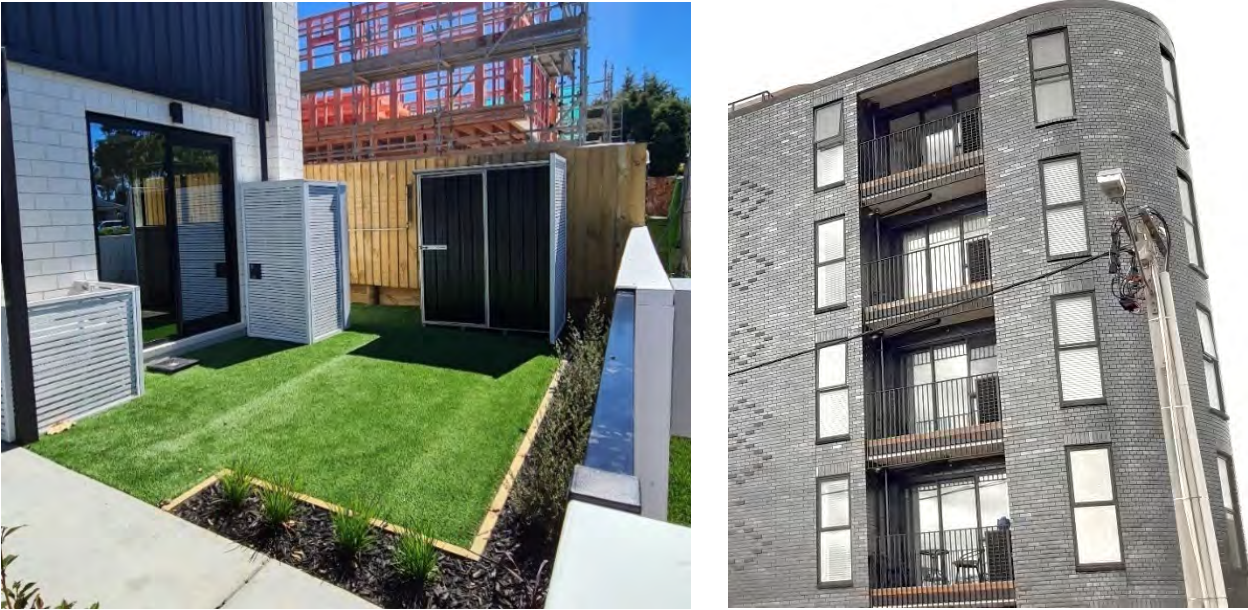
Primary outdoor living spaces were assessed for their functionality. The purpose of the primary outdoor space is for the occupants to use it for living. The Outdoor Living Space standards in the residential zones seek to ensure that they are of a functional size and dimension, have access to sunlight, and are accessible from the dwelling. The AUP requirements for these spaces did not factor in space for utilities like rubbish bins, hot water cylinders, heat pump units, water tanks, sheds, etc. Collectively, these items can take up a large portion of the area leaving no space for the area's intended purpose of providing for outdoor living. Typical dimensions are set out in the table below.

### Typical dimensions of common utilities

Utilities	Area required (m <sup>2</sup> )
<b>Refuse, recycling and food waste bins (council collection)</b>	<b>1.4m<sup>2</sup></b>
<b>Rainwater tank</b>	<b>2000L = 1.8m<sup>2</sup> - 2.5m<sup>2</sup></b> <b>2500L = 2.4m<sup>2</sup></b> <b>3000L = 3.85m<sup>2</sup></b> <b>6000L = 3.5m<sup>2</sup></b> <b>7000L = 3.24m<sup>2</sup></b>
<b>Hot-water cylinder</b>	<b>0.24m<sup>2</sup></b>
<b>Storage shed</b>	<b>2.3m<sup>2</sup></b>
<b>Drop-down washing line</b>	<b>2.86m<sup>2</sup></b>
<b>Total (and per cent if everything is located within a 20m<sup>2</sup> outdoor living space)</b>	<b>8.6m<sup>2</sup> (43 per cent) - 10.65m<sup>2</sup> (53 per cent)</b>

Consent plans were analysed to see whether structures such as water tanks and storage sheds were shown within the primary outdoor living space. Around 5 per cent of dwellings had at least one structure and 15 per cent had 2-3 structures occupying the outdoor living spaces at ground level. Many structures such as storage sheds and water tanks are added by new owners after the development is completed. There are no restrictions on this. The effect of such additions is a reduction in the size and dimensions of the primary outdoor living space compromising the purpose for this AUP standard.

Observations from site visits were that a sense of spaciousness was more evident when the outdoor living area was co-located with the principal living outlook. This generally created a better sense of spaciousness. Site visit observations also showed these spaces can become consumed with additional household infrastructure – particularly rubbish bins, hot water tanks, heat pump units, sheds and water tanks. This reinforced the potential issue associated with the unintended consequences of reducing the functionality of outdoor living spaces ‘by a thousand cuts’. Collectively, this changes the function of the outdoor living space to a service court.



*Figure 21: The useable space of the ground floor outdoor living area is reduced by the presence of a heat pump, shed and water tank. In this site, the items are screened. The useable space on the balcony in the apartment building is reduced by the external heat pump unit.*

This issue is difficult to control during resource consents as plans may not necessarily reveal the level of encroachment on outdoor living spaces. Many of these items also appeared to have been added by residents following completion.

A potential effect of the continuing trend of reduced private outdoor living space functionality is additional pressures on our parks and open spaces to accommodate family needs for outdoor living spaces. Conversely, compromises in primary outdoor living space may produce more desirable outcomes in terms of typology and site layout. For example, for apartments, the requirement is for a 20m<sup>2</sup> ground floor outdoor living area, while in the same development a 5m<sup>2</sup> balcony is deemed appropriate. This discrepancy demonstrates how a single package of residential standards in the MHS, MHU and THAB zones is designed to apply to a range of different housing typologies. The standards are primarily focussed on provision for standalone houses, townhouses and terraces. However, they also provide for apartments which can have different requirements in terms of access, functionality, safety, and amenity.

### **Privacy**

Another observation from site visits was the location of outdoor living spaces and the way it influenced the level of privacy – for the occupants and in some cases, adjacent sites. Sites with multiple dwellings with outdoor living spaces abutting adjacent sites often reduced privacy on those sites – especially when outdoor living areas were balconies at higher levels. This is exacerbated by long blocks of attached terrace houses or apartments abutting a site with a single dwelling. While visual mitigation may be achieved with a 1.8m fence, acoustic mitigation is less achievable – particularly for balconies at upper levels. In circumstances where the outdoor living spaces from multiple dwellings occurs, the acoustic effects on adjacent sites can be cumulative. Perceived visual dominance and level of privacy are most evident when a development is the first site to intensify under the AUP standards. Higher intensity typologies and densities were most jarring when juxtaposed against traditional single house suburban development, even if the zone outcomes envisioned such changes.



*Figure 22: Three storey apartment development with complying outdoor living areas in the form of balconies and ground level courtyards facing the boundary may affect privacy on the adjoining site.*

### **Street interface**

Where outdoor living spaces fronted streets, most developments had fences. Some complied with the AUP fence standard but many did not – and may have been constructed by residents seeking more privacy following completion. The dominance of high fencing had the effect of significantly reducing the quality of the public realm by cutting off the connection of the street with developments. Conversely, those developments with a height separation between the public footpath and the outdoor living space achieved good connectivity to the street while maintaining privacy by avoiding the blank façade effects of high fencing. These observations reveal the importance of considering the realities of post-consent use in affecting the public realm (and sense of place); the issue of privacy is intrinsically linked with how a development will mature in the context of the wider urban fabric.



*Figure 23. This development shows how privacy is achieved for the ground level apartments when there is a height separation and landscaping between the primary outdoor living area and the public footpath.*

### **Sustainability**

The type of landscaping influenced the quality of outdoor living spaces in terms of visual attractiveness as well as functionality (i.e. maintenance considerations). While many plans showed landscaped, well-planted outdoor living spaces, observations from site visits revealed many were areas of grass, artificial lawn, paving or combination of these. Those with grass were often not mown as most occupiers would not own a lawnmower for such a small area or have a place to store it. Some developments anticipated the burden outdoor spaces could put on residents, ensuring well-designed, planted landscaping that required minimal maintenance.

### ***Effectiveness and efficiency of the plan***

The performance of primary outdoor living spaces shows a trend that the AUP is not performing as well as it could for the health and wellbeing of residents. Particularly, the effects from utilities (heat pump units, hot water cylinders, sheds, water tanks or other items) constraining the amount of private space for children to play and residents to use for passive recreation, gardening or other uses. The AUP requires sunlight to outdoor living spaces at the equinox but not in mid-winter when residents most need sunlight for their health (eg., vitamin D) and wellbeing.

The AUP seeks to provide outdoor living areas as spaces for people to enjoy the outdoor environment within their homes. The findings and observations show that there is still a noticeable amount of development with low quality primary outdoor living spaces. This mainly relates to:

- utilities and structures locating in primary outdoor living spaces at ground floor or on balconies, significantly affecting their functionality
- where outdoor spaces are located on a street frontage there can be tension between privacy and high fencing to primary windows/sliding doors, which can compromise the quality of the public realm
- 15 per cent of balconies in the residential zone sample are too small or with proportions/shapes limiting their functionality and 30 per cent in the Business – Mixed Use sample were inadequate.

- access to primary outdoor living spaces from assortment of rooms, reducing functionality of both spaces
- 25 per cent of primary outdoor living spaces could have compromised sunlight access during mid-winter in the residential zone sample
- cumulative effects where multiple primary outdoor living spaces facing the same adjoining site can reduce that development's privacy and privacy of the adjoining site
- the effects of overshadowing in mid-winter by new developments on adjoining sites can compromise the quality and functionality of outdoor living spaces.

The AUP identifies primary outdoor living space as a key component of delivering high-quality built environments. Findings from the monitoring program reveal that the performance of developments consented under the AUP's current provisions fall short of its own aspirational goals. This suggests that planning intervention is needed.

The majority of apartment developments in the Business – Mixed Use zone provided balconies for dwellings. While this is not a standard, this indicates the strong market preference for outdoor living spaces. This supports the health and wellbeing of residents.

## *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve the functionality and quality of primary outdoor living spaces, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Co-location of outlook with outdoor living spaces where at ground level. **High priority**
- Require outdoor living spaces to be directly accessible from the principal living space at any level. **High priority**
- Limit the percentage of dwellings in a development with a south facing aspect. **Superseded by Medium Density Residential Standards**
- Do not allow fences or retaining walls within the primary outdoor living space. **Medium priority**
- Require the location of hot water cylinders, rubbish bins, rain tanks, sheds, heat pump units, etc to be shown on consent plans – including screening of some items. **Medium priority**
- Increase the size of ground level outdoor living space (eg. 24m<sup>2</sup>) to accommodate additional dwelling infrastructure such as hot water cylinders, rubbish bins, rain tanks, sheds, clotheslines, heat pump units, etc. These items should be located to ensure a specified area (e.g. 20m<sup>2</sup>) of living space without structures. **Superseded by Medium Density Residential Standards**
- Require co-location of utilities and services in communal areas in apartments to avoid impacting the functionality of communal or private outdoor living, while recognising the unique characteristics of the apartment typology. **Medium priority**

- Specify the number of hours of sunshine at the winter solstice to the outdoor living space and require shadow diagrams in plans to ensure buildings and structures do not overshadow these spaces in mid-winter. ***Superseded by Medium Density Residential Standards***

To manage the effects of primary outdoor living on adjoining properties, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Where outdoor living spaces with balconies are above ground level, require balconies to face over the street or into the site or to the rear of the site to avoid overlooking adjacent sites. This could apply to all zones including the BMU zone. ***Affected by recent Government legislative changes***

OR

- Where balconies face towards an adjoining site, a yard space of a specified depth (e.g. 6m) be applied between the edge of the balcony and the side boundary to manage visual and acoustic privacy between the dwelling and the adjacent site. This could apply to all zones including the BMU. ***Superseded by Medium Density Residential Standards***
- Specify the number of hours of sunshine at the winter solstice to the outdoor living spaces of adjoining sites and require shadow diagrams in plans to ensure buildings and structures do not overshadow in mid-winter. ***Superseded by Medium Density Residential Standards***

Improve the consistency of ground floor outdoor living space requirements to be the same as outdoor living spaces provided above ground floor in apartment typologies. Undertake further research and cost benefit analysis. The scope of research could consider but be not limited to the following options:

- Align ground floor outdoor living space and balcony requirements for apartment typologies (8m<sup>2</sup>). ***Affected by recent Government legislative changes***
- The Outdoor Living Space requirement could be a set amount per dwelling, with discretion for that to be provided in one area with the unit, in a separate on-site open space (possibly communal), or a mix. For instance, for apartment buildings with balconies there would be a need for communal space or facilities somewhere. That would give the standard greater technical rigor and legitimacy. ***Affected by recent Government legislative changes***

OR

- The Outdoor Living Space for ground floor units should be brought into line with above ground units, and other standards like outlook / landscaping used to create greenery around the ground level. ***Affected by recent Government legislative changes***
- Include an Outdoor Living Space standard for residential units in the Business - Mixed Use zone to support the health and wellbeing of residents. This zone provides for the most intensive housing outcomes of all the zones being monitored. ***Medium priority***

# Theme 4: Providing choice through a diversity of housing

Theme 4 focuses on whether development provides choice for all Aucklanders to meet their housing needs. A range of housing sizes and typologies are critical to a well-functioning city that encourages a diverse population and urban fabric that allow communities to change in place. This theme responds to the B2.1(1) Issue seeking growth that enhances the quality of life for individuals and communities.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(1)	A quality built environment where subdivision, use and development do all of the following:  (c) contribute to a diverse mix of choice and opportunity for people and communities;  (e) are capable of adapting to changing needs;
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following:  (a) Providing access for people of all ages and abilities
RPS Policy B2.3.2 (3)	Enable a range of built forms to support choice and meet the needs of Auckland’s diverse population.
RPS Objective B2.4.1 (4)	An increase in housing capacity and the range of housing choice which meets the varied needs and lifestyles of Auckland’s diverse and growing population.

This theme applies one indicator:

- Indicator 7 Diverse mix of housing choice for people and a range of built form to suit changing needs

## Indicator 7 Diverse mix of housing choice for people and a range of built form to suit changing needs

### Measures

- Building typologies – predominant typologies for development site
- Dwelling sizes – predominant size for development
- Dwelling bedroom numbers – predominant size for development
- Percentage of dwellings in a development that have no steps or one step between dwelling front door/garage thresholds and street
- Whether there is a habitable room (that fits a bed) and toilet with hand basin at ground level or accessible level for the majority of dwellings in a development

### *What indicator 7 tells us*

The analysis considers the types of houses that are being built in medium to large scale developments. This includes standalone houses, duplex/townhouses, terraces and apartments to meet the needs of a diverse population. Medium scale developments were defined as having 4-9 dwellings and large scale as 10 or more dwellings – some developments in the sample had over 100 dwellings.

Another aspect of the analysis was the ability of housing to meet changing needs of residents. An important consideration is whether people can access and live in their house if they experience a temporary mobility impairment through an illness or accident for example. Residential intensification is producing more dwellings that are two or more storeys high which can exacerbate this situation. Enabling people to live in their homes on the ground level (or an accessible level such as lift-accessed apartments) during a period of limited mobility rather than needing to find alternative accommodation can improve recovery and wellbeing. Each dwelling was assessed for its ability to provide a habitable room (that fits a bed) and toilet and handbasin, on the ground floor or a fully accessible level.

It is important that people can age in place or stay and recover in their homes in the event of a mobility impairment. Dwellings were assessed for the number of steps between the street and the front door or garage threshold. Enabling people to live in their homes on the ground level (or an accessible level such as lift-accessed apartments) during a period of limited mobility rather than needing to find alternative accommodation can improve recovery and wellbeing. Each dwelling was assessed for its ability to provide a habitable room (that fits a bed) and toilet and handbasin, on the ground floor.

## *Findings*

### **Housing typologies**

The AUP does not provide guidance on housing typologies – rather it is primarily market led. Similarly, the AUP does not have specific standards tailored for different housing typologies in the residential zones. Apartments, terraces, duplex/townhouses and standalone dwellings are developed from the same package of standards and evaluated using the same assessment criteria.

The analysis showed that there was an even split between the typologies – developments with standalone houses, duplexes/townhouses, terraces, apartments or a mix of typologies within an individual development. Each category accounted for around 20 per cent of the housing stock analysed. This shows there is a good variety of residential options to accommodate the diverse housing needs of Aucklanders.

The findings suggests that there is a trend for more apartments (as a ratio of development) in the more intense residential zones. However, terrace housing/duplexes are consistently popular across all zones which may either reflect market demands or what the building sector is able to deliver.



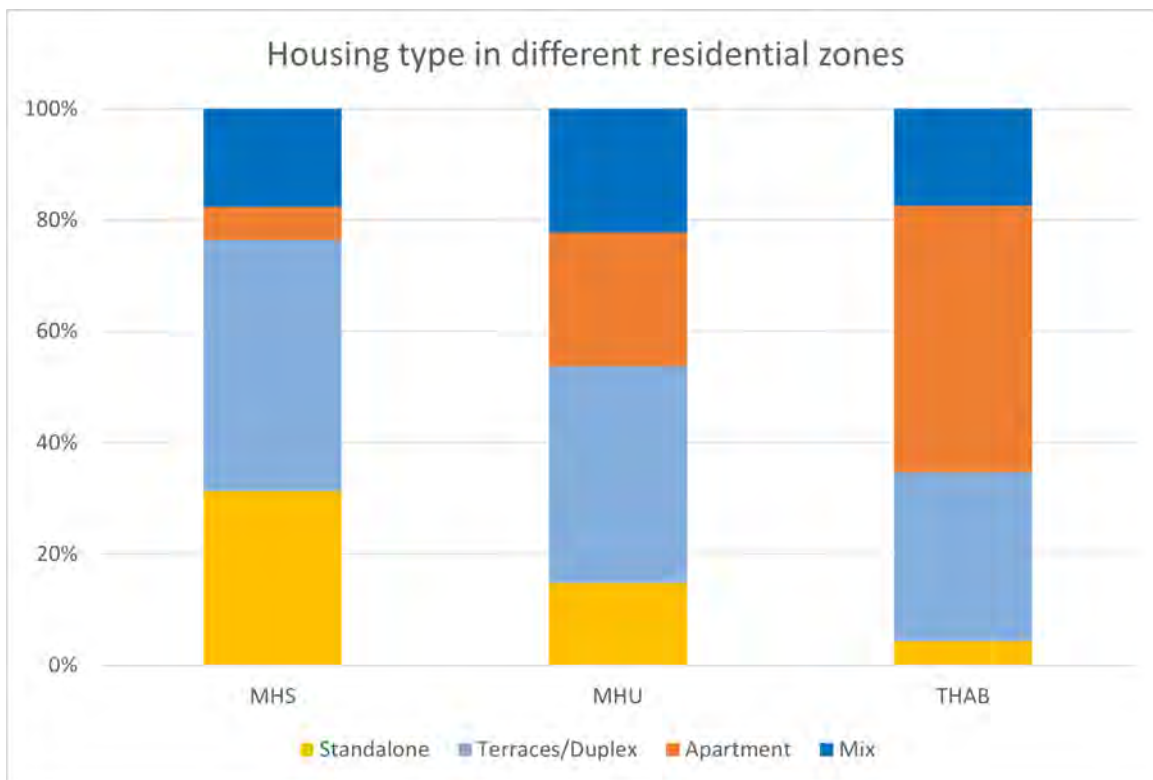


Figure 24 Housing type in residential zones Would be better to use colour in this graph it is difficult to see the different layers here.

### Dwelling sizes

The AUP has standards for minimum dwelling sizes in the residential and business zones to ensure they are functional and of sufficient size to cater for, the day to day needs of residents. The size of dwellings is a major factor in providing housing choice for Aucklanders. This includes family housing as well as smaller homes. Social housing (primarily Kainga Ora developments) was also included in the analysis.

The number of bedrooms is another major contributing factor for housing choice. The analysis also looked at the predominance of one, two, three or more bedrooms in developments to see whether there was an adequate range of housing for a diversity of needs.

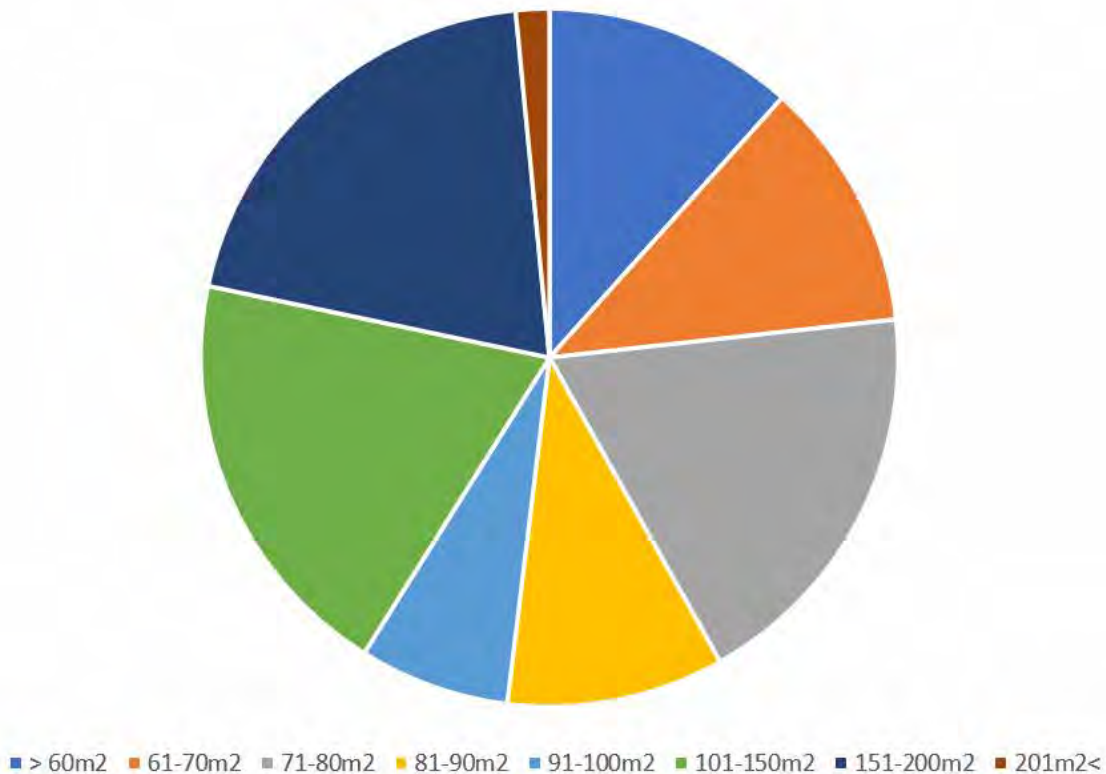
Dwellings of 30m<sup>2</sup> for a studio and 45m<sup>2</sup> for a one bedroom or larger dwelling were the minimum sizes for residential zones and the Business Mixed Use zone in the AUP. In the analysis, dwelling sizes were varied in some developments so the dwelling size for the majority (70 per cent or more) was recorded.

In the residential zones, the findings showed that over 90 per cent of dwellings were at least 50m<sup>2</sup>. Less than 1 per cent of developments had dwellings that were 30-40m<sup>2</sup> and only 5 per cent had sizes between 41-50m<sup>2</sup>.

A summary of the notable findings shows:

- 10 per cent of developments had the majority of dwellings sized between 61-70m<sup>2</sup>,
- 20 per cent of developments had the majority of dwellings sized between 71-80m<sup>2</sup>
- 10 per cent of developments had the majority of dwellings sized between 81-90m<sup>2</sup>.
- 20 per cent of developments had the majority of dwellings sized between 151-200m<sup>2</sup>.

## Dwelling size (predominant on development) across all residential zones



*Figure 25 Dwelling size across all developments in the residential zone sample*

Beyond a minimum size for studios and one-bedroom dwellings, the AUP does not specify housing size for developments. Likewise, it does not require specific housing typologies. The monitoring investigated the range of dwelling sizes to cater for the diverse needs of Aucklanders. The measures for this analysis were the size of dwellings and the number of bedrooms. Recognising that many developments had a mix of bedroom numbers, these were specifically recorded.

Only 5 per cent of developments consisted primarily of one bedroom or studio dwellings. In contrast, 25 per cent of developments had a predominance of two-bedroom dwellings and around 10 per cent of developments had a mix of one and two-bedroom dwellings. This reflects the prevalence of two-bedroom dwellings in apartments and terrace housing. The majority of apartments were sized between 61-70m<sup>2</sup> and the majority of dwellings in terraces were between 71-80m<sup>2</sup>. At an Auckland-wide scale which has traditionally been dominated by three bedroom homes on single sites, this level of one and two bedroom homes improves housing choice to support the diversity of residents needs.

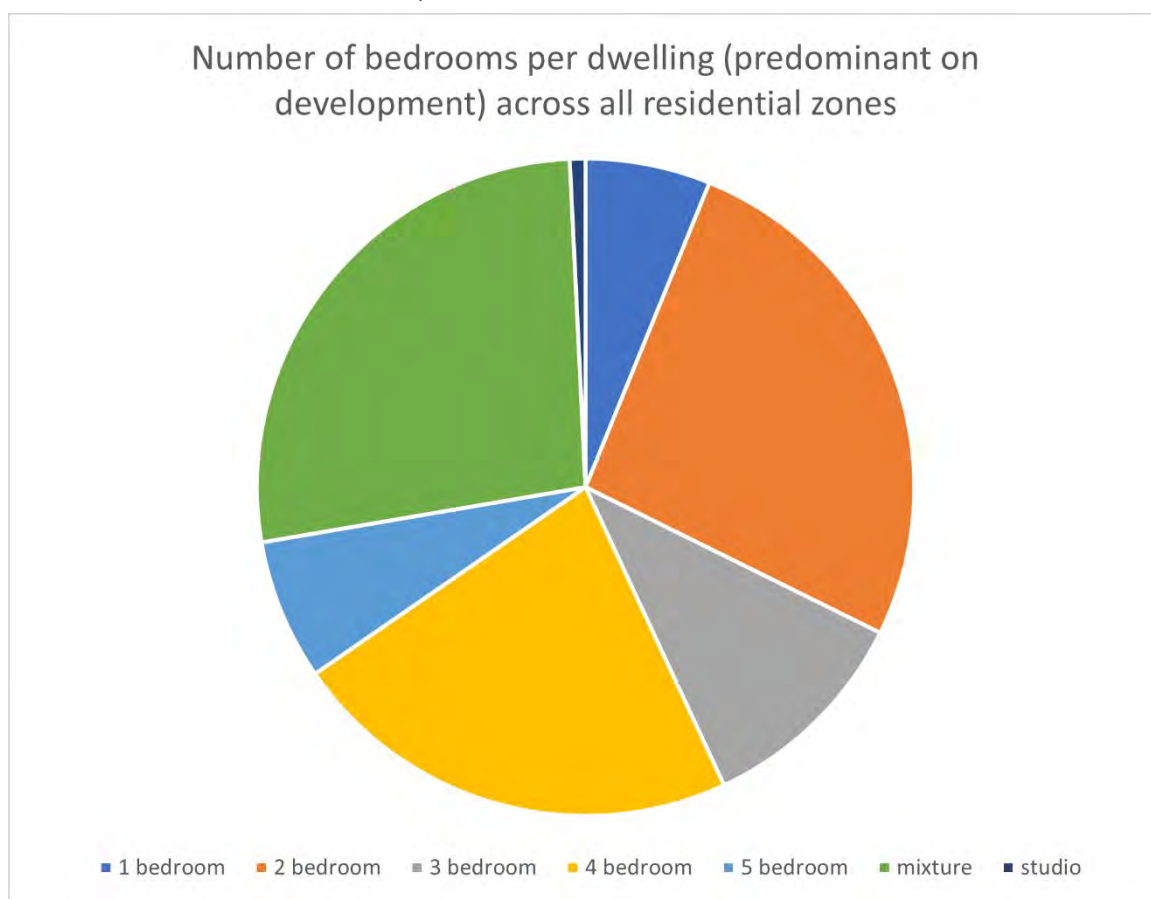
Around 20% of developments had a mix of 2, 3 or 4 bedroom dwellings to cater for a range of family sizes. Three-bedroom dwellings accounted for 10 per cent of housing and 4-5 bedroom dwellings accounted for 30 per cent. This reflects the prevalence of developments with larger standalone and duplex/townhouse dwellings in the sample. The findings suggests that a substantial amount of housing for families, including multi-generational families remains market attractive.

The analysis also included 28 Kainga Ora residential developments providing social housing. The majority of these were large scale developments ranging from a mix of duplexes/townhouses and

terraces to apartment buildings. They also included a range of housing sizes to cater for individuals as well as range of family sizes.

The data was recorded slightly differently for dwelling sizes in the Business – Mixed Use zone. The size of dwellings is one of only three residential-specific standards for this zone. Therefore, more detail was sought on the correlation between dwelling size and the number of bedrooms. The findings showed:

- Studios ranged between 27-38m<sup>2</sup> (two developments only)
- One bedroom dwelling sizes ranged between 38 -80m<sup>2</sup> with 70 per cent of dwellings sized between 45-60m<sup>2</sup>
- Two bedroom dwelling sizes ranged between 56-118m<sup>2</sup> with 60 per cent of dwellings sized between 50-70m<sup>2</sup> and 30 per cent between 71-90m<sup>2</sup>
- Three or more bedroom dwelling sizes ranged between 90-253m<sup>2</sup> with 45 per cent of dwellings sized between 95-120m<sup>2</sup> and 30 per cent between 121-170m<sup>2</sup>.



*Figure 26 –Bedroom(s) per dwelling in developments in the residential zone sample*

In the Business – Mixed Use zone, a potential limitation of the findings on the number of bedrooms shown on plans didn't always align with the number of rooms that could actually be used as bedrooms. This was most evident in apartment developments with some including windowless, 'bedroom-sized' rooms that were labelled as offices or media rooms. Some of these rooms also include features such as large wardrobes, which appear to enhance the likelihood that they will serve as bedrooms instead of the function they are labelled as on the plans. This posed issues for calculating dwelling sizes as an apartment might appear to be a relatively large one-bedroom

apartment, but if it included an 'office' that could actually function as a bedroom then it would be a relatively small two-bedroom apartment.

A possible contributing reason for the majority of dwellings being well in excess of the AUP minimum standards is that the commercial lending banks prefer to lend on dwellings that are at least 45m<sup>2</sup> in size.<sup>9</sup> In 2017, BNZ stated it would not lend for apartments less than 65m<sup>2</sup>. This kind of lending policy can have flow-on effects into the building design.<sup>10</sup> In July 2021 ANZ announced a change to its lending arrangements for apartments.<sup>11</sup> Under its new rules, customers only need a 20 per cent deposit for freehold apartments that are 38m<sup>2</sup> or larger. Previously, any apartments smaller than 45m<sup>2</sup> required a 50 per cent deposit.

In July 2021 *Stuff.co.nz* also reported that 'Between 2001 and 2021, Auckland two-bedroom apartments of 50sqm to 79sqm increased in value by 157 per cent, compared to a 527 per cent increase in two-bedroom houses.'<sup>12</sup> This shows the potential market influences on building size and typologies.

Beyond being a regulator of housing, the AUP has no additional influence over housing supply or affordability. The monitoring does not attempt to provide in-depth analysis of the relationship between market viability and the characteristic of housing stock being delivered via the AUP rules (e.g. what sort of housing the AUP is preventing).

### Preparing for changing needs

There are no provisions in the AUP for universal access homes although this had been a requirement in the Proposed Auckland Unitary Plan. While the analysis did not record the provision of universal access homes, site observations showed that very few developers provided these – Kainga Ora being the most visible in this provision.

The AUP does not require residential developments to provide a habitable bedroom, toilet and handbasin at ground level or an accessible level in dwellings. Except for apartments, the majority of new housing is 2-3 storey so internal stairs are a fundamental aspect of their design and can limit access to living facilities if they are above ground level (or without an accessible lift in the case of apartments). The AUP does not prescribe the number of steps between the street and dwellings. This analysis will examine the potential effects on accessibility emerging from the AUP's policy position.

Steps and stairs can be problematic for residents if they have impaired mobility for any period of time. Level access between the house and street enables residents to have easy and safe access into their homes – not only for potential health reasons but also for parents with prams and small children.

The analysis looked at the percentage of dwellings within a development that avoided steps or had one step between the street and the dwelling front door (or via the garage). This could at least enable a person with limited temporary mobility (not necessarily a wheelchair) to access their home. In some cases, a mobility impaired resident may need assistance from others for help with the threshold step, but at least it would be possible for them to return to their home.

The findings showed that:

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<sup>9</sup> <https://www.edgemortgages.co.nz/home-investment-loans/buying-an-apartment/>

<sup>10</sup> <https://www.stuff.co.nz/business/92709350/banks-make-buyers-jump-through-hoops>

<sup>11</sup> <https://www.stuff.co.nz/business/money/300347395/anz-move-fantastic-news-for-firsthome-buyers-broker-says>

<sup>12</sup> Ibid

- 45 per cent of developments of 4 or more dwellings had designed all their dwellings either without steps or no more than one step into the home,
- 20 per cent of developments had at least half their dwellings,
- 10 per cent had a third of their dwellings with either no steps or one step between the street and front door threshold,
- 20 per cent of developments were less accessible with more than one step into all the dwellings.

Overall, this is a positive result given there is no AUP requirement to minimise steps. A possible reason for the large number of more accessible dwellings is the majority of multi-unit developments tend to be constructed with concrete slab floors which require a minimal step rise from external concrete paths and driveways that connect to the street.

Around 70 per cent of dwellings provided this level of accommodation. This is very positive given the large amount of multi-storey housing being built in Auckland. This means that most people would be able to recover in their home from a temporary illness, injury or other form of incapacity that restricts mobility. It provides the basic infrastructure for short-term needs. With this, washing and food preparation arrangements are available for healthcare providers to support people in their homes. Very few developments in the sample included one or two universally designed housing for people with disabilities.

The RPS seeks ‘development capable of adapting to changing needs to provide for people and communities’. There is scope for the AUP to actively encourage the design of housing to be more adaptable to residents’ changing needs. This includes people with temporary or permanent health impairments or disabilities, families, the young and elderly. For example, avoiding or minimising steps between the street and front door threshold, requiring a toilet, handbasin and habitable room that is accessible from the front door, including minimum widths for halls and doorways are just some ways housing can be more adaptable to residents’ changing needs. It is cost-effective to design these elements into new housing but expensive to retrofit. The evidence suggests the market is already providing some elements that support adaptable living which shows economic and market viability. Adaptable housing will help deliver on RPS B2.3 objectives that support health, safety and wellbeing of residents and liveable communities.

In the Business – Mixed Use zone, the majority of the developments were apartment buildings where every unit was accessible via lifts. Most of the terraced housing developments in this zone had step free access to the front door and the walk-up apartments had step-free access for ground level dwellings.

This enabled a high level of accessibility. The findings across all housing typologies in the Business – Mixed Use zone showed:

- 80 per cent of developments, had step-free or single-step access between the street and dwelling front door,
- 10 per cent of the developments had dwellings with more than one step between the street and dwelling front door,
- 80 per cent of developments had a habitable room and toilet.

## Effectiveness and efficiency of the plan

A range of housing sizes and typologies with good accessibility are key to providing choice for Auckland's diverse population needs. The findings show that the B2.3 objectives, and B2.1(1) issue which seeks growth that enhances the quality of life for individuals and communities, is being successfully addressed through the range of housing being consented. This enables residents to stay in their neighbourhoods and access appropriate housing to cater for their personal circumstances.

The AUP is effective and efficient in delivering a diversity of housing for Aucklanders. The plan provisions enable a wide range of housing types – typology, dwelling size and number of bedrooms. In most developments, the dwelling sizes well exceed the AUP's minimum standards. External factors such as the trading banks' lending criteria appear to be influencing market desirability for two bedroom and larger dwellings.

The findings show that Auckland's housing stock is generally providing for changing needs of residents despite the lack of direction in the AUP. The majority of developments analysed could provide for temporary changes in residents' mobility needs. However, the AUP could provide more direction for the design of housing to adapt to residents changing needs to support health, safety and wellbeing objectives. Inclusion of more universally designed housing for people of all ages and abilities should also be considered. The New Zealand Building Act 2004 does not provide guidance or require this form of housing in residential developments.

### *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To increase diverse housing choice, undertake further research to provide understanding of the relationship between market viability and AUP residential provisions. This would inform other potential plan changes to residential provisions emerging from this report's recommendations. The research scope should consider but not be limited to the following option:

- Contribute to the work programme on the implementation of the National Policy Statement on Urban Development. **High priority**

To improve the delivery of providing access for all people and dwellings capable of adapting to changing needs undertake further research and cost benefit analysis to determine the appropriateness for further planning intervention. The scope this of research could consider, but not limited to, the following

- Investigate potential AUP provisions to encourage dwellings be designed to be adaptable to changes in circumstances for residents of all ages and abilities. **Medium priority**

Continue to work with the Ministry of Business, Innovation and Employment to develop and implement the "Building access for all" work programme. **Medium priority**

# Theme 5: Responding to climate change and environmental sustainability

This theme focuses on aspects of residential development that may help reduce the effects of climate change and contribute to environmental sustainability. Limiting the amount of impervious surfaces, managing stormwater better, provide quality landscaping and managing waste in residential developments can reduce the impact of residential intensification on the wider environment. Quality landscaping includes planting and trees for shade, carbon absorption and supporting biodiversity. Landscaping can also provide privacy, shelter or food sources, improve amenity, reduce urban heat and stormwater run-off. Some AUP standards such as the amount of impervious surface and landscaping influence the design of residential developments.

RPS Chapter B2.1. recognises that growth needs to be provided for in a way that maintains and enhances the quality of the environment, both natural and built (issue 6).

RPS Chapter B10.1 seeks to manage environmental risk and the effects of climate change. It recognises that the way the region manages land use in response to climate change will determine the resilience of Auckland’s economy, environment, and communities in the future.

Auckland Council declared a climate emergency in June 2019 and have been working in partnership with mana whenua, businesses, industry, NGOs, communities, and government to finalise an action plan. The city has adopted a climate plan, Te Tāruke-ā-Tāwhiri which aims to cut emissions in half by 2030.

Auckland Council’s Climate Change Action Plan promotes the following actions that are relevant to this theme.

- Action Area N3: Implement nature-based solutions in planning. Landscaping is important in achieving this – supporting the growth of vegetation in built environments.
- Action Area N2: Grow and protect our rural and urban ngahere (forest).
- Action area N5: Advocate for land use practices that deliver healthy, resilient soils.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(1)	A quality built environment where subdivision, use and development do all of the following: (f) respond and adapt to the effects of climate change
RPS Objective B2.3.1(2)	Innovative design to address environmental effects is encouraged.
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following: (c) minimising the adverse effects of discharges of contaminants from land use activities (including transport effects) and subdivision.
RPS Policy B2.3.2 (5)	Mitigate the adverse environmental effects of subdivision, use and development through appropriate design including energy and water efficiency and waste minimisation.

This theme applies three indicators:

- Indicator 8 – Managing stormwater to mitigate adverse environmental effects
- Indicator 9 – Quality of landscaping to address the effects of increased density and climate change
- Indicator 10 – Location and appearance of on-site rubbish management

## Indicator 8 – Managing stormwater to mitigate adverse environmental effects

### *Measures for the residential zones*

- Total impervious area for developments
- Extent of maximum impervious area standard non-compliance

### *Measures for the residential zones and Business – Mixed Use zone*

- Whether there are rainwater tanks shown on site plans

### *What indicator 8 tells us*

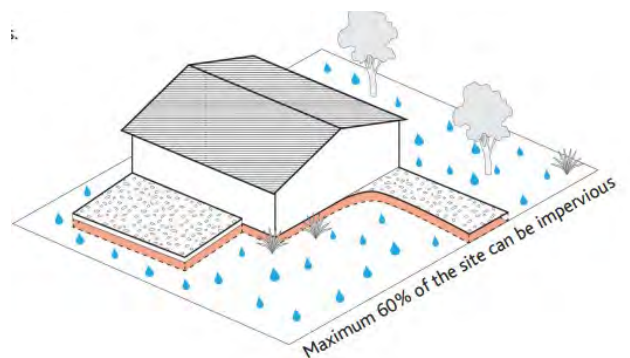
This indicator and its measures collectively provide information on how the development will minimise environmental effects caused by stormwater in the residential zones. This includes the management of stormwater runoff and supporting water quality where it enters natural environments such as coasts and streams. The Business-Mixed Use zone has an impervious surface standard that applies only to riparian yards and was not included in the monitoring. Collecting on-site rainwater is another way that stormwater run-off can be reduced and has the added benefit of providing water for gardens or other outdoor uses.

Provision of stormwater methods is linked to engineering and infrastructure standards. There are cumulative trade-offs and risks with on-site attenuation. For instance, residents need to collectively maintain their facilities. A related issue is the use of permeable pavers for access and manoeuvring spaces to help achieve compliance, but that over time these settle and may no longer achieve the permeability intended.

## *Findings*

### **Impervious surfaces**

In the residential zones, the AUP has a standard that specifies a maximum impervious surface area of 60 per cent for a site in MHS and MHU; and 70 per cent in the THAB zone. This includes the area of building coverage. It is calculated for the total (gross) site of the parent site. The diagram shows the impervious surface area for a site in the MHS zone.



This is a core standard for residential developments of 1-3 dwellings but not for four or more dwellings. Assessment criteria are applied to negotiate outcomes that ensure adverse effects on water quality, quantity and amenity values are avoided or mitigated. The AUP states the purpose of the standard is to manage the amount of stormwater runoff generated by a development, particularly Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 93



in relation to the capacity of the stormwater network and potential flood risks. This standard reinforces the building coverage and landscaped area standards. It also seeks to support the functioning of riparian yards, lakeside yards and coastal yards and water quality and ecology.

The findings showed that 65 per cent of developments complied with the maximum impervious area standard across the three residential zones. However, over a third of developments – primarily in the higher density residential zones exceeded the standard. The infringements were:

Zone	Infringement
<b>MHS</b>	<ul style="list-style-type: none"> <li>20 per cent of developments infringed the standard – most by up to 5 per cent.</li> </ul>
<b>MHU</b>	<ul style="list-style-type: none"> <li>30 per cent of developments infringed the standard by up to 5 per cent</li> <li>10 per cent infringed it by 5-10 per cent.</li> </ul>
<b>THAB</b>	<ul style="list-style-type: none"> <li>20 per cent of developments infringed the standard.</li> </ul>

The cumulative effects of non-compliance with the maximum impervious surface area standard over the wider Auckland region are unknown. Notwithstanding, this can create potential effects which contribute to climate change and other environmental risks, including

- Impact on flood hazards
- Loss of connection with ground water systems
- Increased runoff in both pipes and as over land flow
- Stream and coastal erosion
- Urban heat island effects
- Loss of evapotranspiration rates.

Further monitoring under the guidance of Auckland Council Healthy Waters, Infrastructure and Environmental Services would provide evidence of the cumulative effects of intensification – particularly in the MHU and THAB zones.

### Rainwater tanks

Recent droughts (at time of writing) in Auckland have highlighted the opportunities from collecting rainwater on-site for exterior household uses. Along with rainwater detention tanks, rainwater tanks for external household use are also being installed to reduce non-compliance with the maximum impervious surface standard and manage stormwater. The analysis looked at site plans to see whether developments are providing these in response to the market demand for an additional water resource and/or as stormwater management measures.

To date, there is no AUP standard requiring the installation of rainwater tanks or to show water tanks on drawings. In specific cases, rainwater tanks may be required to mitigate particular site conditions to address stormwater issues. While tanks can be installed at a later date by the owner, the findings showed that nearly 45 per cent of developments had water tanks for at

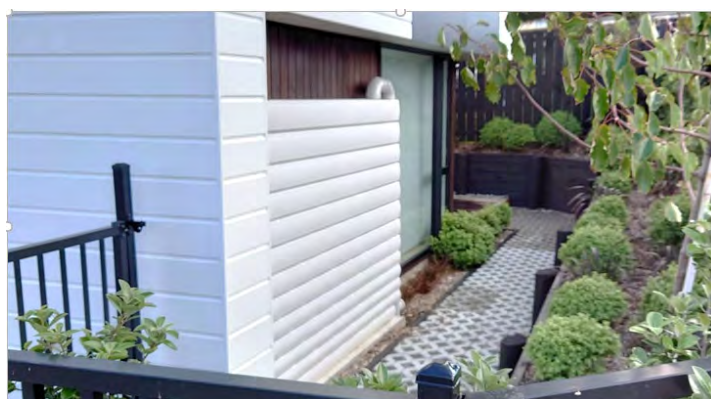


Figure 27. An example of a narrow rainwater tank integrated with the building and permeable landscaping.

least some if not all their dwellings. These were less evident in apartment developments. Auckland Council is currently preparing a plan change to make installing a rain tank easier. In the Business – Mixed Use zone, only one development had rainwater tanks.

### *Effectiveness and efficiency of the plan*

The findings showed that a third of the sample across the three residential zones infringed the maximum impervious surface area standard. Non-compliance was more significant in the MHU and THAB zones where maximum impervious surface areas are greater. Providing rainwater collection tanks is one method for reducing the impact of stormwater run-off. The cumulative effects of non-compliance and whether alternative solutions are effective are unknown. The negative effects could have implications for climate change and the natural and built environment. Without clear evidence of the cumulative effects of more intensive residential development, it is not possible to evaluate whether the plan is effective or efficient.

Nearly half of developments showed rainwater tanks for at least some dwellings to collect rainwater. Rainwater tanks are used to being installed for exterior household uses. In some cases, they were being installed as mitigation measures to offset non-compliance with the maximum impervious surface area standard. Planning practice is being effective by encouraging the use of rainwater tanks as a mitigation measure which has the additional benefit of supplementing Auckland's water supply at the local level.

### *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To give effect to council's Emergency Climate Change response and to address the stormwater effects of intensification – particularly in medium to large scale developments – undertake further research and cost benefit analysis. This work could consider but not be limited to the following options:

- Require the maximum impervious surface area to be a core standard for four dwellings or more. **Affected by recent Government legislative changes**
- Modify the proportion of maximum impervious surface area relative to site area. **Affected by recent Government legislative changes**
- Explore other solutions to avoid non-compliance with the standard. **Affected by recent Government legislative changes**

To support the installation of on-site rainwater tanks, the Plan Change 54 Enable Rainwater Tank Installation is finalised. **High priority**

## Indicator 9 – Quality of landscaping to address the effects of increased density and climate change

## *Measures*

- Non-compliance with the landscaped area standard
- Provision of landscape plans
- Presence of at least one tree (2m+ height) proposed in the landscape plan

## *What indicator 9 tells us*

Landscaping of sites contributes to the ecology, reduces stormwater runoff and contributes to the site and neighbourhood character and amenity. It is also important for flooding abatement, reducing contaminant load and the urban heat effect. Softer planted landscaping and trees have an impact on reducing heat absorption and refraction.

This indicator looked at whether landscape plans were included with the consent plans and whether there was non-compliance with the AUP landscape area requirements. The monitoring did not look at tree removal prior to development.

In addition to this, the landscape plans were assessed for the presence of at least one tree proposed that would grow to over 2m. Trees support birdlife, provide shade in summer to reduce heat in the urban environment, absorb carbon and help mitigate the visual effects of more intensive housing.

The site visits provided a valuable opportunity to see the quality of landscaping and whether landscape plans had been implemented to the standard envisaged.

There is no landscaping requirement in the Business – Mixed Use zone apart from a landscape buffer if parking is provided at the front of the site. No monitoring was undertaken on this topic.

## *Findings*

### **Landscape area**

The purpose of the landscape area standard is to provide for quality living environments consistent with the planned urban built character of buildings surrounded by open space. It also creates a landscaped urban streetscape character. The minimum landscape area in the MHS zone is 40 per cent of the net site area, the MHU zone is 35 per cent, and the THAB zone is 30 per cent of the net site. The analysis assessed non-compliance with the total landscape area for a site – not areas explicit to front yards. The purpose of the landscape area could be updated to support biodiversity and climate change objectives given increasing residential intensities. The landscape definition also needs updating.

Nearly 35 per cent of all developments across all zones in the analysis infringed the landscaping standard. Of those 35% that infringed the standard, the extent of infringements by zone showed the following:

- 55 per cent of developments infringed the 40 per cent net site landscape area standard in the MHS zone. The majority infringed the standard by between 1- 5 per cent.
- 40 per cent of developments infringed the 35 per cent net site landscape area standard in the MHU zone. The majority infringed the standard by between 1- 5 per cent.
- 45 per cent of developments infringed the 30 per cent net site landscape area standard in the THAB zone. The majority infringed the standard by between 1- 5 per cent.

The extent of non-compliance with the landscape area standard reflects a similar level of infringement for the maximum impervious surface standard. Non-compliance of between 1-5 per cent reduction in the landscaped area in the residential zones could undermine the anticipated landscape

outcomes– especially in the MHS zone where landscape is considered an attribute to the character. The amount of landscape area and the quality of landscaping is also fundamental for achieving climate change objectives in suburban and urban areas.

The cumulative effects of this degree of non-compliance is not likely to achieve the purpose of the standard. Together with the bulk and location findings (refer to Indicator 1), this suggests a trend where maximisation of a site’s development potential is reducing the AUP’s intention of having distinct planned built character for the each of the residential zones.

There is no requirement for landscape area in the Business - Mixed Use zone. This could be a consideration for residential development to support climate change objectives.

### Landscape plans

While the AUP does not require them, landscape plans with resource consent applications are encouraged. Around 90 per cent of developments analysed included landscape plans. Landscape plans can be a valuable resource for compliance, monitoring and enforcement of the landscape standard.

### Landscape quality

To measure the ‘quality’ of landscaping and its value to contribute to climate change objectives, each site was assessed on whether a tree with potential growth of 2m on the parent site was provided (including in outdoor living spaces).. Trees are often sized for their location so the measure enabled flexibility. This is not a requirement of the AUP. The AUP relies on Chapter J Definitions (definition for ‘Landscaped area’) to provide guidance on landscaping. The AUP currently define ‘Landscaped area’ as:

In relation to any site, means any part of that site not less than 5m<sup>2</sup> in area which is grassed and planted in trees, shrubs, or ground cover plants and may include:

1. One or more of the features in (a) (b) or (c) where the total land area occupied does not collectively cover more than 25 per cent of the landscaped area:
  - a. ornamental pools
  - b. areas paved with open jointed slabs, bricks or gobi or similar blocks where the maximum dimension of any one paver does not exceed 650mm
  - c. terraces or uncovered timber decks where no part of such terrace or deck exceeds more than 1m in height above the ground immediately below
2. non-permeable pathways not exceeding 1.5m in width
3. permeable artificial lawn in the residential zones, except:
  - a. that permeable artificial lawn must not cover more than 50 per cent of the landscaped area of the front yard
  - b. Permeable artificial lawn must:
    - be permeable
    - resembles grass in colour including a mix of natural looking green tones
    - have piles that are a minimum 30mm pile height, straight cut (not looped pile), and of a density and form that resembles grass
    - is resistant to ultra violet degradation, weathering and ageing during its normal service life
    - is recyclable.
4. Any part of a landscaped area may be situated over an underground structure with adequate soil depth and drainage.

Excludes any area which:

- falls within the definition of building coverage;

- is part of a non-permeable pathway that is greater than 1.5m in width;
- is used for the parking, manoeuvring or loading of motor vehicles.



*Figure 28: Observations from site visits showed poor quality landscaping and ongoing maintenance was an issue for many developments.*



*Figure 29 This development has a well-designed landscape with low maintenance native planting with a variety of small plants and trees that will mature and enhance the outlook spaces and outdoor living spaces of the dwellings as well as the street frontage.*

Findings showed that 75 per cent of developments with landscape plans proposed a tree with potential growth of 2m or taller. Observations from site visits revealed that many sites were poorly landscaped and lacked the level of planting shown in the landscape plans. Although developments

were only viewed from the street, not many trees capable of growth over 2m appeared to have been planted or had survived much beyond the completion date. Many developments did not have space within the site or front yard to plant a tree of this scale.

Another observation from site visits was the prevalence of grass for outdoor living spaces in terrace housing which could not be maintained without a lawnmower. On these sites, storage for gardening equipment would compromise the amount of outdoor living space. Some had used artificial turf or paved the entire outdoor living space to deal with the maintenance issue. It was not known whether this was undertaken by the residents at a later date. This suggests that the design process (and analysing any future planning solutions) must consider and address the issue of practicality and maintenance.

### *Effectiveness and efficiency of the plan*

The monitoring showed the AUP is not sufficiently effective or efficient in achieving quality landscaping. The landscape area standard was infringed by 35 per cent of residential developments in the sample. Non-compliance of between 1-5 per cent in each of the zones is likely to undermine the spatial landscape qualities promoted for each zone – especially in the MHS zone. The amount of landscape area and the quality of landscaping is fundamental for achieving climate change objectives in suburban and urban areas. These findings suggest that the purpose statement and definition for the landscaped area standard is limited and should be expanded to include provisions to support biodiversity and climate change objectives.

Observations from site visits showed there was either a lack of implementation or poor implementation and maintenance of landscape plans. There were also issues around the types of landscaping and the lack of thought for the ongoing maintenance of sites – especially terrace housing.

Recommendations on landscape outcomes will ensure site and planned character is consistent with the zone descriptions. Increasing the private and public tree cover will mitigate the effects of building dominance, reduce heat, provide shade to public footpaths, and collectively provide ecological corridors for birdlife. It will also reduce carbon and pollution between the street and living spaces creating healthier homes.

The Business - Mixed Use zone does not have a landscape standard. This recognises the diversity of uses in the zone where it would be inappropriate to require landscaping. However, there could be an opportunity to introduce a standard for residential developments in this more intensive urban zone. A priority will be providing on-site amenity, improving air quality and biodiversity as well as supporting climate change objectives at a site and neighbourhood scale.

### *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To address the lack of quality in landscaping and planting, undertake further research and cost benefit analysis to support council's Emergency Climate Change response. The scope of this research could consider but not be limited to the following options:

- Require landscape area to be a core standard to provide a strategic response to climate change action (as well as enhancing streetscapes and the public realm). ***Affected by recent Government legislative changes***
- Require a landscape plan and future maintenance plan for developments of four or more dwellings. This includes landscape areas with planting designed to be easily maintained by occupants to ensure sustainability. ***High priority***
- Include an ongoing maintenance arrangement on titles for subdivision through a land use consent with body corporate or residents' associations committing to the future management of common landscape areas. ***Medium priority***
- Investigate expanding the depth of front yards in the MHS, MHU and THAB zones to increase the amount of landscaped area in the front yard from in all residential zones. This is to enable space for the planting of trees and shrubs (including a specification for deep soil). ***Affected by recent Government legislative changes***
- Review the definition to achieve quality landscaped spaces. This would include measures to support biodiversity and climate change objectives. It should also provide clarity on what qualifies and what does not qualify as landscaping for inclusion in the quantum and minimum dimension of landscape space set out in the standard. ***High priority***
- Provide incentives to encourage developers to retain existing mature trees on redevelopment sites. ***Medium priority***
- Specify the dimensions of outdoor living spaces and yards to be of a size that can accommodate mature trees. ***Affected by recent Government legislative changes***
- Require at least one tree planted in deep soil on the parent site of at least 4m-6m height and allow a diameter of at least 4m to provide viable natural habitats, visual amenity and contribute to climate change objectives – improved air quality, shade to reduce heat island effects and carbon absorption. ***Affected by recent Government legislative changes***

OR

- Include requirements in the standard for inclusion of a tree of a size appropriate for the site with deep soil for each dwelling or group of trees on the parent site. ***Affected by recent Government legislative changes***
- Consider a landscape area standard in the Business - Mixed Use zone. This would be for residential development only. This would improve amenity, biodiversity and reduce heat island effects and improve air quality to support climate change objectives at a site and neighbourhood scale. ***Medium priority***

To mitigate the effects of inadequate landscaping, undertake further research and cost benefit analysis. The scope of this research could consider the following options:

- The AUP definition of landscaping needs updating to incorporate measures to support biodiversity, amenity and climate change initiatives. Other updates include reducing the amount of hard landscaping in favour of more soft landscaping and a requirement for deep soil to support plant growth. The permeable artificial lawn could be limited as a ratio of the primary Outdoor Living Space. ***Affected by recent Government legislative changes***

To ensure landscape plans are implemented, improve council planning practice – compliance monitoring and enforcement:

- Increase enforcement on the implementation of landscape plans at completion of developments. Undertake ongoing monitoring to ensure owners comply with consents. This includes retaining trees as specified on plans. *High priority*
- Landscape monitoring conditions and costs could be extended to for longer (e.g., 5 years) – especially for large scale developments. *Medium – high priority*

To increase the amount of tree cover using non-regulatory methods, council explore feasibility of the following:

- Auckland Council could supply every new dwelling with a tree capable of 2m or more mature height as part of the Mayor’s 1 million trees programme. *Medium priority*
- Auckland Council and Auckland Transport could plant more street trees and maintain grass berms in higher density residential areas. *Medium priority*

## Indicator 10 – Location and appearance of on-site waste management

### *Measures*

- Is there a designated location for rubbish bins
- Is the rubbish bin screened

### *What indicator 10 tells us*

Waste management contributes to council’s broader objectives with regard to waste minimisation, emissions, net carbon, congestion, and other targets. These are contained in the Waste Minimisation Plan, Climate Action Plan, and C40 Cities Climate Leadership Group. Construction and demolition waste as major contributors of waste to landfill, as well as sustainable design and construction are all issues for the development sector. Only two aspects of domestic waste were addressed in the monitoring programme.

Effective waste management is also an essential part of well-functioning sites and urban environments. The monitoring focussed on the provision of waste storage and its visibility within the site to determine the quality of on-site waste management.

Managing household waste efficiently and effectively within sites, for collection and to meet waste reduction objectives is essential for multi-dwelling residential developments. The amount of waste storage – whether it’s in individual rubbish bins or a combined collection, is a significant factor in addressing council objectives with regard to amenity, waste reduction, and traffic congestion, amongst others. Poor on-site waste management can negatively affect hygiene and safety, building appearance and pedestrian movement on public footpaths on collection days.

The AUP uses assessment criteria in the residential zones that require the necessary waste collection and recycling facilities. These are to be in locations conveniently accessible and screened from streets and public open spaces.

The monitoring applied two measures to assess how well developments in the residential zone sample were managing rubbish within sites.

There is a waste bylaw that applies to 10 or more dwellings. The Auckland Design Manual provides guidance through a Design Element for Waste and a practice note. Ongoing monitoring will be necessary to determine whether recent initiatives are effective at managing waste – storage and collection.



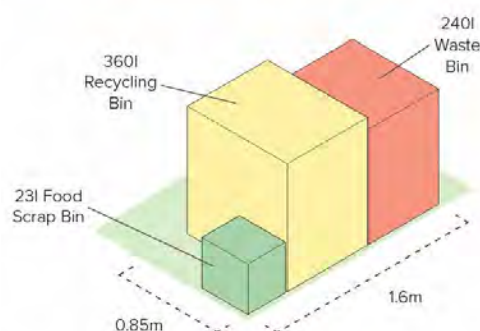
Monitoring developments from consenting through to completion provided the opportunity to assess the amount of house removal occurring – either through demolition or transportation of dwellings to other sites. This provided some insight on potential construction and demolition waste being produced as part of the development process.

## Findings

The analysis showed that 70 per cent of developments had a designated area for rubbish shown on plans. This included locations next to dwellings, designated area for groups of bins or a communal bin for the development. Of these, 65 per cent were shown to be screened from view on the plans. This demonstrates a moderate level of effectiveness of the Waste Minimisation Bylaw which applies to 10 or more dwellings and the sole assessment criteria in the residential provisions.

Site visits were an opportunity to see some well managed on-site waste collection areas. Conversely, those developments without any rubbish management were often dominated by the presence of multiple rubbish bins alongside front doors that were visible from the street. Another issue identified during site visits was the propensity to locate rubbish bins in primary outdoor living spaces where there could be hygiene and safety issues. The amount of space associated with waste storage consumed the limited space and eroded the quality and safety of outdoor living areas (refer to diagram showing area needed for total waste bin storage).

Total Waste Bin Storage Area (1.4m<sup>2</sup>)



*Figure 30. A lack of on-site space for storing waste bins can block pedestrian walkways and clutter property entrances, creating adverse health, safety and amenity issues. Waste management collection is becoming a significant issue for multi-dwelling developments. Kerbside collections consume footpaths, forcing pedestrians onto the road.*

Although not assessed specifically, site visit observations showed kerbside space issues for multi-dwelling developments. The number of waste bins were located on footpaths and obstructed pedestrian movement. This was exacerbated for rear site developments which did not have adequate site frontage and kerb space to locate bins for collection.

In the Business – Mixed Use zone, 80 per cent of developments provided for waste and recycling collection in a manner that was well screened from the street and functional for residents.

Construction and demolition waste are also major contributors of waste to landfill. The monitoring showed that approximately 270 houses were removed from sites in the residential zone sample to accommodate new development although some of these may have been relocated to other sites. Less than five sites from the sample of 130 developments in the residential zones retained existing dwellings alongside new development. Removed dwellings would have either been demolished or transported to other sites for re-use. Further monitoring and analysis would provide a better understanding of the amount of demolition waste.

### *Effectiveness and efficiency of the plan*

Waste management is a significant issue both in terms of on-site storage, residents' access and the method of waste collection. It is also significant in terms of service, value for money, and meeting waste reduction objectives. The AUP is not sufficiently effective in providing standards needed to address the management of on-site waste or collections. The current reliance on a sole assessment criteria applying to developments of 4 or more dwellings is not effective. Council's Waste Management and Minimisation Bylaw 2019 and the NZ Building Code G15 – Solid Waste provide some rules and a strategic framework for managing waste. However, this needs to be complemented with appropriate management for the type, scale and location of the development. It should also require on-site bin storage space as well as access and space for either private or public collections (on-site or street kerb).

Inadequate space for on-site waste storage can result in the following issues:

- o more collections than may be needed (noting once a week collection can require two-three trucks - one for rubbish, one for recyclables, one for food scraps)
- o more inconvenience for residents
- o more cost to residents
- o more impact on amenity and safety with on-site collection with rubbish trucks close to dwellings and sharing pedestrian access ways.

There are amenity, space, hygiene, safety and operational aspects of waste management that affect the quality and functionality of residential developments. Consent plans and observations from site visits showed that there is insufficient consideration for waste management in many developments. There is also a disparity between commitments to waste management in resource consents and lack of implementation of access and facilities on site. This can be compounded with the increase in scale of developments. The management of waste affects both private and public health environments.

### *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part

of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve waste management to benefit functional, operational, urban design, environmental and health outcomes in residential and business zone developments undertake further research and cost benefit analysis to determine the appropriateness of the issue for inclusion for a plan change in the next 1-2 years. The scope could consider, but not limited to, the following.

- Undertake further investigations based on issues experienced by Auckland Council's Solid Waste Planning unit. *High priority*
- Develop a new standard for managing residential waste on all residential zone sites – including but not limited to bin storage location, screening, hygiene, access and collection of waste bins. The standard should also include a minimum separation distance between dwellings and communal waste storage areas for hygiene safety (including odour). There should be consideration for how rubbish would be collected within the site using private collections or on street public collections (including for rear sites), and public street kerb space for council streetside collections relative to the scale of development. Responsibility for waste management by residents through consent conditions would assist with compliance. Monitoring and enforcement provisions may also assist with compliance.  
*Affected by recent Government legislative changes*
- Require a waste management plan for sites of four dwellings or more in residential zones and all residential developments in the Business – Mixed Use zone. This would specify but not be limited to bin storage space requirements, access, location, hygiene (eg a minimum separation distance between dwellings and communal waste storage), screening, collection of rubbish bins. Plans would also show how rubbish would be collected. This could be for private waste collections on-site or on the street or council streetside collections with consideration for public street kerb space relative to the scale of development. *High priority*
- Investigate new or improve other tools such as bylaws, greater use of council's practice guidance notes for waste management, training, compliance etc for managing waste in multi-dwelling developments. *High priority*
- Undertake further monitoring of residential construction and demolition waste which are major contributors of waste to landfill. *Medium priority*

# Theme 6: Supporting safe access and travel choice

Theme 6 analyses the safety and functionality of site access and circulation for pedestrians and vehicles. It also looks at the safety issues and opportunities of new developments on public streets and places. The AUP recognises that growth needs to be provided for in a way that:

- (1) enhances the quality of life for individuals and communities; and
- (2) supports integrated planning of land use, infrastructure and development.

The relevant B2.3 Quality built environment objectives and policies for this theme seek developments that enhances the health and safety of people and communities. The policies focus on ways developments promote walking, cycling and public transport, and minimise vehicle movements. This theme assesses whether developments have achieved the balance between safe sites and streets for people and achieve the functional requirements of vehicles.

The monitoring looked at the MHS, MHU and THAB zones for Indicators 11 and 12; and partially looked at the Business – Mixed Use zone for Indicator 12. Data was collected on the type or parking because this affected vehicle circulation and was an important factor in determining the relationship between a development and the street. The number of car parks for each development was not assessed because it was not considered an indication of quality housing or urban environments.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(3)	The health and safety of people and communities are promoted.
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following:  (a) providing access for people of all ages and abilities;  (b) enabling walking, cycling and public transport and minimising vehicle movements;  (e) meets the functional, and operational needs of the intended use;
RPS Policy B2.3.2 (4)	Balance the main functions of streets as places for people and as routes for the movement of vehicles

There are two indicators for this theme.

- Indicator 11 pedestrian safety within the residential developments.
- Indicator 12 pedestrian safety in the movement network

## Indicator 11 – Pedestrian safety within residential developments

### *Measures for developments in the residential zones*

- Separate footpath between the street and the dwellings (including alongside driveway)
- Footpath width

- Whether footpaths are located in the reversing space of cars
- Dwelling front door opens directly onto private way or parking

### *Measures for developments in the residential zones and Business – Mixed Use zone*

- Type of vehicle parking

#### *What indicator 11 tells us*

Indicator 11 focuses on the safety of pedestrian access between the dwelling and the street in the residential zones. Pedestrian safety is a particular concern given the high incidence of driveway accidents involving pedestrians (particularly children). The vehicle access and parking arrangements influence the site layout, access to dwellings and level of pedestrian safety.

A separate footpath between the street and the dwellings (including alongside the driveway or private way) provides greater safety for pedestrians than a driveway shared with vehicles. The quality of the footpath is important. Where footpaths were provided, these were either the same surface and level as the driveway or separated with a raised footpath and kerb or of separated by landscaping. The width of the footpath is also a factor in its safety. Footpaths less than 1m wide are generally too narrow, especially if a parent is walking with a child or if people need to pass each other.

Another measure recorded the type of car parking provided as this can influence pedestrian safety. The monitoring assessed whether footpaths were located in the reversing space of cars – particularly when manoeuvring out of parking areas. Some developments had dwelling front doors opening directly onto driveways or parking areas.

## *Findings*

### **Pedestrian safety within residential developments**

The AUP Chapter E27 Transport does not require a separate footpath from the driveway where it serves less than 10 parking spaces in the residential zones (E27.6.4.3.2). Along with a minimum width of 3.5m, the standard E27.6.5. specifies:

- (1) The design and location of the proposed facility shall provide connections to existing pedestrian and cycling routes and facilities.
- (2) The width of the path is designed to accommodate the anticipated number and type of users.
- (3) The surface of the path is designed to safely provide for the anticipated number and type of users.

For developments with 10 or more parking spaces, driveways are required to have two-way movements, be a minimum 5.5m width and include a 1.0m pedestrian access for rear sites which may be located within the formed driveway. In the Business – Mixed Use zone, the width is 1.5m for footpaths with 10 or more parking spaces. The definition for landscaping restricts the width of non-permeable pathways (such as concreted paths) within the site to 1.5m.

The findings showed that 35 per cent of developments in the residential zone sample did not have a separated footpath. In these developments, the footpath was an assumed shared space with the driveway and for many, provided the only access to some dwellings. The findings are tempered by two factors in the monitoring – the large number (50 per cent) of developments in the sample with less than 10 dwellings and the minimal parking provisions for these developments – commonly one

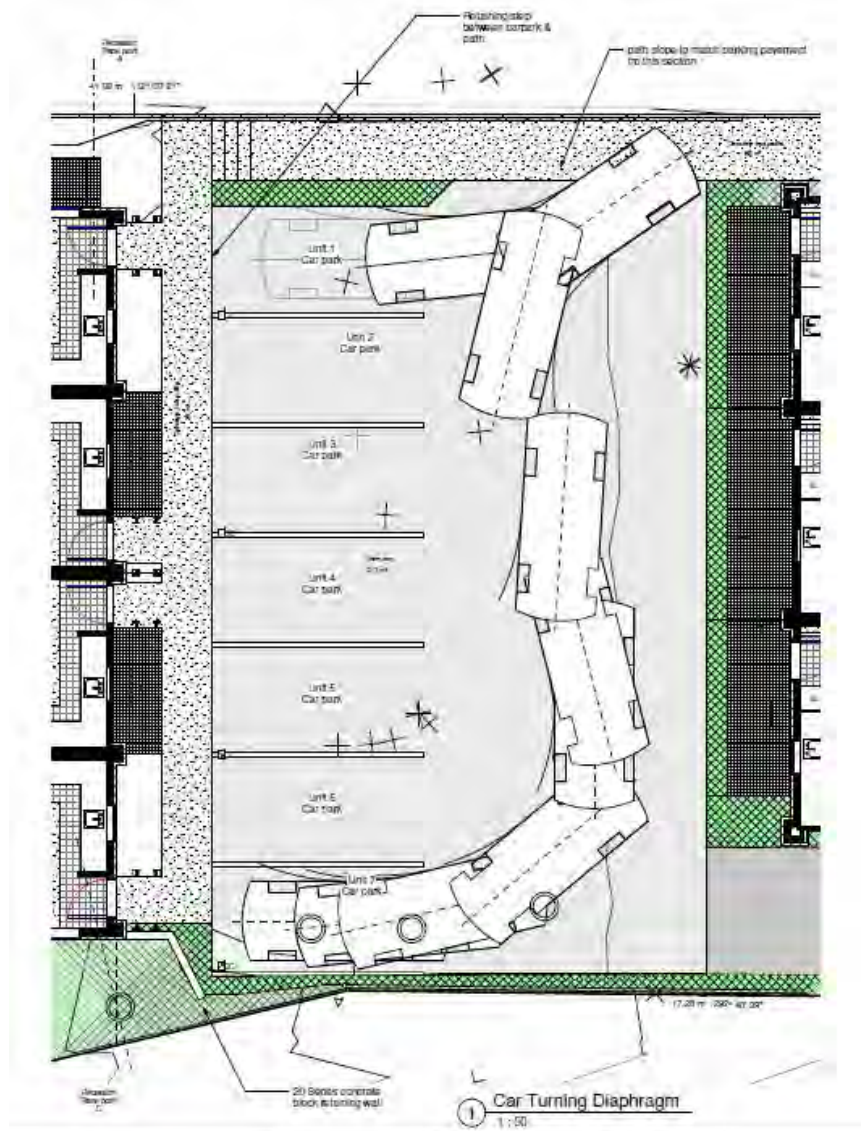
per dwelling. Many of these developments would have fallen below the 10 parking space threshold for the AUP requirement for a footpath.

The findings showed 65 per cent of developments contain footpaths separated from the driveway for access between the street and the front doors of dwellings. Of these, one quarter had a well-separated formed footpath that was raised with a kerb or a landscaped buffer from the driveway. The remainder shared the same driveway level but used a change of surface (colour or material such as paving) to denote the footpath zone. The width varied:

- 10 per cent of developments had footpaths less than 1m wide
- 45 per cent were 1m wide
- 45 per cent were over 1m wide.

The results of the investigation into footpaths located in the potential reversing space of cars was concerning. The findings showed:

- 45 per cent of footpaths were located in the reversing space of cars
- 5 per cent of footpaths were partially located in the reversing space of cars
- 50 per cent of footpaths were designed to avoid the reversing space of cars



There are no standards or guidance in the AUP to prevent this problem. The diagram illustrates how one development in the sample proposed manoeuvring space that compromises the safety of pedestrians on the footpath.

The types of parking provided for residential developments can also influence pedestrian safety. The monitoring recorded the parking typology that applied to the majority of the development.

Monitoring in the MHS, MHU and THAB zones showed:

- 40 per cent of residential developments had parking integrated within individual dwellings such as an internal garage or an attached carport.
- 15 per cent had individual parking pads (usually adjoining to the dwelling)
- 30 per cent of residential developments had communal parking areas

- 10 per cent had a mix of parking types (typically some dwellings with garages and an area of communal parking for others)
- 2 per cent had underground car parks
- 4 per cent had no car parking.

#### Monitoring in the Business – Mixed Use zone showed

- 20 per cent had no parking
- 35 per cent had underground or enclosed basement parking
- 20 per cent ground level communal parking
- 20 per cent had a mix of parking types

The findings showed a diversity of carpark provision with developers responding to market and site conditions. The removal of internal garages from the dwelling generally resulted in designs that used the site more efficiently and internal layouts enabled ground floor living areas to be better connected to outdoor living spaces.

The increasing number of developments with communal car parks was significant. It also signals the increase in more complex pedestrian movement within the site as people access their vehicles – often carrying goods or managing children between their vehicle and their home.

Site visits provided the opportunity to assess the effectiveness of footpaths within sites in the residential zones. Those footpaths that were level with driveways, relying on a change of colour or surface quality did not provide the same level of pedestrian safety as those with a formed and raised footpath with a kerb.



*Figure 31. Development with front doors opening directly onto a communal parking area and vehicle manoeuvring space. The designated footpath area (dark grey paving adjacent to the dwelling on left), directs pedestrians into the reversing space of cars enroute to the front doors of dwellings.*

Dwelling front doors that open directly onto driveways or parking can also pose risks to pedestrian safety – particularly children. This measure was applied to developments where **any** of the dwellings had front doors opening onto driveways or parking areas. There are no standards or assessment criteria in the AUP to manage this. The findings showed that:

- 20 per cent of developments had one or more dwellings with front doors opening onto a driveway or carpark.
- 80 per cent of developments were designed to avoid dwellings with front doors opening onto a driveway or carpark.

The majority of developments avoided designing dwellings with front doors opening directly onto a driveway which suggests this is not onerous for developers. This probably recognises the safety concerns for residents and their visitors. There are significant safety and amenity benefits for dwellings to be designed to avoid this.

### *Effectiveness and efficiency of the plan*

The plan is not adequately managing on-site pedestrian safety effectively or efficiently. This is with respect to pedestrian access and circulation within the site. In addition to this, a number of developments had front doors opening directly onto driveways or parking areas that could risk pedestrian safety.

The analysis showed there are safety issues for pedestrian access in developments with parking for four or more dwellings. Some forms of parking such as centralised communal parking areas are not adequately designed for pedestrian safety within the site. These often fell below the AUP threshold (based on the number of car parks) requiring a footpath.

The width and design of pedestrian accessways was variable. Nearly half of developments provided the minimum footpath width of 1m required by the plan. However, 45 per cent provided footpaths greater than 1m width which suggests that this is not necessarily onerous for the developer.

The quality and design of footpaths was also variable with most complying with the plan standard and incorporating a footpath zone within the same surface as the driveway. The form of footpath influenced pedestrian safety – particularly where they were located adjoining to vehicle manoeuvring spaces. Observations from consent plans and site visits showed these footpaths did not provide the same level of pedestrian safety as a raised footpath with a kerb (like a typical public street footpath) or a landscaped buffer from the driveway.

The findings showed 20 per cent of developments have one or more dwelling with front doors opening directly onto a driveway or parking area. This is a safety concern for residents and their visitors. Given the majority of developments avoided this, it suggests that it is not onerous for developers to achieve better safety and amenity benefits for residents.

### *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

**Low priority** – Further monitoring advised.

**Affected by recent Government legislative changes** - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.



To improve pedestrian safety on access ways into developments, continue with the proposed plan change for private way and driveway access, undertake further research and cost benefit analysis. The scope could consider but not be limited to the following:

- addressing pedestrian safety for developments of four or more dwellings with car parking (of any scale or type) ***Affected by recent Government legislative changes***
- require a safe separate raised footpath (with kerb) of a specified width with adequate space for two people to pass (e.g. 1.5-1.8m). ***Affected by recent Government legislative changes***
- avoid dwellings with front doors opening directly onto a driveway or parking areas. ***Medium priority***

To improve consistency between different sections of the AUP in the Transport Chapter specifications and landscape definition for non-permeable footpath widths, undertake further research and cost benefit analysis to determine the appropriateness for inclusion for a plan change. The scope of research could consider but not be limited to the following options:

- Additional criteria in the transport provisions to:
  - Address site access or transport limitations which can require substantially more on-site vehicle access and manoeuvring space. ***Affected by recent Government legislative changes***
  - Assess whether it is a rear site or a front site - the safety issues are different for these site conditions. Pedestrian access and amenity into multi-unit rear sites need to be reviewed to prioritise pedestrian safety. ***Affected by recent Government legislative changes***

## Indicator 12 – Pedestrian safety in the movement network

### *Measures for the residential zones:*

- Number of vehicle driveways into site
- Number of dwellings served by vehicle private ways or driveways
- Front doors or entry porches visible or access (e.g. paths) visible from the street
- Dwellings with passive surveillance from a habitable room window at any level overlooking the street

### *Measures for the Business – Mixed Use zone:*

- Ground floor activities
- Amount of ground floor glazing estimated to evaluate the quality of the street frontage

### *What Indicator 12 tells us*

The interface between dwellings and the street is key to achieving positive experiences in the public realm – particularly around legibility (such as finding the front door) and making streets safer. This includes providing passive surveillance with windows, balconies or outdoor living areas that overlook the street, using crime prevention through environmental design (CPTED) principles.

This indicator looks at the effects of the development on pedestrian safety in the public street environment. The number of dwellings served by a driveway and types of parking provided

information on the potential volume and type of vehicle movements on a private way (such as owner access as well as visitors, couriers etc.).

All vehicles cross the footpath at the street kerb to access driveways so understanding the potential vehicle movements can inform possible future safety measures. This would be in addition to the AUP provisions for driveway sightlines and standards for vehicle crossings over public footpaths.

The number of vehicles crossing the public footpath is a risk for pedestrian safety. The potential number of vehicle movements to and from a development can provide an insight into the amount of additional traffic generated by intensification within in our neighbourhoods. The monitoring looked at the MHS, MHU and THAB zones and used the number of vehicle crossings for each development and the number of dwellings these serve as measures to consider pedestrian safety on the street and the effects of development in the movement network.

The presence of front doors or visibility of their access via a path was a measure used to evaluate the legibility of dwellings for a visitor. This is another aspect of residential design that enhances a development's connection to the street environment and community.

## *Findings*

### **Vehicle crossings over public footpaths**

Chapter E27 Transport provides for one vehicle crossing per 25m of frontage or part frontage (E27.6.4.2.1). This applies whether there is a footpath or berm. The findings for residential developments in the MHS, MHU and THAB zones showed:

- 80 per cent of residential developments had one vehicle crossing
- 5 per cent had two crossings
- 5 per cent had 3-6 crossings
- 10 per cent did not have any vehicle crossings

This shows that more intensive residential developments are producing the same number of vehicle crossings as typical single dwelling development would. This is a positive outcome as public footpaths are not fragmented by multiple vehicle accessways. However, the number of vehicles served by a vehicle crossing can be significant. The findings show:

- 60 per cent of developments had a driveway serving 4-10 dwellings
- 20 per cent had a driveway serving 11-20 dwellings
- 10 per cent had a driveway serving 21-30 dwellings
- 5 per cent had driveway(s) serving 31-50 dwellings
- 5 per cent had driveway(s) serving 51-100+ dwellings

There is potential for a significant number of traffic movements on driveways over public footpaths – particularly when considering deliveries and other commercial activities in addition to residents' vehicle movements. Analysis of crash data for pedestrians, cycles and vehicles resulting from increased vehicle movements on driveways would need to be undertaken to identify the extent of safety issues.

### **Passive surveillance of the street**

Passive surveillance by dwellings overlooking the street is an important aspect of personal safety for pedestrians. To measure this, the percentage of dwellings in a development with passive surveillance

from a habitable room window at any level overlooking the street was recorded. Those developments on rear sites without street frontages were excluded from the assessment.

- 70 per cent of developments had up to half their dwellings overlooking the street – although most commonly it applied to one third of dwellings overlooking the street. This reflects Auckland’s typical narrow sites which enable two or three dwellings to face the street.
- 15 per cent of developments had between 60-90 per cent of dwellings overlooking the street
- 15 per cent of developments had all the dwellings overlooking the street. These tended to be in large comprehensive terrace developments designed to face the street.
- The most common room in dwellings to overlook the street were living areas (65 per cent), bedrooms (20 per cent) and kitchens (15 per cent).

Visible access to front doors makes streets feel safer by giving pedestrians a sense that help is accessible if needed. It also makes it easy for visitors to access the dwelling. The number of developments with street facing dwellings with visible front doors, entry porches or pathways to the front door visible from the street were recorded. The findings for the residential zones showed that:

- 70 per cent of front doors or access to them in street facing dwellings were visible,
- 20 per cent were partially visible,
- 5 per cent were not,
- 5 per cent were rear sites so this measure could not be applied.

In the Business – Mixed Use zone, residential developments had 70 per cent of front doors visible and 30 per cent partially visible. Many of these developments were apartments so this would have been a visible single-entry door or porch.

In the Business – Mixed Use zone, the building and street interface is quite different with both commercial and residential activities possible. These activities have quite different requirements for the street interface. There are no AUP standards for street frontages in this zone. However, the AUP does restrict discretion when assessing resource consents to ‘the extent of glazing provided on walls fronting public streets and public spaces and the benefits it provides in terms of:

- i. the attractiveness and pleasantness of the public space and the amenity for people using or passing through that space
- ii. the degree of visibility that it provides between the public space and the building interior
- iii. the opportunities for passive surveillance of the street from the ground floor of buildings.’

This provides an indication of how the AUP is seeking a quality street amenity that is safe for pedestrians.

The findings show:

- For ground floor activities:
  - 40 per cent of developments had commercial uses on the ground floor
  - 60 per cent of developments had dwellings on the ground floor. In business zones where there are no front yard setbacks.
- The amount of ground floor glazing was estimated to evaluate the quality of the street frontage – including pedestrian safety on public streets:
  - 55 per cent of developments, approximately half the street-level façade consisted of glazing.
  - 30 per cent of developments had approximately three-quarters of the façade glazed,

- 20 per cent of developments, had around one quarter of the façade glazed.

The amount of glazing at ground level reflects the extent of residential activity and the challenges associated with privacy.

### *Effectiveness and efficiency of the plan*

The interface between the street and dwellings provides both safety and amenity benefits. More intensive housing increases the number of residents, pedestrians and vehicles. Providing for the safety of pedestrians with issues such as increased vehicle activity and the desire for privacy in residential developments is a challenge.

The findings for the residential zone sample showed that for most developments, the level of intensification did not increase the number of vehicle crossings compared to the number that existed prior to development. Only 10 per cent of developments in the sample had two or more vehicle crossings. This shows the AUP transport chapter provisions which seek to minimise the number of vehicle crossings across a public footpath, are effective and efficient.

Although the number of vehicle crossings are very economical, the potential number of traffic movements (e.g. resident vehicles, deliveries and other commercial activities) using driveways pose more of a risk to pedestrians on public footpaths and pedestrians entering sites. Analysis of crash data would be necessary to identify whether there are safety issues.

As discussed above, all developments fronting streets were designed to optimise passive surveillance with windows or/and balconies overlooking the street. Most front doors for street facing dwellings were visible or partially visible from the street. This demonstrates that the AUP is effective and efficient in ensuring that dwellings in residential zones are well-designed to provide passive surveillance of the street.

In the Business – Mixed Use zone, the building and street interface is influenced by the presence of commercial and/or residential activities – particularly at the ground floor. Approximately 60 per cent of developments in the sample had residential activity on the ground floor and the remainder had commercial activity. The range of ground floor activities possible in this zone makes the visibility of front doors to apartment buildings essential for residents and visitors. The findings showed that front doors (or porches) were either fully or partially visible.

While there are no standards for street frontages in this zone, the AUP assesses the extent, attractiveness and passive surveillance from windows fronting public streets and public spaces. The amount of ground floor glazing was estimated to evaluate the quality of the street frontage – including pedestrian safety on public streets.

The findings showed that most residential developments have at least a quarter of the street-level façade as windows. Only 30 per cent had the majority of ground floor facades glazed and these were ground floor commercial activities. The amount of glazing at ground level reflects the extent of residential activity in developments and the challenges associated with privacy. The plan is less effective achieving ground level passive surveillance in residential development in this zone.

### *Recommendations*

**High priority** – Investigate a plan change as a priority.

**Medium priority** – Further investigate at plan review stage (2026)

*Low priority* – Further monitoring advised.

*Affected by recent Government legislative changes* - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve the ground floor interface between residential development and the street in the Business – Mixed Use zone, investigate a range of design solutions including glazing at ground floor level that achieves privacy for residents while maintaining passive surveillance of the street.

- Undertake further research to provide design guidance for inclusion in the Auckland Design Manual and the next review of the AUP. *Medium priority*

To determine whether driveways and private ways serving four or more dwellings are creating traffic levels on vehicle crossings over public footpaths pose a safety risk to pedestrians. *Affected by recent Government legislative changes*

# Conclusion

The regional policy statement for B2.3 Quality built environment has a broad reach – seeking quality outcomes across all scales and types of development – site, street, block, neighbourhood and city. It sets a framework for considering the role of the built environment in supporting people’s health, safety, well-being, choices, accessibility and travel. It also recognises the need to innovate, maximise resources, have efficient infrastructure and adapt to climate change. These are particularly important considerations for residential development which is the predominant form of development in Auckland.

The findings from the monitoring have helped determine the extent that the AUP has enabled these outcomes. It has also identified trends and issues that could be addressed through the Unitary Plan. The monitoring assessed how well new residential developments respond to the site, street, neighbourhood and area to gauge whether the future built form anticipated for the various zones is being achieved. Although not central to the review, the individual performance of planning rules has been necessary in part, to understand or address monitoring outcomes, emerging issues and trends.

The wide scope and depth of the monitoring for this topic has meant it is challenging to draw a single conclusion on the performance of the AUP to achieve the B2.3 Quality Built Environment objectives and policies. The breadth of the analysis produced specific conclusions and recommendations for each indicator. These complement the overall conclusions in this section of the report. The conclusions for each indicator can be referred to for more detail – including recommendations, when reading the overall conclusion.

This overall conclusion identifies those areas where the AUP is achieving exceptionally and is most effective and efficient. It also highlights some significant issues and emerging trends. These are not necessarily all shortcomings of the AUP. Some are potentially caused by a lack of regulation or intervention by the AUP or other statutory or non-statutory methods.

## Auckland Unitary Plan successes

The monitoring analysis has shown that the AUP is both effective and efficient in many aspects of development in the residential and the Business – Mixed Use zones. The main successes of the plan are:

- **Supporting growth**

The AUP and planning practices have been effective in achieving residential intensification at levels promoted through the zoning principles and zone standards to reinforce the hierarchy of centres and corridors. Analysis of the sample showed the lowest densities were in the MHS zone with a clear transition of intensity through the MHU and THAB zones to the highest density in the Business – Mixed Use zone. This also achieves the B2.4.1 (1) growth objective seeking residential intensification to support a quality compact urban form<sup>13</sup>.

In terms of land use efficiency, 130 developments in the residential zone sample produced 2,339 new dwellings. Seventy per cent of developments were for between 4-15 dwellings per site, 20 per cent were for 16-40 dwellings per site and 10 per cent were for developments with over 40 dwellings. Some of these had over 150 dwellings in a single development. The new developments replaced approximately 275 existing dwellings across the sample.

The majority of these dwellings in the residential zone sample have been built or in the construction phase during the monitoring period. This demonstrates the effectiveness and efficiency of the AUP standards – and specifically the unlimited density provisions enabled for 4 or more dwellings.

In the Business - Mixed Use zone the calculations are theoretical as many are yet to be constructed. There were consents for 33 developments – primarily apartments, which could produce 1,655 dwellings when built.

As a combined theoretical calculation, this shows that the 163 developments in the monitoring samples from both the residential and Business-Mixed Use zone replaced approximately 300-350 dwellings with almost 4,000 dwellings.

- **Reinforcing centres and transport corridors**

The monitoring has shown that the density of residential developments progressively increases towards centres and transport corridors. The findings from the monitoring sample showed lower density residential occurred furthest from centres and the highest densities were closest to centres and transport corridors. The lowest density zone in the assessment was the MHS zone, with findings showing a predominance of standalone houses, townhouses/duplexes and terraces. Terrace housing and small-scale apartments were more prevalent in the MHU zone. In the THAB zone, there were more large-scale terrace and apartment developments. And in the Business – Mixed Use zone (closest to centres and on transport corridors), most residential development was for apartments. In this zone, they were at greater scales than the other zones. This shows the zone descriptions for the future planned built form, policies, objectives and standards are effectively and efficiently influencing the location of residential density.

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<sup>13</sup> Note that this conclusion is in the context of the AUP rules in enabling development on sites. This topic does not comment on the spatial allocation of zones and the appropriateness of intensity.

- **Unlimited density provisions enable sites to maximise yield.**

The AUP's unlimited density provisions combined with the land use led subdivision consenting process have been very effective in enabling sites to maximise housing yield. The findings showed that 55 per cent of developments in the residential zone sample constructed between 4-9 dwellings per site, 15 per cent of developments constructed 10-15 dwellings per site and 25 per cent developed 16 or more dwellings per site.

In the Business – Mixed Use zone, the majority of developments were for apartments on larger sites where higher dwelling numbers per site were achieved than the residential zones. The findings showed that 40 per cent of developments had 4-20 dwellings, 20 per cent of developments: 21-40 dwellings and 30 per cent of developments: 80 dwellings or more.

This shows that intensive housing is occurring at every scale of residential development throughout Auckland.

- **Provide housing choice with a wide range of options to meet the diversity of Aucklanders changing needs**

Analysis of the sample from the MHS, MHU and THAB zones showed there was an even split across the five residential housing typologies investigated. These were standalone houses, terraces, apartments and developments which had a mix of housing typologies.

The size of dwellings (square meterage and number of bedrooms) influences the ability of Auckland's new housing to provide for single people as well as large or multi-generational families or groups. In the residential zones, the findings showed that over 90 per cent of dwellings were 50m<sup>2</sup> or more. Only 5 per cent of developments had dwellings that were smaller than 50m<sup>2</sup>. In contrast, 20 per cent of developments were for larger dwellings between 151-200m<sup>2</sup> to cater for families

In the residential zones, only 5 per cent of developments consisted primarily of one bedroom or studio dwellings. although around 10 per cent of developments had a mix of one and two-bedroom dwellings. There were 25 per cent of developments with a predominance of two-bedroom dwellings. This reflects the prevalence of two-bedroom dwellings in apartments and terrace housing. Three-bedroom dwellings accounted for 10 per cent of housing and 4-5 bedroom dwellings accounted for 30 per cent.

These findings show there is a good range of housing typologies and sizes to meet the diverse needs of Aucklanders.

- **AUP provisions can achieve good quality of development – form, design and function**

The monitoring has shown that successful developments are achieved when a range of factors such as site conditions (site size and dimensions, topography), design, scale and type of residential development are appropriate for the site and surroundings. In addition to this, the residential zones include standards for outlook spaces, outdoor living areas, landscape areas and protect daylight into dwellings to support well-functioning living environments. The site visits showed that many developments have successfully applied these standards to produce well designed quality housing. These developments have demonstrated what is possible and show how effective the AUP can be.

- **Good quality street frontage appearance for most developments in the residential zones**

The AUP relies on assessment criteria to influence building appearance. In addition to this, council provides design guidance in several forms. Developments with more than 10 dwellings are assessed by specialists including urban designers. Large scale developments may be reviewed by the Auckland Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 117



Urban Design Panel who are a group of industry experts who provide independent advice to developers. Council's Auckland Design Manual also provides comprehensive design guidance.

The monitoring used a number of architectural design elements to objectively evaluate the appearance of developments from the street. These included modulation of building facades, variation in rooflines and the dominance of carparking. The majority of developments included variation in the façade design to create more visual interest. Most also had some form of variation in rooflines.

Site visits evaluated developments from the street against a set of site assessment criteria. The visits confirmed that the majority of residential developments are achieving average to good outcomes in their appearance when viewed from the street. The majority of developments visited in the MHS and MHU zones were producing average to good or very good outcomes.

This positive outcome indicates that the plan's residential standards can be effective and efficient if applied appropriately. The challenge will be to achieve quality outcomes for all residential developments within constraints such as site size, dimensions and topography.

- **Good quality developments are evident in all Auckland areas**

The monitoring showed good quality developments in all areas of Auckland – regardless of land values, location or socio-economic factors. This shows the AUP residential provisions can be applied effectively and efficiently to produce good quality outcomes on any site, in any area and in any property market.

## **Auckland Unitary Plan issues**

The monitoring has identified a number of issues with the Plan or emerging trends that are not managed by the plan. Many of these were assessed further with site visits to some developments. Each indicator in the report included a series of recommendations to improve the quality of residential development – many directed at specific standards or detailed aspects of development design and functionality. The issues in this overall conclusion draw from these to provide some key directions for improving the AUP.

- **Need for a balanced planning framework that manages the effects of new development on existing and future residential development potential**

The AUP standards that manage effects on adjoining sites are height, height in relation to boundary and yards in the MHS, MHU and THAB zones. These standards differ from other AUP residential standards in that they are subject to notification tests where the standards are infringed. This provides the opportunity for an adjoining property or in some cases, the public to submit a response on a proposed development. These standards manage effects including sunlight and daylight access, privacy and dominance of new development on adjoining sites. This can affect the function of existing development or limit the future potential of the site for redevelopment at a more intensive scale.

Other standards which are not subject to notification tests for four or more dwellings, can affect privacy, sunlight, daylight, dominance or amenity on adjacent sites such as the location and form of the principal living area outlook space and outdoor living areas. These standards collectively influence the quality and functionality of existing development and the potential for future development on those sites.

The monitoring showed that with the level of intensification occurring, these standards are not always managing the effects on adjoining sites as effectively as some legacy district plans. For Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 118

instance, the AUP requires the amount of sunlight to adjoining sites to be assessed at the equinox (spring/autumn) rather than the winter solstice – when sun is most needed. This reduces the quality of life for residents and site functionality on adjoining sites – especially during winter when sun access is valued most for passive heating, health and wellbeing.

Another issue was the loss of privacy to adjoining sites. The findings for the residential zones showed that half of developments in the sample had between 50 to 100 per cent of their dwellings facing adjoining sites. These developments complied with the AUP standards but it can be challenging to mitigate the visual and acoustic effects of this level of intensification – especially where principal living area outlook spaces and outdoor living balconies are located at the first level or higher. This can affect the functionality, amenity and future development opportunity of adjoining sites.

- **Yield-led plan – large number of dwellings per site and very small sites post subdivision**

A major success of the AUP has been supporting the growth in housing supply. However, this has changed the focus from being a ‘outcomes-led’ plan to one that is yield focussed. This is evident by the number of dwellings on parent sites and consequentially, small site subdivisions that follow. Sites are becoming so small that functionality and amenity can be compromised (particularly around private outdoor living spaces and outlook spaces). This is more evident where there is non-compliance with outlook space or outdoor living space standards. There is also little margin to cater for any changes that a property owner may undertake in future that may increase the site’s impervious surfaces with a shed or shelter structure for instance.

Amenity, sunlight access, privacy (visual and acoustic) and other factors that contribute to quality housing and the health and safety of residents within sites as well as adjoining sites are being compromised in favour of housing yield in some developments. This is evidenced by the large number of dwellings per site and the level of non-compliance for building coverage, HIRB and other standards.

- **Tailored standards needed for terrace housing and apartment buildings**

The AUP has a generic set of residential standards in the MHS, MHU and THAB zones that are applied to standalone housing, townhouses/duplexes, terraces and apartments. These are quite disparate housing typologies - especially at larger scales. The AUP standards could be improved to support quality design outcomes with the complexity of medium to large scale terraces and apartment typologies. The scale and complexity of developments require greater management than the current standards provide. This includes the location, size, functionality and quality of outlook spaces and outdoor living areas. Waste management and safe functional pedestrian and vehicle access are important factors that need to be addressed more effectively by the AUP – particularly for medium and large-scale terrace and apartment developments. New or updated standards are also needed to effectively manage the bulk and scale of terrace and apartment development within the constraints of Auckland’s typically small, narrow and deep sites. A more tailored set of standards could achieve better outcomes for terrace and apartment developments in the MHS, MHU, THAB and Business – Mixed Use zones.

- **Issues with building scale and bulk relative to a site and limited sense of space**

It can be a challenge to achieve a quality outcome if the site conditions, scale of development and housing typology are not compatible. There are issues regarding the bulk of buildings relative to a site which in turn, constrains the sense of spaciousness. This is at both a site and neighbourhood scale. The zone descriptions anticipate greater spaciousness in the MHS zone, which is progressively reduced towards the MHU, THAB and Business Mixed Use zones. The monitoring identified a high Auckland Unitary Plan RMA Section 35 Monitoring – B2.3 A quality built environment | 119

degree of non-compliance with building coverage and the HIRB standards. There is evidence that the AUP and planning practice are challenged by development pressures for more development. This contributes to the lack of differentiation between zones.

The height, HIRB and building coverage standards manage the bulk and scale of buildings. Height was generally complied with. However, the findings showed 60 per cent of developments (across all three residential zones) in the sample, infringed the HIRB. Although not as significant, the extent of non-compliance with building coverage was 35 per cent in MHS, 20 per cent in MHU and 35 per cent in the THAB zone. Over one third of developments in the THAB zone infringed the standard and some by up to 20 per cent. Non-compliance with the standards enable larger, bulkier buildings that may cause negative effects within the site and on adjoining sites. Non-compliance with the building coverage can have consequential effects on the ability of a development to comply with AUP requirements for landscaping or impervious surfaces. Observations from site visits showed the inadequacy of space for quality landscaping.

The size and dimensions of sites (such as width) can have an effect on the form and type of housing developed on sites. This may have an effect on the orientation and length of buildings. The findings showed that rows of terraces and apartment buildings can create large-scale wall-like buildings that penetrate deep into sites. Building length is not regulated by the AUP. Excessive building length can affect the quality of development within a site, adjoining sites and influence neighbourhood character. The analysis showed that 25 per cent of developments in the residential sample have continuous building lengths greater than 40m. Limiting building length in multi-dwelling developments can improve built form quality within the site allowing more daylight and sunlight to dwellings. It can also alleviate negative effects on privacy, dominance and shading within the site and on adjoining sites. The form and scale of new development can have a negative effect on how the adjoining site can be intensified in future.

The Government's recent legislation – National Policy Statement – Urban Development and the Resource Management (Enabling Housing and Other Matters) Act. This legislation mandates Council to increase residential intensification. The Government requires council to update the AUP with more intensive residential standards. This limits the opportunity to modify the AUP residential standards in response to some findings from the monitoring.

- **Scale of earthworks producing poor outcomes – outlook, outdoor living, landscaping**

The consequences of earthworks can achieve positive and negative outcomes in the residential zones sample. The AUP land disturbance standard is enabling site development efficiencies. However, in some cases, the extent of earthworks results in high retaining walls which can affect the quality of outlook spaces and outdoor living areas.

Observations from site visits to developments in the residential zones showed some sites also had high fences atop retaining walls – particularly on side or rear boundaries. Excavation on some sites, had resulted in developments sunk well below the natural ground level to enable an additional storey on the house, but remain within the zone height limit (measured using the rolling height, not the finished ground level). This can produce 'below ground' living environments with limited daylight, sunlight, sense of space and privacy.

- **Insufficient standards to address climate change – need for quality landscaping**

The purpose of landscape area AUP standard in the residential zones is to provide for quality living environments consistent with the planned urban built character of buildings surrounded by open space. Landscaping is a valuable residential zone standard that can help address the Climate

Emergency declared by Auckland Council in 2019. However, the findings showed nearly 35 per cent of all developments across all residential zones in the analysis infringed the landscaping standard.

The extent of non-compliance with the landscape area standard reflects a similar level of infringement for the maximum impervious surface standard. Non-compliance of between 1-5 per cent reduction in the landscaped area for developments in each of the zones is likely to undermine purpose of the standard and limit effectiveness in the climate change response. The amount of landscape area and the quality of landscaping is fundamental for achieving climate change objectives in suburban and urban areas.

The cumulative effects of this extent of non-compliance is not likely to achieve the purpose of the standard at a site or neighbourhood scale. Together with the bulk and location findings (refer to Indicator 1), this suggests a trend where maximisation of a site's development potential is reducing the AUP's intention of having distinct planned built character for the each of the residential zones.

The landscape purpose and standard needs updating to incorporate climate change and biodiversity objectives. This includes appropriate soil conditions to enable planting of trees and long-term maintenance plans – particularly in medium to large-scale developments.

- **Inadequate residential waste management within the site and street environment**

Waste management is a significant issue both in terms of on-site storage, residents' access and the method of waste collection. It is also significant in terms of service, value for money, and meeting waste reduction objectives in response to environmental sustainability and climate change commitments. Without standards, the AUP is not effective at managing residential waste.

There are space, hygiene, safety, amenity and operational aspects of waste management that affect the quality and functionality of residential developments. Consent plans and observations from site visits showed that there is insufficient consideration for waste management in many developments. There is also a disparity between commitments to waste management in resource consents and lack of implementation of access and facilities on site. This can be compounded with the increase in scale of developments. The management of waste affects both private and public health environments.

- **Safety of pedestrians within sites**

The interface between the street and dwellings provides both safety and amenity benefits. More intensive housing increases the number of residents, pedestrians and vehicles. Providing for the safety of pedestrians with issues such as increased vehicle activity and the desire for privacy in residential developments is a challenge.

The plan is not adequately managing on-site pedestrian safety effectively or efficiently. This is with respect to pedestrian access and circulation within the site. The findings showed the width and design of pedestrian accessways was variable. Nearly half of developments provided the minimum footpath width of 1m required by the plan. However, 45 per cent provided footpaths greater than 1m width which suggests that greater widths are not necessarily onerous for the developer. Footpath widths of at least 1.5m are necessary to enable two people to safely pass each other.

The quality and design of footpaths was also variable with most complying with the plan standard and incorporating a footpath zone within the same surface as the driveway. The form of footpath influenced pedestrian safety – particularly where they were located adjoining vehicle manoeuvring spaces. Observations from consent plans and site visits showed these footpaths did not provide the same level of pedestrian safety as a raised footpath with a kerb (like a typical public street footpath) or a landscaped buffer from the driveway.

In addition to this, a number of developments had front doors opening directly onto driveways or parking areas that could risk pedestrian safety. The findings showed 20 per cent of developments have one or more dwelling with front doors opening directly onto a driveway or parking area. This is a safety concern for residents and their visitors. Given the majority of developments avoided this, it suggests that it is not onerous for developers to achieve better safety and amenity benefits for residents.

### **Future S.35 monitoring**

The monitoring did not interview or survey residents to understand their preferences and the lived experiences of their homes, developments and neighbourhoods. This would provide a more robust assessment of the social, economic, health, safety and well-being aspects of housing provision. It is recommended that this be included in future S.35 monitoring for this topic.

### **Next steps**

This S.35 monitoring report has been prepared to satisfy the requirements of the Resource Management Act. The report will be submitted to the Ministry for the Environment in 2022.

The findings from the monitoring will inform future plan changes. Some recommendations are affected by recent Government legislative changes and may be either investigated and progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation. Many recommendations will contribute to the full AUP review in future. There are also opportunities to influence planning practice as well as non-statutory methods such as planning and design guidance.

The monitoring report aims to provide some explanations and context for issues raised by the local boards and the public. It includes information from some legacy district plans and the Auckland Unitary Plan Independent Hearing Panel Reports. This provides the background context from which the AUP faces the challenge of accommodating residential growth with quality development to transition Auckland towards a more compact urban form with a quality built environment.

# Appendix A: Indicators and measures

Relevant RPS Objective	Theme	Indicator	Measures
B2.3.1(1)(a)  B2.4.1(2)	<b>Theme 1: The quality of site development, built form, appearance and setting</b>	1 – Extent that developments respond to the physical characteristics of sites	<ul style="list-style-type: none"> <li>• Number of sites requiring Chapter E Natural resources consents for land disturbance</li> <li>• Amount of land disturbance – by volume removed</li> <li>• Extent of site modification – cut, fill, retaining walls</li> </ul>
		2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings	<p><b>Built form</b></p> <ul style="list-style-type: none"> <li>• Site size and shape (influence of frontage width)</li> <li>• Height and extent of Non-compliance (by zone)</li> <li>• Number of storeys (by zone)</li> <li>• Building coverage and extent of Non-compliance (by zone)</li> <li>• Number of Height In Relation to Boundary (HIRB) Non-compliances</li> </ul> <p><b>Appearance and response to surroundings</b></p> <ul style="list-style-type: none"> <li>• Variation in roof form or ridgeline</li> <li>• Variation in façade/s – modulation with recessions and protrusions</li> <li>• Continuous building length</li> <li>• The percentage of dwellings within a development that had the primary living outlook facing towards adjoining sites</li> <li>• Whether windows and balconies were located and offset to avoid direct views into adjacent dwellings and private outdoor spaces</li> <li>• Whether dwellings respond positively to the street – including orientation, façade treatment and minimal garage or carpark dominance</li> </ul>
B2.3.1(1)(b) & (d)  B2.4.1(1)(2)	<b>Theme 2: Building Auckland's planned built form with</b>	3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors	<ul style="list-style-type: none"> <li>• Building typologies – by zone</li> <li>• Number of dwellings per consent (pre-subdivision)</li> </ul>

	<b>more intensive housing</b>		<ul style="list-style-type: none"> <li>Whether development is consistent with the planned built character anticipated for its zone</li> </ul>
		4 – Maximising land and building resources and infrastructure efficiency	<ul style="list-style-type: none"> <li>Number of dwellings per development</li> <li>Gross site size post- subdivision</li> <li>Number of dwellings removed prior to development</li> </ul>
<b>B2.3.1(3)</b>	<b>Theme 3: Supporting the health, safety and wellbeing of residents</b>	5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight.	<p><b>Measures for residential zones:</b></p> <ul style="list-style-type: none"> <li>Extent of compliance with the 6 x 4m principal living outlook space AUP standard.</li> <li>Extent of primary living space outlook Non-compliance</li> <li>Number of habitable rooms per dwelling complying with 1m outlook standard</li> <li>Number of habitable rooms without direct access to daylight or natural ventilation</li> <li>Location of the primary living outlook space – street, carpark/driveway/adjoining site</li> <li>The proportion of dwellings in a development with principal living overlook spaces towards the street</li> <li>Where the principal living space overlooks the street, what is the distance between primary glazing and the street boundary</li> <li>The percentage of dwellings with privacy measures between the living outlook space and street</li> <li>Percentage of dwellings with principal living outlook space overlooking a driveway or carpark area</li> <li>Percentage of dwellings with principal living outlook space overlapping with any outlook from other dwellings within the site</li> <li>Proportion of dwellings in a development with a north, east or west oriented principal living outlook space</li> <li>Proportion of dwellings in a development with a south oriented principal living outlook space</li> </ul> <p><b>Measures for the Business – Mixed Use zone:</b></p> <ul style="list-style-type: none"> <li>Extent of compliance with the principal living outlook space AUP standard.</li> </ul>

			<ul style="list-style-type: none"> <li>Extent of primary living space outlook Non-compliance</li> </ul>
		6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces	<ul style="list-style-type: none"> <li>Form of primary outdoor living space – ground level space, balcony etc</li> <li>The adequacy of balcony size where they are the primary outdoor spaces – relative to the number of bedrooms.</li> <li>Amount of infringement (m<sup>2</sup>) to the size of the primary outdoor living space</li> <li>Access to outdoor living space</li> <li>Outdoor living space orientated for sunlight</li> <li>Whether outdoor living spaces were overshadowed by buildings or structures such as fences at noon in mid-winter.</li> <li>Structures in the primary outdoor living space</li> </ul>
<b>B2.3.1(1)(c) &amp; (e)</b> <b>B2.4.1(4)</b>	<b>Theme 4: Providing choice through a diversity of housing</b>	7 – Diverse mix of housing choice for people and a range of built form to suit changing needs	<ul style="list-style-type: none"> <li>Building typologies – predominant typologies for development site</li> <li>Dwelling sizes – (predominant size for development)</li> <li>Dwelling bedroom numbers (predominant size for development)</li> <li>Percentage of dwellings in a development that have no steps or one step between dwelling front door/garage thresholds and street</li> </ul> <p>Whether there is a habitable room (that fits a bed) and toilet with hand basin at ground level or accessible level for the majority of dwellings in a development</p>
<b>B2.3.1(1)(f) &amp; B2.3.1(2)</b>	<b>Theme 5: Responding to climate change and environmental sustainability</b>	8 – Managing stormwater to mitigate adverse environmental effects	<p><b>Measures for the residential zones</b></p> <ul style="list-style-type: none"> <li>Total impervious area for developments</li> <li>Extent of maximum impervious area standard Non-compliance</li> </ul> <p><b>Measures for the residential zones and Business – Mixed Use zone</b></p> <ul style="list-style-type: none"> <li>Whether there are rainwater tanks shown on site plans</li> </ul>
		9 – Quality of landscaping to address the effects increased density and climate change	<ul style="list-style-type: none"> <li>Infringements to landscaped area standard</li> <li>Provision of landscape plans</li> <li>Presence of at least one tree (2m+ height) proposed in the landscape plan</li> </ul>
		10 – Location and appearance of on-	<ul style="list-style-type: none"> <li>Is there a designated location for rubbish bins?</li> </ul>



		site rubbish management	<ul style="list-style-type: none"> <li>Is the rubbish bin screened</li> </ul>
B2.3.1(3)	Theme 6: Supporting safe access and travel choice	11 – Pedestrian safety within residential developments	<p><b>Measures for residential zones</b></p> <ul style="list-style-type: none"> <li>Separate footpath between the street and the dwellings (including alongside driveway)</li> <li>Footpath width</li> <li>Whether footpaths are located in the reversing space of cars</li> <li>Dwelling front door opens directly onto private way or parking</li> </ul> <p><b>Measures for residential zones and Business – Mixed Use zone</b></p> <ul style="list-style-type: none"> <li>Type of vehicle parking</li> </ul>
		12 – Pedestrian safety in the movement network	<p><b>Measures for the residential zones:</b></p> <ul style="list-style-type: none"> <li>Number of vehicle driveways into site</li> <li>Number of dwellings served by vehicle private ways or driveways</li> <li>Front doors or entry porches visible or access (e.g. paths) visible from the street</li> <li>Dwellings with passive surveillance from a habitable room window at any level overlooking the street</li> </ul> <p><b>Measures for the Business – Mixed Use zone:</b></p> <ul style="list-style-type: none"> <li>Ground floor activities</li> <li>Amount of ground floor glazing estimated to evaluate the quality of the street frontage</li> </ul>

# Appendix B: Issues raised by councillors, local boards and the public

The following issues are drawn from a range of sources and summarised.

## Need for an equitable planning system

- Planning is a legally ordered spatial arrangement that aims to treat every property owner fairly.
- Loopholes and opportunities for short cuts need to be eliminated where this creates disadvantage for neighbours and other developers.

## Level of intensification

- Auckland has moved from 9-10 dwellings per hectare to 70-100 per hectare to meet demands of smaller households, less maintenance and capital costs. Three storey walk-up apartments are meeting this need. Concerns about quality e.g. ventilation and outlook.
- Developments with standalone houses are taking advantage of the land use led subdivision consenting process. This produces disproportionately large dwellings on very small sites. Small yards are contributing to the loss of garden space due to intensity of development and undermining the inherent qualities of the single house typology. This typology achieves only 25 houses per hectare so does not make intensive use of land or provide the level of intensity anticipated.
- Spatial planning is creating overly close housing with reduced privacy and meaningless separation and space.
- Standalone housing will not achieve the density needed to meet Auckland's growth objectives.
- Call a halt to over-compressed developments and achieve future housing informed by examples of high-quality high-density housing.
- Apply a density ceiling that relates to house-types for site areas to reset the parameters for intensification on small sites and enable sustainable development.
- Proximity and scale of intensive development (e.g. 5 storey apartment building) adjoining to a property with an existing single house causing significant effects
- Medium to large scale development in residential zones is occurring on sites adjoining to existing properties that were designed using lower density legacy planning provisions. These provisions did not anticipate the level of density or consider the effects of this scale of development.

## Cumulative effects of higher density developments

- Concern regarding the cumulative impacts of higher density developments on adjoining sites, neighbourhoods and communities.
- A major issue is the effect of the precedents this level of intensification sets for future development when neighbouring properties claim the same rights.

### Subdivision and effects of smaller site size

- The AUP allows a landuse consent and subdivision consent to be processed concurrently which enables smaller site sizes than the AUP vacant lot subdivision. The order in which these are processed produces different outcomes.
- The concurrent processing of landuse with subdivision consents enables and accepts that post-subdivision, the newly created site and dwelling will not comply with the key development standards. These are listed as building coverage, HIRB, maximum impervious area, minimum landscape area, provision of outdoor living space. In some cases non-compliance is significant.
- The site sizes are too small to achieve the outcomes sought in the zone descriptions.

### Large number of dwellings per site

- The quality outcomes sought for permitted development (3 or more dwellings) specified in the zone description cannot necessarily be achieved with greater numbers of dwellings on a site. *“Up to three dwellings are permitted as of right subject to compliance with the standards. This is to ensure a quality outcome for adjoining sites and the neighbourhood, as well as residents within the development site.* There is concern that Resource consents for four or more dwellings are not achieving the quality outcomes sought in the zone description.
- The intensity of development (number of dwellings per site) can be inconsistent with what is anticipated for the zone.
- Review standards that enable multiple large standalone houses to be constructed on small sites or parent sites that when subdivided, have insufficient space for a proportional amount of outdoor living area and adequate building separation for the building size.

### Building height – inconsistent with zone description

- Inconsistency between the number of storeys able to be built within the height limit and zone descriptions

### Increase in building bulk

- Lack of compliance with the building coverage standard – for the parent site and post subdivision.
- Non-compliance with maximum building coverage results in developments that are too intense of the receiving environment. Further non-compliance with the HIRB results in developments of considerable scale, bulk and dominance.
- Lack of compliance results in gross overdevelopment and imposes significant effects on neighbouring properties and the broader receiving environment.

### Need for quality building form and design – recognising different housing typologies

- Loss of privacy – within site and adjoining sites
- The form and design of housing fronting streets – especially for three storey dwellings is producing poor quality outcomes e.g. two 3-storey townhouses in Ruawai Rd in Mt Wellington which was the subject of a Herald article

- Need for adequate number and proportioned windows to create genuine connection to courtyards and the outside.
- Need to design fencing to achieve acoustic, visual and olfactory privacy in outdoor living areas to avoid occupational and community stress.
- Make outdoor living areas at least a size that is equivalent to an outside living room with an aspect ratio to suit social gatherings.
- Balconies should be larger sized and not cluttered with air conditioning units with exposed conduits.
- Interior planning controls that create visual distance in the long axis between front and back courtyards to compensate for the potential narrowness of some of housing so that there is a sense of size at least in one direction.
- Encourage housing typologies such as three-storey walk up apartments that are well designed and contribute to intensification objectives.
- Discourage standalone dwellings on sites too small to provide sufficient space for quality outlooks, privacy and outdoor living space.
- Multi-storey apartment buildings presenting large blank concrete walls to adjoining sites – amenity effects.

#### **Loss of privacy on adjoining sites**

- The effect of the multi-dwelling residential development on the privacy, sunlight access, dominance effects and loss of amenity on adjoining sites can be significant.
- Loss of privacy due to increasing density and dwelling sizes – outlooks from windows as well as proximity to neighbours.
- Privacy has been a defining characteristics of New Zealand housing.
- Privacy was traditionally achieved by sufficient space around standalone houses but this is now being compromised with small site sizes.

#### **Loss of solar access on adjoining sites due to overshadowing**

- Large scale developments can cause significant shading effects on adjoining sites – this can affect the health, safety, well-being and functionality of these sites for occupants of existing development. This includes the inability to dry washing outside, loss of solar heating of internal rooms

#### **Excessive earthworks**

- Excavation below ground is a method being used by developers to achieve height limits on sites that would not otherwise be achieved using the original ground level or within the HIRB standards.

### Inadequate landscape area, tree cover and vegetation

- Auckland needs a natural environment with a quantum of trees, gardens and grass to sustain ecosystems and provide shade. It needs a landscape to cool the heat island and soft ground to absorb rainfall. Most of the provision comes from private property.
- Gardens are becoming too small to be useable.
- Sites are too small to enable quality outdoor living spaces – reducing quality of life for residents.
- More landscape space is required around dwellings – side, front and back yards.

### Council consenting processes

- More notification required where the effects of both the construction and finished development will affect neighbours.
- Compliance with standards essential to ensure a quality outcome for adjoining sites and the neighbourhood as well as residents within the development site.
- Clear guidance to developers and applicants on the quality outcomes sought for each residential zone.
- Provide residents with comfort and protection that development will proceed in a controlled and managed way, within a framework of well-known and well-understood planning rules.

# Appendix C: Quality Built Environment monitoring – site visit appraisal form

## Street Frontage Assessments

Address:

Date of visit:

Building typology (describe):

Zone:

Date of Code of Compliance Certificate:

This assessment sheet includes both subjective and objective comments made during the site visit. Each development is discussed using the following parameters by a group of planners and urban designers at each site. The purpose of the site visits is to ascertain whether the anticipated outcomes from the Auckland Unitary Plan are being achieved in the actual built form.

### Consider the following:

#### Zone character (as perceived from the street)

Does the height and bulk of buildings seem appropriate for the site and anticipated outcome for the zone when viewed from the street (consider site width, building dominance, spaces between buildings, front yard setback, proximity to adjoining buildings/sites)?

- Is the development at an appropriate intensity for the site size and conditions, location and zone OR Is it overdeveloped/underdeveloped (consider typology and number of dwellings if perceptible)?
- In light of the above, is the development consistent with the AUP zone description (spaciousness/height/density)? Consider from the following perspectives:
  - Integration with existing neighbourhood?
  - Demonstrates anticipated future form?

#### Site and building design

Site layout/design		Other comments
Is site contour a factor in the development?	YES / NO	
If the site has a street frontage, are there dwellings orientated towards the street?	YES / NO	
Does the design of the driveway contribute positively to the development (consider the number of driveways, location, width and material. Whether it dominates street frontage in relation to the scale of the development)	YES / NO	
Consider private ways (if applicable):	Is there...	

	1. Separate pedestrian path Y/N 2. Landscaping Y/N 3. Lighting Y/N 4. Safety features Y/N 5. Passive surveillance Y/N  Is it lane-style/driveway style (choose one)  Any other comments:	
Does the provision for parking/access for cars dictate the layout of the site?	YES / NO	
Is parking visible from the street?	YES / NO	
Are rubbish bins or other domestic infrastructure located in the front yards?	YES / NO	
Is outdoor living is located on the street frontage?	YES / NO	
If outdoor living is located on the street frontage, does it provide enough privacy?	YES / NO  Specify how if necessary:	
In light of the above, does the development respond well to the site shape or other site constraints (including effects from internal layout)? YES / NO  Provide other comments if applicable)		
<b>Building design</b>		
Does the size and arrangement of doors, windows and other architectural features facing the street present a positive frontage?	YES / NO	
Is the façade modulated?	YES / NO	
Are there any other architectural features?	Specify:	
What are the building materials?	Specify:	
Is there diversity in design or/and layout within the development?	YES / NO	
Are there adverse effects of Primary Outlook from living areas overlooking driveways?	YES / NO  Specify if necessary:	
Is there a front door/gate and path visible from the street?	YES / NO	

If there are garage doors – do they dominate the façade?	YES / NO	
Is it evident whether the development has dominance/shading or privacy effects on adjoining sites (consider now and when those sites are developed in future)?	YES / NO	
In light of the above, is the building design appropriate for the site (including effects from internal layout)? YES / NO  Provide other comments if applicable)		
<b>Landscaping</b>		
Are there any large trees on the site?	YES / NO	
Is the landscaping well maintained?	YES / NO	
Is the amount of landscaping mainly just grass?	YES / NO	

4. Additional comments on the development if visible beyond the street frontage?  
*(this includes location and visibility of waste bins)*

**Community safety**

5. Does the development provide passive surveillance (presence of occupants, ears or eyes on the street day and night)?
6. Are curtains/blinds, fences, hedges or other structures obscuring the connection with the street? Yes/No

**Overall assessment** – based on the assessment of the development as viewed from the street, do we (collectively) consider the overall quality of the development as:

very good/ good / average/ producing unanticipated outcomes

**Any other comments:**



# Appendix D: AUP references

## Relevant AUP references

### RPS B2. Tāhuhu whakaruruhau ā-taone - Urban growth and form

#### B2.2. Urban growth and form B2.2.1.

##### Objectives

(1) A quality compact urban form that enables all of the following:

- (a) a higher-quality urban environment;
- (b) greater productivity and economic growth;
- (c) better use of existing infrastructure and efficient provision of new infrastructure;
- (d) improved and more effective public transport;
- (e) greater social and cultural vitality;
- (f) better maintenance of rural character and rural productivity; and (g) reduced adverse environmental effects

2) Urban growth is primarily accommodated within the urban area 2016 (as identified in Appendix 1A).

(3) Sufficient development capacity and land supply is provided to accommodate residential, commercial, industrial growth and social facilities to support growth.

4) Urbanisation is contained within the Rural Urban Boundary, towns, and rural and coastal towns and villages.

(5) The development of land within the Rural Urban Boundary, towns, and rural and coastal towns and villages is integrated with the provision of appropriate infrastructure.

#### B2.3 A quality built environment

##### Objectives:

(1) A quality built environment where subdivision, use and development do all of the following:

- (a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;
- (b) reinforce the hierarchy of centres and corridors;
- (c) contribute to a diverse mix of choice and opportunity for people and communities;
- (d) maximise resource and infrastructure efficiency;
- (e) are capable of adapting to changing needs; and
- (f) respond and adapt to the effects of climate change.

(2) Innovative design to address environmental effects is encouraged.

(3) The health and safety of people and communities are promoted.

#### Policies

(1) Manage the form and design of subdivision, use and development so that it does all of the following:

(a) supports the planned future environment, including its shape, landform, outlook, location and relationship to its surroundings, including landscape and heritage;

(b) contributes to the safety of the site, street and neighbourhood;

(c) develops street networks and block patterns that provide good access and enable a range of travel options;

(d) achieves a high level of amenity and safety for pedestrians and cyclists;

(e) meets the functional, and operational needs of the intended use; and

(f) allows for change and enables innovative design and adaptive re-use.

(2) Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following:

(a) providing access for people of all ages and abilities

(b) enabling walking, cycling and public transport and minimising vehicle movements; and

(c) minimising the adverse effects of discharges of contaminants from land use activities (including transport effects) and subdivision.

(3) Enable a range of built forms to support choice and meet the needs of Auckland's diverse population.

(4) Balance the main functions of streets as places for people and as routes for the movement of vehicles.

(5) Mitigate the adverse environmental effects of subdivision, use and development through appropriate design including energy and water efficiency and waste minimisation

## **B2.4. Residential growth**

### B2.4.1. Objectives

(1) Residential intensification supports a quality compact urban form.

(2) Residential areas are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area.

(3) Land within and adjacent to centres and corridors or in close proximity to public transport and social facilities (including open space) or employment opportunities is the primary focus for residential intensification.

(4) An increase in housing capacity and the range of housing choice which meets the varied needs and lifestyles of Auckland's diverse and growing population.

(5) Non-residential activities are provided in residential areas to support the needs of people and communities.

(6) Sufficient, feasible development capacity for housing is provided, in accordance with Objectives 1 to 4 above, to meet the targets in Table B2.4.1 below:

Table B2.4.1: Minimum Dwelling Targets

**Table B2.4.1: Minimum Dwelling Targets**

<b>Term</b>	<b>Short to Medium</b> 1 - 10 years (2016 – 2026)	<b>Long</b> 11 - 30 years (2027 – 2046)	<b>Total</b> 1 – 30 years (2016 – 2046)
<b>Minimum Target</b> (number of dwellings)	189,800	218,500	408,300

Source: Development Strategy, Assessing Demand, Auckland Plan 2050.

### **B3.3 Transport**

#### B3.3.1. Objectives

- (1) Effective, efficient and safe transport that:
- (a) supports the movement of people, goods and services;
  - (b) integrates with and supports a quality compact urban form;
  - (c) enables growth;
  - (d) avoids, remedies or mitigates adverse effects on the quality of the environment and amenity values and the health and safety of people and communities; and
  - (e) facilitates transport choices, recognises different trip characteristics and enables accessibility and mobility for all sectors of the community.

## **Relevant AUP Zone descriptions and core standards**

### Zone descriptions

#### ***Residential – Mixed Housing Suburban Zone***

The Residential – Mixed Housing Suburban Zone is the most widespread residential zone covering many established suburbs and some greenfield areas. Much of the existing development in the zone is characterised by one or two storey, mainly standalone buildings, set back from site boundaries with landscaped gardens.

The zone enables intensification, while retaining a suburban built character.

Development within the zone will generally be two storey detached and attached housing in a variety of types and sizes to provide housing choice. The height of permitted buildings is the main difference between this zone and the Residential – Mixed Housing Urban Zone which generally provides for three storey predominately attached dwellings.

Up to three dwellings are permitted as of right subject to compliance with the standards. This is to ensure a quality outcome for adjoining sites and the neighbourhood, as well as residents within the development site.

Resource consent is required for four or more dwellings and for other specified buildings in order to:

- achieve the planned suburban built character of the zone;
- achieve attractive and safe streets and public open spaces;
- manage the effects of development on neighbouring sites, including visual amenity, privacy and access to daylight and sunlight; and
- achieve high quality on-site living environments.

The resource consent requirements enable the design and layout of the development to be assessed; recognising that the need to achieve a quality design is increasingly important as the scale of development increases.

### ***Residential – Mixed Housing Urban Zone***

The Residential – Mixed Housing Urban Zone is a reasonably high-intensity zone enabling a greater intensity of development than previously provided for.

Over time, the appearance of neighbourhoods within this zone will change, with development typically up to three storeys in a variety of sizes and forms, including detached dwellings, terrace housing and low-rise apartments. This supports increasing the capacity and choice of housing within neighbourhoods as well as promoting walkable neighbourhoods, fostering a sense of community and increasing the vitality of centres.

Up to three dwellings are permitted as of right subject to compliance with the standards. This is to ensure a quality outcome for adjoining site and the neighbourhood, as well as residents within the development site.

Resource consent is required for four or more dwellings and for other specified buildings in order to:

- achieve the planned urban built character of the zone;
- achieve attractive and safe streets and public open spaces;
- manage the effects of development on adjoining neighbouring sites, including visual amenity, privacy and access to daylight and sunlight; and
- achieve high quality on-site living environments.

The resource consent requirements enable the design and layout of the development to be assessed; recognising that the need to achieve quality design is important as the scale of development increases.

### ***Residential – Terrace Housing and Apartments Zone***

The Residential – Terrace Housing and Apartment Buildings Zone is a high-intensity zone enabling a greater intensity of development than previously provided for. This zone provides for urban residential living in the form of terrace housing and apartments. The zone is predominantly located around metropolitan, town and local centres and the public transport network to support the highest levels of intensification.

The purpose of the zone is to make efficient use of land and infrastructure, increase the capacity of housing and ensure that residents have convenient access to services, employment, education facilities, retail and entertainment opportunities, public open space and public transport. This will promote walkable neighbourhoods and increase the vitality of centres.

The zone provides for the greatest density, height and scale of development of all the residential zones. Buildings are enabled up to five, six or seven storeys in identified Height Variation Control areas, depending on the scale of the adjoining centre, to achieve a transition in height from the centre to lower scale residential zones. This form of development will, over time, result in a change from a suburban to urban built character with a high degree of visual change.

Standards are applied to all buildings and resource consent is required for all dwellings and for other specified buildings and activities in order to:

- achieve the planned urban built character of the zone;
- achieve attractive and safe streets and public open spaces;
- manage the effects of development on adjoining sites, including visual amenity, privacy and access to daylight and sunlight; and
- achieve high quality on-site living environments.

The resource consent requirements enable the design and layout of the development to be assessed; recognising that the need to achieve a quality design is increasingly important as the scale of development increases.

This zone also provides for a range of non-residential activities so that residents have convenient access to these activities and services while maintaining the urban residential character of these areas

### ***Business – Mixed Use Zone***

The Business – Mixed Use Zone is typically located around centres and along corridors served by public transport. It acts as a transition area, in terms of scale and activity, between residential areas and the Business – City Centre Zone, Business – Metropolitan Centre Zone and Business – Town Centre Zone. It also applies to areas where there is a need for a compatible mix of residential and employment activities.

The zone provides for residential activity as well as predominantly smaller scale commercial activity that does not cumulatively affect the function, role and amenity of centres. The zone does not specifically require a mix of uses on individual sites or within areas.

There is a range of possible building heights depending on the context. Provisions typically enable heights up to four storeys. Greater height may be enabled in areas close to the city centre, metropolitan centres and larger town centres.

Some street frontages within the zone are subject to a General Commercial Frontage Control.

New development within the zone requires resource consent in order to ensure that it is designed to a high standard which enhances the quality of streets within the area and public open spaces.

### ***Business - Mixed Use zone***

H13.1. Zone description The Business – Mixed Use Zone is typically located around centres and along corridors served by public transport. It acts as a transition area, in terms of scale and activity, between residential areas and the Business – City Centre Zone, Business – Metropolitan Centre Zone and Business – Town Centre Zone. It also applies to areas where there is a need for a compatible mix of residential and employment activities. The zone provides for residential activity as well as predominantly smaller scale commercial activity that does not cumulatively affect the function, role and amenity of centres. The zone does not specifically require a mix of uses on individual sites or within areas. There is a range of possible building heights depending on the context. Provisions typically enable heights up to four storeys. Greater height may be enabled in areas close to the city centre, metropolitan centres and larger town centres. Some street frontages within the zone are subject to a General Commercial Frontage Control. New development within the zone requires resource consent in order to ensure that it is designed to a high standard which enhances the quality of streets within the area and public open spaces.

### ***Core standards for residential zones***

These are resource consent standards that developments are expected to comply with.

#### **MHS**

Residential development – 4 dwellings or more

Standard H4.6.4 Building height; Standard H4.6.5 Height in relation to boundary; Standard H4.6.6 Alternative height in relation to boundary; Standard H4.6.7 Yards

#### **MHU**

Residential development – 4 dwellings or more

Standard H5.6.4 Building height; Standard H5.6.5 Height in relation to boundary; Standard H5.6.6 Alternative height in relation to boundary; Standard H5.6.7 Height in relation to boundary adjoining lower intensity zones; Standard H5.6.8 Yards

#### **THAB**

Dwellings

Standard H6.6.5 Building height; Standard H6.6.6 Height in relation to boundary; Standard H6.6.7 Alternative height in relation to boundary; Standard H6.6.8 Height in relation to boundary adjoining lower density zones; Standard H6.6.9 Yards

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## **ATTACHMENT 2: Policy cascades**



## H3A Residential – Low Density Residential zone

H3A.2 Objectives	H3A.3 Policies	Relevant Standards	Matters of discretion
<p>(1) Development maintains and is in keeping with the identified qualifying matters' values within the area and their lower intensity residential development, relative to development enabled by the MDRS, being limited to predominantly one to two storeys buildings.</p>	<p>(1) Require development to be in keeping with neighbourhood's identified values and their lower intensity residential development.</p> <p>(2) Require development to:</p> <ul style="list-style-type: none"> <li>(a) be of a height, bulk and form that maintains and is in keeping with the character and amenity values of the established residential neighbourhood; or</li> <li>(b) be of a height and bulk and have sufficient setbacks and landscaped areas to maintain an existing suburban built character or achieve the planned suburban built character of predominantly one to two storey dwellings within a generally spacious setting.</li> </ul>	<p>H3A.6.4. Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H3A.6.5. Dwellings within the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control</p> <p>H3A.6.6. Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay High Natural Character overlay or Outstanding Natural Landscapes Overlay</p> <p>H3A.6.7. Building height</p> <p>H3A.6.8. Height in relation to boundary</p> <p>H3A.6.11 Building coverage</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p> <p>H3A.8.1(4) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control</p> <p>H3A.8.1(5) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p>
<p>(2) Development provides high-quality amenity:</p> <ul style="list-style-type: none"> <li>(a) on-site for residents; and</li> <li>(b) to adjoining sites; and</li> <li>(c) to the street.</li> </ul>	<p>(2) Require development to:</p> <ul style="list-style-type: none"> <li>(a) be of a height, bulk and form that maintains and is in keeping with the character and amenity values of the established residential neighbourhood; or</li> <li>(b) be of a height and bulk and have sufficient setbacks and landscaped areas to maintain an existing suburban built character or achieve the planned suburban built character of predominantly one to two storey dwellings within a generally spacious setting.</li> </ul> <p>(3) Require the height, bulk and location of development to maintain a reasonable level of sunlight access and privacy and to minimise visual dominance effects to the adjoining sites.</p> <p>(4) Encourage accommodation to have useable and accessible outdoor living space.</p>	<p>H3A.6.7. Building height</p> <p>H3A.6.8. Height in relation to boundary</p> <p>H3A.6.9. Yards</p> <p>H3A.6.10. Maximum impervious area</p> <p>H3A.6.11. Building coverage</p> <p>H3A.6.12. Landscaped area</p> <p>H3A.6.13. Front, side and rear fences and walls</p> <p>H3A.6.14. Outdoor living space</p> <p>H3A.6.15. Outlook space</p> <p>H3A.6.16. Windows to street</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p>

<p>(3) Community activities provide for the community's social, economic and cultural well-being, while being in keeping with the scale and intensity of development anticipated by the zone, and in response to the identified qualifying matters' values so as to contribute to the amenity of the neighbourhood.</p>	<p>(6) Provide for community activities that:</p> <ul style="list-style-type: none"> <li>(a) support the social and economic well-being of the community;</li> <li>(b) are in keeping with the scale and intensity of development anticipated within the zone;</li> <li>(c) avoid, remedy or mitigate adverse effects on residential amenity; and</li> <li>(d) (will not detract from the vitality of the Business – City Centre Zone, Business – Metro Centre Zone and the Business – Town Centre Zone.</li> </ul>	<p>H3A.6.2. Home occupations</p> <p>H3A.6.4. Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H3A.6.5. Dwellings within the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control</p> <p>H3A.6.6. Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay High Natural Character overlay or Outstanding Natural Landscapes Overlay</p> <p>H3A.6.7. Building height</p> <p>H3A.6.8. Height in relation to boundary</p> <p>H3A.6.9. Yards</p> <p>H3A.6.10. Maximum impervious area</p> <p>H3A.6.11. Building coverage</p> <p>H3A.6.12. Landscaped area</p> <p>H3A.6.13. Front, side and rear fences and walls</p>	<p>H3A.8.1(1) For healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(4) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control</p> <p>H3A.8.1(5) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p>
<p>(4) More intensive residential development including medium density residential development is enabled only to the extent necessary, ensuring that it does not detract from qualifying matters' values accommodated by the zone's purpose.</p>	<p>(7) Require more intensive residential development including Medium Density Residential development to be enabled only to the extent necessary, ensuring that it does not detract from the identified qualifying matters' values.</p>	<p>H3A.6.4. Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H3A.6.5. Dwellings within the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control</p> <p>H3A.6.6. Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character overlay or Outstanding Natural Landscapes Overlay</p> <p>H3A.6.7. Building height</p> <p>H3A.6.8. Height in relation to boundary</p> <p>H3A.6.9. Yards</p> <p>H3A.6.10. Maximum impervious area</p> <p>H3A.6.11. Building coverage</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p> <p>H3A.8.1(4) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control</p> <p>H3A.8.1(5) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p>

		<p>H3A.6.12. Landscaped area</p> <p>H3A.6.13. Front, side and rear fences and walls</p> <p>H3A.6.14. Outdoor living space (per unit)</p> <p>H3A.6.15. Outlook space (per unit)</p> <p>H3A.6.16. Windows to street</p>	
<p>(5) Development does not adversely affect the qualifying matter values of adjoining water bodies including riparian, lakeside and coastal protection areas nor increase the impact from natural hazard risks.</p>	<p>(5) Restrict the maximum impervious area on a site in order to manage the amount of stormwater runoff generated...</p> <p>(11) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.</p>	<p>H3A.6.9. Yards</p> <p>H3A.6.10. Maximum impervious area</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p>
<p>(6) Development maintains and is in keeping with the amenity values of established residential neighbourhoods including those based on special character values.</p>	<p>(8) Require development to be in keeping with the lower intensity neighbourhoods' identified values including special character.</p>	<p>H3A.6.6. Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character overlay or Outstanding Natural Landscapes Overlay</p> <p>H3A.6.8. Height in relation to boundary</p> <p>H3A.6.9. Yards</p> <p>H3A.6.10 Building coverage</p> <p>H3A.6.11 Landscaped area</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p>
<p>(7) Development provides for the protection and enhances the values of the scheduled site or place of significance and the relationship of Mana Whenua with their taonga, commensurate with the scale of the proposal.</p>	<p>(10) Require development to be at a scale that is in keeping with the identified cultural values to avoid adverse effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites wāhi tapu, and other taonga.</p>	<p>H3A.6.7. Building height</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p>
<p>(8) Development provides for the protection and management of Significant Ecological areas, Outstanding Natural Features and areas of high natural character and historic heritage.</p>	<p>(9) Require buildings to be located on a site and to be of a scale that protects significant ecological areas, outstanding natural landscapes, outstanding natural features and high natural character.</p> <p>(15) Restrict more than one dwelling per site in areas identified on the planning maps as</p>	<p>H3A.6.6. Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay High Natural Character overlay or Outstanding Natural Landscapes Overlay</p> <p>H3A.6.7. Building height</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p>

	<p>subject to the High Natural Character Overlay or the Waitakere Ranges Heritage Area Overlay.</p> <p>(16) Require development to be in keeping with the values associated with the Waitakere Ranges Heritage Area.</p>	<p>H3A.6.9. Yards</p> <p>H3A.6.10. Maximum impervious area</p> <p>H3A.6.11. Building coverage</p>	
(9) Development provides for the protection and management of risks from natural hazards in the coastal environment and from flooding.	(14) Restrict development in areas identified on the planning maps as subject to coastal inundation, coastal erosion and flooding hazards.	H3A.6.1. Activities listed in Table H3A.4.1 Activity table	H3A.8.1(3) For two or more dwellings on a site
(10) Development is enabled where it can be serviced by the water supply, wastewater and stormwater networks to manage adverse effects.	<p>(12) Require dwellings to be provided with access to safe and reliable drinking water, wastewater and stormwater disposal services.</p> <p>(13) Require development of new dwellings in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints to be provided with appropriate infrastructure.</p>	<p>H3A.6.1. Activities listed in Table H3A.4.1 Activity table</p> <p>H3A.6.4. Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H3A.6.5. Dwellings within the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p> <p>H3A.8.1(4) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control</p> <p>H3A.8.1(5) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p>
(11) Intensification is avoided in areas with significant public transport infrastructure constraints.	(17) Avoid developments of more than one dwelling per site in areas identified on the planning maps as subject to significant transport infrastructure constraints.	H3A.6.1. Activities listed in Table H3A.4.1 Activity table	
(12) A well-functioning urban environment that enables all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future;	<p>(18) Enable a variety of housing typologies with a mix of densities within the zone...</p> <p>(19) Apply the MDRS across all relevant residential zones in the district plan...</p> <p>(20) Encourage development to achieve attractive and safe streets and public open spaces...</p> <p>(21) Enable housing to be designed to meet the day-to-day needs of residents</p>	<p>H3A.6.1. Activities listed in Table H3A.4.1 Activity table</p> <p>H3A.6.3. The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings</p> <p>H3A.6.4. Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H3A.6.5. Dwellings within the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p>

	<p>(22) Provide for developments not meeting permitted activity status, while encouraging high-quality developments.</p>	<p>H3A.6.6. Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character overlay or Outstanding Natural Landscapes Overlay</p> <p>H3A.6.7. Building height</p> <p>H3A.6.8. Height in relation to boundary</p> <p>H3A.6.9. Yards</p> <p>H3A.6.10. Maximum impervious area</p> <p>H3A.6.11. Building coverage</p> <p>H3A.6.12. Landscaped area</p> <p>H3A.6.13. Front, side and rear fences and walls</p> <p>H3A.6.14. Outdoor living space (per unit)</p> <p>H3A.6.15. Outlook space (per unit)</p> <p>H3A.6.16. Windows to street</p>	
<p>(13) A relevant residential zone provides for a variety of housing types and sizes that respond to—</p> <ul style="list-style-type: none"> <li>(a) housing needs and demand; and</li> <li>(b) the neighbourhood's planned urban built character, including 3-storey buildings.</li> </ul>	<p>(18) Enable a variety of housing typologies with a mix of densities within the zone...</p> <p>(19) Apply the MDRS across all relevant residential zones in the district plan...</p> <p>(21) Enable housing to be designed to meet the day-to-day needs of residents</p>	<p>H3A.6.7. Building height</p> <p>H3A.6.8. Height in relation to boundary</p>	<p>H3A.8.1(2) For buildings that do not comply with the relevant Standards specified in Table H3A.4.1</p> <p>H3A.8.1(3) For two or more dwellings on a site</p>

## H5 Residential – Mixed Housing Urban zone

H5.2 Objectives	H5.3 Policies	Relevant Standards	Matters of control / discretion
<p>(A1) A well-functioning urban environment that enables all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.</p>	<p>(A1) Enable a variety of housing typologies with a mix of densities within the zone...</p> <p>(B1) Apply the MDRS across all relevant residential zones in the district plan...</p> <p>(C1) Encourage development to achieve attractive and safe streets and public open spaces...</p> <p>(D1) Enable housing to be designed to meet the day-to-day needs of residents.</p> <p>(E1) Provide for developments not meeting permitted activity status, while encouraging high-quality developments.</p> <p>(6A) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</p> <ul style="list-style-type: none"> <li>(a) Maintaining privacy, outlook, daylight and sunlight access;</li> <li>(b) providing for residents' safety and privacy while enabling passive surveillance on the street;</li> <li>(c) minimising visual dominance effects on adjoining sites;</li> <li>(d) maintaining a level of privacy, and sunlight and daylight access for adjoining sites;</li> <li>(e) minimising visual dominance effects of carparking and garage doors to streets and private accessways;</li> <li>(f) minimising adverse effects on the natural environment, including restricting maximum impervious area on a site to reduce the amount of stormwater runoff requiring development to reduce the urban heat island effects of development and respond to climate change</li> <li>(g) designing practical, sufficient space for on-site waste management; and</li> <li>(h) designing practical, sufficient space for internal storage and living areas.</li> <li>(i) designing practical, sufficient space for internal storage and living areas.</li> </ul> <p>(8) Provide for non-residential activities...</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.2 Home occupations</p> <p>H5.6.3 The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings</p> <p>H5.6.3A Number of dwellings per site</p> <p>H5.6.3B Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H5.6.3C Dwellings within the Infrastructure – Stormwater Disposal Constraints Control</p> <p>H5.6.4 Building height</p> <p>H5.6.5 Height in relation to boundary</p> <p>H5.6.8 Yards</p> <p>H5.6.9 Maximum impervious area</p> <p>H5.6.10 Building coverage</p> <p>H5.6.11 Landscape area</p> <p>H5.6.12 Outlook space</p> <p>H5.6.13 Daylight</p> <p>H5.6.14 Outdoor living space</p> <p>H5.6.15 Front, side and rear fences and walls</p> <p>H5.6.16 Minimum dwelling size</p> <p>H5.6.17 Rainwater tanks</p> <p>H5.6.18 Windows to street and private vehicle and pedestrian accessways</p> <p>H5.6.19 Deep soil area and canopy tree</p> <p>H5.6.20 Safety and privacy buffer from private pedestrian and vehicle accesses</p> <p>H5.6.21 On-site waste management</p>	<p>H5.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site.</p> <p>H5.8.1(2) for four or more dwellings per site</p> <p>H5.8.1(3) for integrated residential development</p> <p>H5.8.1(4) for buildings that do not comply with the relevant Standard(s) specified in Table H5.4.1</p> <p>H5.8.1(6) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.</p> <p>H5.8.1(7) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control.</p>

	<p>(9) Enable more efficient use of larger sites by providing for integrated residential development.</p> <p>(10) Recognise the functional and operational requirements of activities and development.</p> <p>(11) Require buildings to be set back from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.</p> <p>(12) Require dwellings to be provided with access to safe and reliable drinking water, wastewater and stormwater disposal services.</p> <p>(13) Require development of new dwellings in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints, are provided with appropriate infrastructure.</p> <p>(14) Require development of four or more dwellings per site to contribute to a safe urban road environment for pedestrians...</p> <p>(17) Building height is restricted to respond to the relationship of Māori and their culture and traditions with their ancestral lands, water, sites wāhi tapu, and other taonga, where located adjacent to Pukekiwiri Pā Historic Reserve, Red Hill.</p>		
<p>(B1) A relevant residential zone provides for a variety of housing types and sizes that respond to –</p> <p>(a) Housing needs and demand; and</p> <p>(b) The neighbourhood's planned urban built character, including 3-storey buildings</p>	<p>(A1) Enable a variety of housing typologies with a mix of densities within the zone...</p> <p>(B1) Apply the MDRS across all relevant residential zones in the district plan...</p> <p>(D1) Enable housing to be designed to meet the day-to-day needs of residents.</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.3 The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings</p> <p>H5.6.3A Number of dwellings per site</p> <p>H5.6.4 Building height</p> <p>H5.6.5 Height in relation to boundary</p> <p>H5.6.16 Minimum dwelling size</p>	<p>H5.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site.</p> <p>H5.8.1(2) for four or more dwellings per site</p>

			<p>H5.8.1(3) for integrated residential development</p> <p>H5.8.1(4) for buildings that do not comply with the relevant Standard(s) specified in Table H5.4.1</p>
<p>(1) Land is efficiently used for higher density residential living and to provide urban living that increases housing capacity and choice and access to public transport.</p>	<p>(A1) Enable a variety of housing typologies with a mix of densities within the zone...</p> <p>(B1) Apply the MDRS across all relevant residential zones in the district plan...</p> <p>(D1) Enable housing to be designed to meet the day-to-day needs of residents.</p> <p>(E1) Provide for developments not meeting permitted activity status, while encouraging high-quality developments.</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.3A Number of dwellings per site</p> <p>H5.6.4 Building height</p> <p>H5.6.16 Minimum dwelling size</p>	<p>H5.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site.</p> <p>H5.8.1(2) for four or more dwellings per site</p> <p>H5.8.1(3) for integrated residential development</p> <p>H5.8.1(4) for buildings that do not comply with the relevant Standard(s) specified in Table H5.4.1</p>
<p>(3) Development provides high-quality amenity:</p> <p>(a) on-site for residents</p> <p>(b) to adjoining sites; and</p> <p>(c) to the street.</p>	<p>(C1) Encourage development to achieve attractive and safe streets and public open spaces...</p> <p>(6A) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</p> <p>(a) Maintaining privacy, outlook, daylight and sunlight access;</p> <p>(b) providing for residents' safety and privacy while enabling passive surveillance on the street;</p> <p>(c) minimising visual dominance effects on adjoining sites;</p> <p>(d) maintaining a level of privacy, and sunlight and daylight access for adjoining sites;</p> <p>(e) minimising visual dominance effects of carparking and garage doors to streets and private accessways;</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.4 Building height</p> <p>H5.6.5 Height in relation to boundary</p> <p>H5.6.8 Yards</p> <p>H5.6.9 Maximum impervious area</p> <p>H5.6.10 Building coverage</p> <p>H5.6.11 Landscape area</p> <p>H5.6.12 Outlook space</p> <p>H5.6.13 Daylight</p> <p>H5.6.14 Outdoor living space</p> <p>H5.6.15 Front, side and rear fences and walls</p> <p>H5.6.16 Minimum dwelling size</p>	<p>H5.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site.</p> <p>H5.8.1(2) for four or more dwellings per site</p> <p>H5.8.1(3) for integrated residential development</p>



	<p>(f) minimising adverse effects on the natural environment, including restricting maximum impervious area on a site to reduce the amount of stormwater runoff</p> <p>(g) requiring development to reduce the urban heat island effects of development and respond to climate change</p> <p>(h) designing practical, sufficient space for on-site waste management; and</p> <p>(i) designing practical, sufficient space for internal storage and living areas.</p>	<p>H5.6.17 Rainwater tanks</p> <p>H5.6.18 Windows to street and private vehicle and pedestrian accessways</p> <p>H5.6.19 Deep soil area and canopy tree</p> <p>H5.6.20 Safety and privacy buffer from private pedestrian and vehicle accesses</p> <p>H5.6.21 On-site waste management</p>	<p>H5.8.1(4) for buildings that do not comply with the relevant Standard(s) specified in Table H5.4.1</p>
<p>(4) Non-residential activities provide for the community's social, economic and cultural well-being, while being compatible with the scale and intensity of development anticipated by the zone so as to contribute to the amenity of the neighbourhood.</p>	<p>(8) Provide for non-residential activities...</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.4 Building height</p> <p>H5.6.5 Height in relation to boundary</p> <p>H5.6.8 Yards</p> <p>H5.6.9 Maximum impervious area</p> <p>H5.6.10 Building coverage</p> <p>H5.6.11 Landscape area</p> <p>H5.6.14 Outdoor living space</p> <p>H5.6.15 Front, side and rear fences and walls</p>	<p>H5.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site.</p> <p>H5.8.1(3) for integrated residential development</p> <p>H5.8.1(4) for buildings that do not comply with the relevant Standard(s) specified in Table H5.4.1</p>
<p>(5) Development does not adversely affect the environmental values of adjoining water bodies including riparian, lakeside and coastal protection areas and does not increase the impact from natural hazard risks.</p>	<p>(6A) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</p> <p>(f) minimising adverse effects on the natural environment, including restricting maximum impervious area on a site to reduce the amount of stormwater runoff</p> <p>(11) Require buildings to be set back from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.8 Yards</p> <p>H5.6.9 Maximum impervious area</p>	<p>H5.8.1(4) for buildings that do not comply with the relevant Standard(s) specified in Table H5.4.1</p>

<p>(6) Development contributes to a high-quality built environment that is resilient to the effects of climate change.</p>	<p>(6A) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</p> <p>(g) requiring development to reduce the urban heat island effects of development and respond to climate change....</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.19 Deep soil area and canopy tree</p>	<p>H5.8.1(4) for buildings that do not comply with the relevant Standard(s) specified in Table H5.4.1</p>
<p>(7) Development is enabled where it can be serviced by the water supply, wastewater and stormwater networks to manage adverse effects.</p>	<p>(12) Require dwellings to be provided with access to safe and reliable drinking water, wastewater and stormwater disposal services.</p> <p>(13) Require development of new dwellings in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints, are provided with appropriate infrastructure.</p>	<p>H5.6.1 Activities listed in Table H5.4.1 Activity table</p> <p>H5.6.3B Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H5.6.3C Dwellings within the Infrastructure – Stormwater Disposal Constraints Control</p>	<p>H5.8.1(6) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure –Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.</p> <p>H5.8.1(7) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Stormwater Disposal Constraints Control.</p>
<p>(8) Enable a safe street environment for pedestrians.</p>	<p>(14) Require development of four or more dwellings per site to contribute to a safe urban road environment for pedestrians...</p>	<p>N/A</p>	<p>H5.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site.</p> <p>H5.8.1(2) for four or more dwellings per site</p> <p>H5.8.1(3) for integrated residential development</p>
<p>(9) Development is enabled on sites within significant ecological areas where it provides for the protection and management of significant ecological values</p>	<p>(15) Require buildings on sites subject to significant ecological areas to be of a scale that protects and maintains the significant ecological values of those areas.</p>	<p>H5.6.10 Building coverage</p>	<p>H5.7.1(1) For one or more dwellings per site subject to a Significant Ecological Area Overlay.</p>
<p>(10) Intensification is avoided in areas with</p>	<p>(16) Avoid developments of more than one dwelling per site in areas identified on the planning</p>		

significant transport infrastructure constraints.	maps as subject to significant transport infrastructure constraints.		
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## H6 Residential – Terraced Housing and Apartment Buildings zone

H6.2 Objectives	H6.3 Policies (summarised)	Relevant Standards	Matters of discretion
<p>(A1) A well-functioning urban environment that enables all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.</p>	<p>(A1) Enable a variety of housing typologies with a mix of densities within the zone...</p> <p>(B1) Apply the MDRS across all relevant residential zones in the district plan...</p> <p>(C1) Encourage development to achieve attractive and safe streets and public open spaces...</p> <p>(D1) Enable housing to be designed to meet the day-to-day needs of residents.</p> <p>(E1) Provide for developments not meeting permitted activity status, while encouraging high-quality developments.</p> <p>(1) Enable a variety of housing types at high densities including terrace housing and low to mid-rise and higher rise apartments...</p> <p>(2) Require the height, bulk, form and appearance of multi-unit development to achieve a high-quality built environment...</p> <p>(A4) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</p> <ul style="list-style-type: none"> <li>(a) maintaining privacy, outlook, daylight and sunlight access</li> <li>(b) providing for residents' safety and privacy while enabling passive surveillance on the street;</li> <li>(c) minimising visual dominance effects on adjoining sites</li> <li>(d) maintaining a level of privacy, and sunlight and daylight access for adjoining sites;</li> <li>(e) minimising visual dominance effects of carparking and garage doors to streets and private accessways;</li> <li>(f) minimising the maximum impervious area on a site in order to manage the amount of stormwater runoff.....</li> </ul>	<p>H6.6.1 Activities list in Table H6.4.1 Activity table</p> <p>H6.6.2 Home occupations</p> <p>H6.6.3. The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings</p> <p>H6.6.4. Offices within the Centre Fringe Office Control as identified on the planning maps</p> <p>H6.6.4A Number of dwellings per site</p> <p>H6.6.4B Dwellings within the infrastructure – Combined Wastewater Network Control as identified on the planning maps</p> <p>H6.6.4C Dwellings within the Infrastructure – Stormwater Disposal Constraints Control</p> <p>H6.6.5 Building height</p> <p>H6.6.6. Height in relation to boundary</p> <p>H6.6.8 Height in relation to boundary adjoining lower intensity zones</p> <p>H6.6.9 Yards</p> <p>H6.6.10 Maximum impervious area</p> <p>H6.6.11 Building coverage</p> <p>H6.6.12 Landscaped area</p> <p>H6.6.13 Outlook space</p> <p>H6.6.14 Daylight</p> <p>H6.6.15 Outdoor living space</p> <p>H6.6.16 Front, side and rear fences and walls</p> <p>H6.6.17 Minimum dwelling size</p> <p>H6.6.18 Rainwater tanks</p> <p>H6.6.19 Windows to street and private vehicle and pedestrian accessways</p> <p>H6.6.20 Deep soil area and canopy tree</p>	<p>H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; restaurants and cafes up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H6.8.1(2) for four or more dwellings per site</p> <p>H6.8.1(3) for integrated development</p> <p>H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p> <p>H6.8.1(6) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.</p> <p>H6.8.1(7) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.</p>

	<p>(g) requiring development to reduce the urban heat island effects of development and respond to climate change.....</p> <p>(h) designing practical, sufficient space for residential waste management; and</p> <p>(i) designing practical, sufficient space for internal storage and living areas.</p> <p>(4) In identified locations adjacent to centres, enable greater building height...</p> <p>(9) Provide for non-residential activities...</p> <p>(10) Recognise the functional and operational requirements of activities and development.</p> <p>(11) Require buildings to be set back from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.</p> <p>(12) Require dwellings to be provided with access to safe and reliable drinking water and wastewater services.</p> <p>(13) Require developments of more than one new dwellings per site in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints, to be provided with appropriate infrastructure.</p> <p>(14) Require development to contribute to safety improvements of the immediate urban road environment...</p>	<p>H6.6.21 Safety and privacy buffer to private pedestrian and vehicle accesses</p> <p>H6.6.22 Residential waste management</p>	
<p>(B1) A relevant residential zone provides for a variety of housing types and sizes that respond to –</p> <p>(i) Housing needs and demand; and</p> <p>(ii) The neighbourhood's planned urban built character, including three-storey buildings.</p>	<p>(A1) Enable a variety of housing typologies with a mix of densities within the zone...</p> <p>(B1) Apply the MDRS across all relevant residential zones in the district plan...</p> <p>(D1) Enable housing to be designed to meet the day-to-day needs of residents.</p> <p>(1) Enable a variety of housing types at high densities including terrace housing and low to mid-rise and higher rise apartments...</p>	<p>H6.6.1 Activities list in Table H6.4.1 Activity table</p> <p>H6.6.4A Number of dwellings per site</p> <p>H6.6.5 Building height</p> <p>H6.6.17 Minimum dwelling size</p>	<p>H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; restaurants and cafes up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p>

			<p>H6.8.1(3) for integrated development</p> <p>H6.8.1(2) for four or more dwellings per site</p> <p>H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p>
<p>(1) Land adjacent to centres and near the public transport network is efficiently used to provide high-density urban living that increases housing capacity and choice and access to centres and public transport.</p>	<p>(1) Enable a variety of housing types at high densities including terrace housing and low to mid-rise and higher rise apartments...</p> <p>(4) In identified locations adjacent to centres, enable greater building height...</p>	<p>H6.6.1 Activities list in Table H6.4.1 Activity table</p> <p>H6.6.4A Number of dwellings per site</p> <p>H6.6.5 Building height</p> <p>H6.6.17 Minimum dwelling size</p>	<p>H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; restaurants and cafes up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H6.8.1(3) for integrated development</p> <p>H6.8.1(2) for four or more dwellings per site</p> <p>H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p>
<p>(1A) Development of at least six storeys is enabled within walkable catchments, with seven or more storey buildings in identified areas, while also achieving a high-quality built environment.</p>	<p>(1) Enable a variety of housing types at high densities including terrace housing and low to mid-rise and higher rise apartments...</p> <p>(4) In identified locations adjacent to centres, enable greater building height...</p>	<p>H6.6.1 Activities list in Table H6.4.1 Activity table</p> <p>H6.6.4A Number of dwellings per site</p> <p>H6.6.5 Building height</p> <p>H6.6.17 Minimum dwelling size</p>	<p>H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; restaurants and cafes up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H6.8.1(3) for integrated development</p> <p>H6.8.1(2) for four or more dwellings per site</p>

			H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1
(2) Development outside walkable catchments is in keeping with the areas' changing planned urban built character of predominantly five storeys or six or seven storey buildings where specified in identified areas, in a variety of forms.	(1) Enable a variety of housing types at high densities including terrace housing and low to mid-rise and higher rise apartments...  (4) In identified locations adjacent to centres, enable greater building height...	H6.6.1 Activities list in Table H6.4.1 Activity table  H6.6.4A Number of dwellings per site  H6.6.5 Building height  H6.6.17 Minimum dwelling size	H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m <sup>2</sup> gross floor area per site; restaurants and cafes up to 100m <sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m <sup>2</sup> gross floor area per site  H6.8.1(3) for integrated residential development  H6.8.1(2) for four or more dwellings per site  H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1
(3) Development provides high-quality amenity:  a. on-site for residents;  b. to adjoining sites; and  c. to the street.	(A4) Require development to achieve a built form that contributes to high-quality built environment outcomes by:  (a) maintaining privacy outlook, daylight and sunlight access  (b) providing for residents' safety and privacy while enabling passive surveillance on the street;  (c) minimising visual dominance effects on adjoining sites  (d) maintaining a level of privacy, and sunlight and daylight access for adjoining sites;  (e) minimising visual dominance effects of carparking and garage doors to streets and private accessways;	H6.6.1 Activities list in Table H6.4.1 Activity table  H6.6.5 Building height  H6.6.6. Height in relation to boundary  H6.6.8 Height in relation to boundary adjoining lower intensity zones  H6.6.9 Yards  H6.6.10 Maximum impervious area  H6.6.11 Building coverage  H6.6.12 Landscaped area  H6.6.13 Outlook space  H6.6.14 Daylight  H6.6.15 Outdoor living space  H6.6.16 Front, side and rear fences and walls	H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m <sup>2</sup> gross floor area per site; restaurants and cafes up to 100m <sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m <sup>2</sup> gross floor area per site  H6.8.1(3) for integrated development  H6.8.1(2) for four or more dwellings per site  H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1

	<p>(f) minimising the maximum impervious area on a site in order to manage the amount of stormwater runoff</p> <p>(g) requiring development to reduce the urban heat island effects of development and respond to climate change</p> <p>(h) designing practical, sufficient space for residential waste management; and</p> <p>(i) designing practical, sufficient space for internal storage and living areas.</p> <p>(2) Require the height, bulk, form and appearance of multi-unit development to achieve a high-quality built environment...</p> <p>(C1) Encourage development to achieve attractive and safe streets and public open spaces...</p>	<p>H6.6.17 Minimum dwelling size</p> <p>H6.6.18 Rainwater tanks</p> <p>H6.6.19 Windows to street and private vehicle and pedestrian accessways</p> <p>H6.6.21 Safety and privacy buffer to private pedestrian and vehicle accesses</p> <p>H6.6.22 Residential waste management</p>	
<p>(4) Non-residential activities provide for the community's social, economic and cultural well-being, while being compatible with the scale and intensity of development anticipated by the zone so as to contribute to the amenity of the neighbourhood.</p>	<p>(9) Provide for non-residential activities...</p>	<p>H6.6.1 Activities list in Table H6.4.1 Activity table</p> <p>H6.6.4. Offices within the Centre Fringe Office Control as identified on the planning maps</p> <p>H6.6.5 Building height</p> <p>H6.6.6. Height in relation to boundary</p> <p>H6.6.8 Height in relation to boundary adjoining lower intensity zones</p> <p>H6.6.9 Yards</p> <p>H6.6.10 Maximum impervious area</p> <p>H6.6.11 Building coverage</p> <p>H6.6.12 Landscaped area</p> <p>H6.6.16 Front, side and rear fences and walls</p> <p>H6.6.18 Rainwater tanks</p> <p>H6.6.20 Deep soil area and canopy tree</p>	<p>H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m<sup>2</sup> gross floor area per site; restaurants and cafes up to 100m<sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m<sup>2</sup> gross floor area per site</p> <p>H6.8.1(3) for integrated development</p> <p>H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p>
<p>(5) Development contributes to a high-quality built environment that is resilient to the effects of climate change.</p>	<p>(A4) Require development to achieve a built form that contributes to high-quality built environment outcomes by:</p>	<p>H6.6.1 Activities list in Table H6.4.1 Activity table</p> <p>H6.6.20 Deep soil area and canopy tree</p>	<p>H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1</p>



	(g) requiring development to reduce the urban heat island effects of development and respond to climate change...		
(6) Development does not adversely affect the environmental values of adjoining water bodies including riparian, lakeside and coastal protection areas and does not increase the impact from their potential natural hazard risks.	(11) Require buildings to be set back from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.  (A4) Require development to achieve a built form that contributes to high-quality built environment outcomes by:  (f) minimising the maximum impervious area on a site in order to manage the amount of stormwater runoff....	H6.6.1 Activities list in Table H6.4.1 Activity table  H6.6.9 Yards  H6.6.10 Maximum impervious area	H6.8.1(4) for buildings that do not comply with the standard(s) specified for the activity to comply with in Table H6.4.1
(7) Development is enabled where it can be serviced by the water supply, wastewater and stormwater networks to manage adverse effects.	(12) Require dwellings to be provided with access to safe and reliable drinking water and wastewater services.  (13) Require developments of more than one new dwellings per site in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints, to be provided with appropriate infrastructure.	H6.6.1 Activities list in Table H6.4.1 Activity table  H6.6.4B Dwellings within the infrastructure – Combined Wastewater Network Control as identified on the planning maps  H6.6.4C Dwellings within the Infrastructure – Stormwater Disposal Constraints Control	H6.8.1(6) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.  H6.8.1(7) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.
(8) Enable safer pedestrian movement within the immediate locality of higher density developments to ensure ease of pedestrian movement to the rapid transport stops.	(14) Require development to contribute to safety improvements of the immediate urban road environment...	N/A	H6.8.1(1) for supported residential care accommodating greater than 10 people per site inclusive of staff and residents; boarding houses accommodating greater than 10 people per site inclusive of staff and residents; visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors; dairies up to 100m <sup>2</sup> gross floor area per site; restaurants and cafes up to 100m <sup>2</sup> gross floor area per site; care centres accommodating greater than 10 people per site excluding staff; community facilities; and healthcare facilities up to 200m <sup>2</sup> gross floor area per site  H6.8.1(2) for four or more dwellings per site  H6.8.1(3) for integrated development

<p>(9) Development is enabled on sites subject to significant ecological areas where it provides for the protection and management of the significant ecological values.</p>	<p>(15) Require buildings on sites subject to significant ecological areas to be of a scale that protects and maintains the significant ecological values of those areas.</p>	<p>H6.6.1 Activities list in Table H6.4.1 Activity table H6.6.11 Building coverage</p>	<p>H6.7.1(1) For one dwelling per site located in a Significant Ecological Area Overlay</p>
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**ATTACHMENT 3:**

\_Residential – Low Density Residential zone (marked up version of  
Residential – Single House zone that it replaces)

### **H3A. Residential – Single House Low Density Residential Zone**

**Note:** a purple bubble line shows where PC 78 incorporates the density standards in Part 2 of Schedule 3A, RMA, or the objectives and policies in clause 6 of Schedule 3A, RMA. Council is required by section 80H RMA to show this information.

**Note:** a green dotted line shows which provisions in the Auckland Unitary Plan, and any change or variation, are replaced in PC 78 by the density standards in Part 2 of Schedule 3A, RMA, or the objectives and policies in clause 6 of Schedule 3A, RMA. Council is required by section 80H RMA to show this information.

#### **H3A.1. Zone description**

~~The purpose of the Residential – Single House Zone is to maintain and enhance the amenity values of established residential neighbourhoods in number of locations. The particular amenity values of a neighbourhood may be based on special character informed by the past, spacious sites with some large trees, a coastal setting or other factors such as established neighbourhood character.~~

In the urban environment, the Residential – Low Density Residential Zone is applied to identified sites within residential neighbourhoods, subject to relevant qualifying matters, with the purpose being to:

- incorporate MDRS, and make development less enabling to the extent necessary to accommodate the qualifying matter(s) that are present;
- protect significant ecological areas and outstanding natural features and landscapes and high natural landscapes;
- protect areas of distinct cultural, historic and natural heritage;
- protect areas subject to risks from natural hazards including coastal hazards, coastal erosion, overland flow paths and flood plains; ~~and/or~~
- maintain and enhance special character residential areas; and
- provide for low density residential activities and buildings consistent with a suburban scale and subdivision pattern, such as one to two storey houses.

It is applied in the urban environment where the relevant qualifying matters have resulted in a lower intensity of development. Limiting levels of re-development is necessary to accommodate one or more qualifying matters while enabling residential development. The zone applies to:

- the Waitakere Ranges Heritage Area;
- neighbourhoods with special character based on past development patterns;
- a coastal setting;
- sites containing cultural values or substantial proportions of significant ecological areas;
- sites that are subject to high natural character, outstanding natural features or landscapes; or,

### H3A Residential – Single House Low Density Residential Zone

- other factors such as natural hazards risks in the coastal environment and from flooding.

To respond to the identified purpose the ~~provide choice for future residents,~~ Residential – ~~Single House Low Density Residential~~ zone may also be applied in plan changes that rezone Future Urban zone land to a residential zone greenfield developments where relevant qualifying matters exist. Within the zone, MDRS are incorporated to the extent qualifying matters can be accommodated. The activities and standards are limited by Auckland-wide provisions and overlays as the Residential - Low Density Residential Zone works with other plan provisions to provide for dwellings while accommodating relevant qualifying matters.

To support the purpose of the zone, ~~development is managed multi-unit development is not anticipated,~~ with additional dwellings limited to the conversion of an existing dwelling into two dwellings and minor dwelling units provided for only where dwellings and other buildings do not detract from the values of the identified qualifying matter. The zone is generally characterised by residential activities and buildings consistent with a suburban scale and subdivision pattern, such as one to two storey high buildings with yards and landscaping consistent with a low intensity suburban built character, except where the zone exhibits high landscape or natural heritage values.

#### H3A.2. Objectives

##### General Objectives for the Residential – Low Density Residential Zone

- ~~(1) Development maintains and is in keeping with the amenity values of established residential neighbourhoods including those based on special character informed by the past, spacious sites with some large trees, a coastal setting or other factors such as established neighbourhood character.~~
- ~~(1) (2) Development maintains and is in keeping with the neighbourhood's existing or planned identified qualifying matters' values within the area and their lower intensity residential development, relative to development enabled by the MDRS, being limited to suburban built character of predominantly one to two storeys buildings.~~
- ~~(2) (3) Development provides high-quality amenity:~~
  - ~~(a) on-site residential amenity for residents; and~~
  - ~~(b) for to adjoining sites; and~~
  - ~~(c) to the street.~~
- ~~(3) (4) Non-residential Community activities provide for the community's social, economic and cultural well-being, while being in keeping with the scale and intensity of development anticipated by the zone, and in response to the identified qualifying matters' values so as to contribute to the amenity of the neighbourhood.~~

### H3A Residential – Single-House Low Density Residential Zone

- (4) More intensive residential development including medium density residential development is enabled only to the extent necessary, ensuring that it does not detract from qualifying matters' values accommodated by the zone's purpose.

#### Specific Qualifying Matter Objectives

- (5) Development does not adversely affect the qualifying matter values of adjoining water bodies including riparian, lakeside and coastal protection areas nor increase the impact from natural hazard risks.
- (6) Development maintains and is in keeping with the amenity values of established residential neighbourhoods including those based on special character values.
- (7) Development provides for the protection and enhances the values of the scheduled site or place of significance and the relationship of Mana Whenua with their taonga, commensurate with the scale of the proposal.
- (8) Development provides for the protection and management of significant ecological areas, outstanding natural features and landscapes and areas of high natural character and historic heritage.
- (9) Development provides for the protection and management of risks from natural hazards in the coastal environment and from flooding.
- (10) Development is enabled where it can be serviced by the water supply, wastewater and stormwater networks to manage adverse effects.
- (11) Intensification is avoided in areas with significant public transport infrastructure constraints.

#### Medium Density Residential Standards Objectives

- (12) A well-functioning urban environment that enables all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future;
- (13) A relevant residential zone provides for a variety of housing types and sizes that respond to—
- (a) housing needs and demand; and
  - (b) the neighbourhood's planned urban built character, including 3-storey buildings.

**Commented [LD1]:** Incorporated as per s80H RMA

### **H3A.3. Policies**

#### General Policies for the Residential – Low Density Residential Zone

H3A Residential – Single House Low Density Residential Zone

- (1) ~~Require an intensity of development to be in keeping with neighbourhoods' identified values and lower intensity residential development being limited to that is compatible with either the existing suburban built character where this is to be maintained or the planned suburban built character of predominantly one to two storey dwellings.~~
- (2) Require development to:
  - (a) be of a height, bulk and form that maintains and is in keeping with the character and amenity values of the established residential neighbourhood; or
  - (b) be of a height and bulk and have sufficient setbacks and landscaped areas to maintain an existing suburban built character or achieve the planned suburban built character of predominantly one to two storey dwellings within a generally spacious setting.
- (3) ~~Encourage development to achieve attractive and safe streets and public open spaces including by:~~
  - (a) ~~providing for passive surveillance~~
  - (b) ~~optimising front yard landscaping~~
  - (c) ~~minimising visual dominance of garage doors.~~
- ~~(3)~~ (4) Require the height, bulk and location of development to maintain a reasonable level of sunlight access and privacy and to minimise visual dominance effects to the adjoining sites.
- ~~(4)~~ (5) Encourage accommodation to have useable and accessible outdoor living space.
- ~~(5)~~ (6) Restrict the maximum impervious area on a site in order to manage the amount of stormwater runoff generated by a development and ensure that adverse effects on water quality, quantity and amenity values are avoided or mitigated.
- ~~(6)~~ (7) Provide for ~~non-residential~~ community activities that:
  - (a) support the social and economic well-being of the community;
  - (b) are in keeping with the scale and intensity of development anticipated within the zone;
  - (c) avoid, remedy or mitigate adverse effects on residential amenity; and
  - (d) will not detract from the vitality of the Business – City Centre Zone, Business – Metro Centre Zone and the Business – Town Centre Zone.

H3A Residential – Single House Low Density Residential Zone

~~(8) To provide for integrated residential development on larger sites.~~

- (7) Require more intensive residential development including Medium Density Residential development to be enabled only to the extent necessary, ensuring that it does not detract from the identified qualifying matters' values.

Specific Qualifying Matter Policies

- (8) Require development to be in keeping with the lower intensity neighbourhoods' identified values including special character.
- (9) Require buildings to be located on a site and to be of a scale that protects significant ecological areas, outstanding natural landscapes, outstanding natural features and high natural character.
- (10) Require development to be at a scale that is in keeping with the identified cultural values, including restricting building height to avoid adverse effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites wāhi tapu, and other taonga, where located adjacent to Pukekiwiri Pā Historic Reserve, Red Hill.
- (11) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards.
- (12) Require all new dwellings to be provided with access to safe and reliable drinking water, wastewater and stormwater disposal services.
- (13) Require development of new dwellings in areas identified on the planning maps as subject to water, wastewater or stormwater infrastructure constraints to be provided with appropriate infrastructure.
- (14) Restrict development in areas identified on the planning maps as subject to coastal inundation, coastal erosion and flooding hazards.
- (15) Restrict more than one dwelling per site in areas identified on the planning maps as subject to the High Natural Character Overlay or the Waitakere Ranges Heritage Area Overlay.
- (16) Require development to be in keeping with the values associated with the Waitakere Ranges Heritage Area.
- (17) Avoid developments of more than one dwelling per site in areas identified on the planning maps as subject to significant transport infrastructure constraints.

Medium Density Residential Standards Policies



H3A Residential – Single House Low Density Residential Zone

- (18) Enable a variety of housing typologies with a mix of densities within the zone, including 3-storey attached and detached dwellings, and low-rise apartments.
- (19) Apply the MDRS across all relevant residential zones in the district plan except in circumstances where a qualifying matter is relevant (including matters of significance such as historic heritage and the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga).
- (20) Encourage development to achieve attractive and safe streets and public open spaces, including by providing for passive surveillance, including:
  - (a) optimising front yard landscaping; and
  - (b) minimising visual dominance of garage doors also contributes to achieving attractive and safe streets and public open spaces.
- (21) Enable housing to be designed to meet the day-to-day needs of residents.
- (22) Provide for developments not meeting permitted activity status, while encouraging high-quality developments.

Commented [LD2]: Incorporated as per s80H RMA

**H3A.4. Activity table**

Table H3A.4.1 Activity table specifies the activity status of land use and development activities in the Residential – Single House Low Density Residential Zone pursuant to section 9(3) of the Resource Management Act 1991.

The rules and standards in this zone are replaced by the rules and standards of Chapter D18 Special Character Areas Overlay – Residential and Business as they apply to residentially zoned land.

**Table H3A.4.1 Activity table**

Activity	Activity status	Standards to be complied with
Use		
(A1)	Activities not provided for	NC
Residential		
(A2)	Camping grounds	D
(A2)	One dwelling per site	P Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas; Standard

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			<p>H3.6.10 Building coverage;  <u>Standard H3.6.11 Landscaped area;</u>  <u>Standard H3.6.12 Front, side and rear fences and walls</u>  <u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control;</u>  <u>Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control;</u>  <u>Standard H3A.6.7 Building height;</u>  <u>Standard H3A.6.8 Height in relation to boundary;</u>  <u>Standard H3A.6.9 Yards;</u>  <u>Standard H3A.6.10 Maximum impervious area;</u>  <u>H3A.6.11 Building coverage;</u>  <u>Standard H3A.6.12 Landscaped area;</u>  <u>Standard H3A.6.13 Front, side and rear fences and walls;</u>  <u>Standard H3A.6.14 Outdoor living space;</u>  <u>Standard H3A.6.15 Outlook space;</u>  <u>Standard H3A.6.16 Windows to street</u></p>
(A3)	Two or three dwellings per site	RD	<p><u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control;</u>  <u>Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control;</u>  <u>Standard H3A.6.7 Building height;</u>  <u>Standard H3A.6.8 Height in relation to boundary;</u>  <u>Standard H3A.6.9 Yards;</u>  <u>Standard H3A.6.10 Maximum impervious area;</u>  <u>H3A.6.11 Building coverage;</u>  <u>Standard H3A.6.12 Landscaped area;</u>  <u>Standard H3A.6.13 Front, side and rear fences and walls;</u>  <u>Standard H3A.6.14 Outdoor living space;</u>  <u>Standard H3A.6.15 Outlook space;</u>  <u>Standard H3A.6.16 Windows to street</u></p>
(A4)	One dwelling per site where located in a High Natural Character Overlay (refer to Outstanding Natural Character and High Natural Character Overlay D11.4.1(A12))	D	<p><u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control;</u>  <u>Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control;</u>  <u>H3A.6.6 Additions to buildings and structures existing at 30</u></p>

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			<p><u>September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay; Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u></p>
(A5)	<p><u>One dwelling per site in an Outstanding Natural Character Overlay (refer to Outstanding Natural character and High Natural Character Overlay D11.4.4(A12))</u></p>	NC	<p><u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control; Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control; Standard H3A.6.6 Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay; Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u></p>
(A6)	<p><u>One dwelling per site in an Outstanding Natural Landscape Overlay (refer to Outstanding Natural character and High Natural</u></p>	D	<p><u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control; Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control;</u></p>

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	<u>Character Overlay D11.4.4(A12))</u>		<u>Standard H3A.6.6 Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay; Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u>
(A7)	<u>Two or more dwellings per site in the Waitakere Ranges Heritage Area Overlay</u>	NC	<u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control; Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control; Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u>
(A8)	<u>One dwelling per site where located in a Significant Ecological Area Overlay which complies with Standards E15.4.2(A29) and E15.6.5</u>	C	<u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control; Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control; Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious</u>

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			<p><u>area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u></p>
(A9)	<p><u>Two or more dwellings per site subject to an Significant Ecological Area Overlay (refer to Vegetation management and biodiversity E15.4.2(A43))</u></p>	D	<p><u>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control; Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control; Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u></p>
(A10)	<p><u>Two or three dwellings per site in the Infrastructure – Water and Wastewater Constraints Control.</u></p>	RD	<p><u>Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u></p>
(A4) (A11)	<p>The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings</p>	P	<p>Standard H3A.6.3 Conversion of a principal dwelling into a maximum of two dwellings</p>

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(A5)	Minor dwellings	P	Standard H3.6.4 Minor dwellings; Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas; Standard H3.6.10 Building coverage; Standard H3.6.11 Landscaped area; Standard H3.6.12 Front, side and rear fences and walls
(A6)	<del>More than one dwelling per site (other than the conversion of a principal dwelling in Rule H3.4.1(A4) or minor dwellings in Rule a H3.4.1(A5))</del>	NC	
(A7) (A12)	Home occupations	P	Standard H3A.6.2 Home occupations
(A8) (A13)	Home occupations that do not meet Standard H3A.6.2	D	
(A9)	<del>Integrated Residential Development</del>	<del>D</del>	
(A14)	Supported residential care accommodating up to 10 people per site inclusive of staff and residents	P	Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas; Standard H3.6.10 Building coverage; Standard H3.6.11 Landscaped area; Standard H3.6.12 Front, side and rear fences and walls <del>Standard H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control;</del> <del>Standard H3A.6.5 Dwellings within the Infrastructure – Stormwater Disposal Constraints Control;</del> Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living

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			<u>space; Standard H3A.6.15</u> <u>Outlook space; Standard</u> <u>H3A.6.16 Windows to street</u>
(A15)	Supported residential care accommodating greater than 10 people per site inclusive of staff and residents	D	
(A16)	Boarding houses accommodating up to 10 people per site inclusive of staff and residents	P	<u>Standard H3.6.6 Building height;</u> <u>Standard H3.6.7 Height in relation to boundary;</u> <u>Standard H3.6.8 Yards;</u> <u>Standard H3.6.9 Maximum impervious areas;</u> <u>Standard H3.6.10 Building coverage;</u> <u>Standard H3.6.11 Landscaped area;</u> <u>Standard H3.6.12 Front, side and rear fences and walls</u> <u>Standard H3A.6.7 Building height;</u> <u>Standard H3A.6.8 Height in relation to boundary;</u> <u>Standard H3A.6.9 Yards;</u> <u>Standard H3A.6.10 Maximum impervious area;</u> <u>H3A.6.11 Building coverage;</u> <u>Standard H3A.6.12 Landscaped area;</u> <u>Standard H3A.6.13 Front, side and rear fences and walls;</u> <u>Standard H3A.6.14 Outdoor living space;</u> <u>Standard H3A.6.15 Outlook space;</u> <u>Standard H3A.6.16 Windows to street</u>
(A17)	Boarding houses accommodating greater than 10 people per site inclusive of staff and residents	D	
(A18)	Visitor accommodation accommodating up to 10 people per site inclusive of staff and visitors	P	<u>Standard H3.6.6 Building height;</u> <u>Standard H3.6.7 Height in relation to boundary;</u> <u>Standard H3.6.8 Yards;</u> <u>Standard H3.6.9 Maximum impervious areas;</u> <u>Standard H3.6.10 Building coverage;</u> <u>Standard H3.6.11 Landscaped</u>

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			<p>area; Standard H3.6.12 Front, side and rear fences and walls  Standard H3A.6.7 Building height;  Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area;  H3A.6.11 Building coverage;  Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls;  Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</p>
(A19)	Visitor accommodation accommodating greater than 10 people per site inclusive of staff and visitors	D	
(A20)	<u>Two or more dwellings per site within the Infrastructure – Beachlands Transport Constraints Control;</u>	<u>NC</u>	
<b>Commerce</b>			
(A16)	<del>Dairies up to 100m<sup>2</sup> gross floor area per site</del>	<del>RD</del>	<del>Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas; Standard H3.6.10 Building coverage; and Standard H3.6.12 Front, side and rear fences and walls</del>
(A17)	<del>Restaurants and cafes up to 100m<sup>2</sup> gross floor area per site</del>	<del>D</del>	
(A18)	<del>Service stations on arterial roads</del>	<del>D</del>	
(A19)	<del>Offices within the Centre Fringe Office Control as identified on the planning maps</del>	<del>P</del>	<del>Standard H3.6.5 Offices within the Centre Fringe Office Control</del>
(A20)	<del>Offices within the Centre Fringe Office Control as identified on the planning maps that do not comply with Standard H3.6.5</del>	<del>D</del>	
<b>Community</b>			



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(A21)	Care centres accommodating up to 10 people per site excluding staff	P	Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas; Standard H3.6.10 Building coverage; Standard H3.6.11 Landscaped area; and Standard H3.6.12 Front, side and rear fences and walls Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls.
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(A22)	Care centres accommodating greater than 10 people per site excluding staff	D	
<del>(A23)</del>	<del>Community facilities</del>	<del>D</del>	
<del>(A24)</del>	<del>Education facilities</del>	<del>D</del>	
<del>(A25)</del>	<del>Tertiary education facilities</del>	<del>D</del>	
(A23)	Emergency services adjoining an arterial road	D	
(A24)	Healthcare facilities up to 200m <sup>2</sup> gross floor area per site	RD	Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas; Standard H3.6.10 Building coverage; Standard H3.6.11 Landscaped area; and Standard H3.6.12 Front, side and rear fences and walls Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls.

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(A25)	Healthcare facilities greater than 200m <sup>2</sup> gross floor area per site	NC	
<del>(A29)</del>	<del>Deleted Veterinary clinics</del>	<del>D</del>	
Rural Deleted			
<del>(A30)</del>	<del>Deleted Grazing of livestock on sites greater than 2,000m<sup>2</sup> net site area</del>	<del>P</del>	
Mana Whenua			
(A26)	Marae	D	
Development			
(A27)	Demolition of buildings	P	
(A28)	Internal and external alterations to buildings	P	<p><u>Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas; Standard H3.6.10 Building coverage; Standard H3.6.11 Landscaped area; Standard H3.6.12 Front, side and rear fences and walls Standard H3A.6.6 Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay; Standard H3A.6.7 Building height; Standard H3A.6.8 Height in relation to boundary; Standard H3A.6.9 Yards; Standard H3A.6.10 Maximum impervious area; H3A.6.11 Building coverage; Standard H3A.6.12 Landscaped area; Standard H3A.6.13 Front, side and rear fences and walls; Standard H3A.6.14 Outdoor living space; Standard H3A.6.15 Outlook space; Standard H3A.6.16 Windows to street</u></p>
(A29)	Accessory buildings	P	<p><u>Standard H3.6.6 Building height; Standard H3.6.7 Height in relation to boundary; Standard H3.6.8 Yards; Standard H3.6.9 Maximum impervious areas;</u></p>

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			<p><u>Standard H3.6.10 Building coverage</u>; <u>Standard H3A.6.6 Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay</u>; <u>Standard H3A.6.7 Building height</u>; <u>Standard H3A.6.8 Height in relation to boundary</u>; <u>Standard H3A.6.9 Yards</u>; <u>Standard H3A.6.10 Maximum impervious area</u>; <u>H3A.6.11 Building coverage</u>;</p>
(A30)	Additions to an existing dwelling	P	<p><u>Standard H3.6.6 Building height</u>; <u>Standard H3.6.7 Height in relation to boundary</u>; <u>Standard H3.6.8 Yards</u>; <u>Standard H3.6.9 Maximum impervious areas</u>; <u>Standard H3.6.10 Building coverage</u>; <u>Standard H3.6.11 Landscaped area</u>; <u>Standard H3.6.12 Front, side and rear fences and walls</u>; <u>Standard H3A.6.6 Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay</u>; <u>Standard H3A.6.7 Building height</u>; <u>Standard H3A.6.8 Height in relation to boundary</u>; <u>Standard H3A.6.9 Yards</u>; <u>Standard H3A.6.10 Maximum impervious area</u>; <u>H3A.6.11 Building coverage</u>; <u>Standard H3A.6.12 Landscaped area</u>; <u>Standard H3A.6.13 Front, side and rear fences and walls</u>; <u>Standard H3A.6.14 Outdoor living space</u>; <u>Standard H3A.6.15 Outlook space</u>; <u>Standard H3A.6.16 Windows to street</u></p>

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(A31)	<u>New buildings and additions to buildings and structures (other than dwellings) existing at 30 September 2013 and located in the Outstanding Natural Character Overlay and not complying with Standards H3A.6.6 or H3A.6.7(2) Building height</u>	D	<u>The same standards as apply to the land use activity that the new building or addition to a building is designed to accommodate.</u>
(A32)	<u>New buildings and structures (other than dwellings) located in the High Natural Character Overlay or the Outstanding Natural Landscape Overlay</u>	RD	<u>The same standards as apply to the land use activity that the new building or addition to a building is designed to accommodate.</u>
(A33)	<u>New buildings and structures (other than dwellings) located in the Outstanding Natural Character Overlay</u>	D	<u>The same standards as apply to the land use activity that the new building or addition to a building is designed to accommodate.</u>
(A34)	<u>Any new buildings, additions to buildings and alterations to buildings which increase gross floor area and which are located in the coastal storm inundation 1 per cent annual exceedance probability (AEP) (refer to Natural hazards and flooding E36.4.1(A7) and (A9)).</u>	RD	<u>The same standards as apply to the land use activity that the new building or addition to a building is designed to accommodate.</u>
(A35)	<u>Any new buildings, additions to buildings and alterations to buildings which increase gross floor area and which are located in the coastal erosion hazard area (refer to Natural hazards and flooding E36.4.1(A2) and (A4))</u>	RD	<u>The same standards as apply to the land use activity that the new building or addition to a building is designed to accommodate.</u>
(A36)	<u>Any new buildings and additions or alterations to buildings located in the Outstanding Natural Features Overlays A, V1, V2 or F2 (refer to Outstanding Natural</u>	RD	<u>The same standards as apply to the land use activity that the new building or addition to a building is designed to accommodate.</u>

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	<u>Features and Outstanding Natural Landscape Overlay D10.4.2(A1))</u>		
(A37)	<u>Any new buildings and additions or alterations to buildings located in the Outstanding Natural Features Overlays B, C, E or F1 (refer to Outstanding Natural Features and Outstanding Natural Landscape Overlay D10.4.2(A1)).</u>	NC	
(A38)	<u>Any new buildings, additions to buildings and alterations to buildings which are located in an 1 per cent annual exceedance probability (AEP) floodplain (refer to Natural hazards and flooding E36.4.1(A37) and (A38)</u>	RD	<u>The same standards as apply to the land use activity that the new building or addition to a building is designed to accommodate.</u>
(A39)	<u>Any other new New buildings and additions to buildings</u>		The same activity status and standards as applies to the land use activity that the new building or addition to a building is designed to accommodate.

**H3A.5. Notification**

(1) ~~Any application for resource consent for the following activities will be considered without public or limited notification or the need to obtain the written approval from affected parties unless the Council decides that special circumstances exist under section 95A(9) of the Resource Management Act 1991:~~

~~(a) [deleted]~~

~~(a) development which does not comply with H3A.6.12 (1a) Front, side and rear fences and walls.~~

(2) Any application for resource consent for an activity listed in Table H3A.4.1 Activity table and which is not listed in H3A.5(4) below will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.

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- (3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in Rule [C1.13\(4\)](#).
- (4) Unless the Council decides that special circumstances exist under section 95A(9) of the Resource Management Act 1991, public notification of an application for resource consent is precluded if the application is for the construction and use of one dwelling that does not comply with one or more of the following:
- (i) Standard H3A.6.8 Height in relation to boundary;
  - (ii) Standard H3A.6.9(1) Side and Rear Yards;
  - (iii) Standard H3A.6.9(1) and (2) Landscaped area;
  - (iv) Standard H5.6.14 Outdoor living space;
  - (v) Standard H3A.6.15 Outlook space; and
  - (vi) Standard H5.6.16 Windows to street.
- (5) Any application for a resource consent which is listed in H3A.5(4) above which also requires resource consent under other rules in the Plan will be subject to the normal tests for notification under the relevant sections of the RMA.

Commented [A3]: Qualifying Matters as per s80H RMA

### H3A.6. Standards

#### H3A.6.1. Activities listed in Table H3A.4.1 Activity table

- (1) Activities and buildings containing activities listed in Table H3A.4.1 Activity table must comply with the standards listed in the column in Table H3A.4.1 Activity table called Standards to be complied with.

#### H3A.6.2. Home occupations

Purpose: to enable people to work from home at a scale that the residential character and amenity is maintained.

- (1) A home occupation must comply with all the following standards:
- (a) at least one person engaged in the home occupation must use the dwelling on the site as their principal place of residence;
  - (b) no more than two people who do not use the dwelling as their principal place of residence may work in the home occupation;
  - (c) no more than four people in total may work in the home occupation;
  - (d) the sale of goods or services from the home occupation that requires customers to come to the site and the delivery of goods to and from the site may not occur before 7am or after 7pm;

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- (e) car trips to and from the home occupation activity must not exceed 20 per day;
- (f) heavy vehicle trips must not exceed two per week;
- (g) no more than one commercial vehicle associated with the home occupation may be on site at any one time;
- (h) storage for rubbish and recycling associated with the home occupation must be provided on site and screened from public view;
- (i) materials or goods manufactured, serviced or repaired in the home occupation must be stored and worked on within a building on the same site; and
- (j) goods sold from the home occupation must be:
  - (i) goods produced on site; or
  - (ii) goods that are primarily ordered by mail or electronic transaction and redistributed by post or courier; or
  - (iii) goods ancillary and related to a service provided by the home occupation.

**H3A.6.3. The conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings**

Purpose: to enable a dwelling existing as at 30 September 2013 to be converted into a maximum of two dwellings and to provide for sufficient outdoor living space for each of the dwellings.

- (1) Where a dwelling existing as at 30 September 2013 is proposed to be converted into a maximum of two dwellings each dwelling must have an outdoor living space that is:
  - (a) at least 5m<sup>2</sup> for a studio or one-bedroom dwelling and 8m<sup>2</sup> for a two or more bedroom dwelling; and
  - (b) at least 1.8m in depth; and
  - (c) directly accessible from the dwelling.

**H3.6.4. Minor dwellings**

Purpose:

- ~~to provide accommodation that is limited in size and secondary to the principal dwelling on a site;~~
- ~~to ensure that sufficient outdoor living space is provided for the minor dwelling;~~

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- to ensure there is no more than one minor dwelling on each site.
- (1) A minor dwelling must not exceed a floor area of 65m<sup>2</sup> excluding decks and garaging.
  - (2) A minor dwelling must have an outdoor living space that is:
    - (a) at least 5m<sup>2</sup> for a studio or one bedroom dwelling and 8m<sup>2</sup> for a two or more bedroom dwelling; and
    - (b) least 1.8m in depth; and
    - (c) directly accessible from the minor dwelling.
  - (3) There must be no more than one minor dwelling per site.

#### **H3.6.5. Offices within the Centre Fringe Office Control as identified on the planning maps**

- (1) Offices must be located in existing buildings.

#### **H3A.6.4 Dwellings within the Infrastructure – Combined Wastewater Network Control as identified on the planning maps**

Purpose: to restrict development in any area served by a combined sewer network where public sewer separation has not occurred while enabling new dwellings where separation is in progress and the new dwelling can connect to a separated local stormwater pipe that is part of the public stormwater network.

- (1) A new dwelling in an area served by the combined sewer network must be able to connect to an existing separated local stormwater pipe that is part of the public stormwater network.

#### **H3A.6.5 Dwellings within the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control**

Purpose: to manage development in any area where stormwater disposal is constrained by the lack of any connection or ability to connect to a public stormwater network and where on-site soakage capacity is insufficient to require adequate provision for stormwater disposal from the site.

- (1) A new dwelling in an area identified as having no current connection to the public stormwater network and poor on-site soakage capacity must either be able to connect to the public stormwater network or provide sufficient stormwater disposal capacity on-site.

#### **H3A.6.6 Additions to buildings and structures existing at 30 September 2013 in the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscapes Overlay**

Purpose: to require additions to buildings and structures (other than dwellings) existing at 30 September 2013 maintain the integrity of the natural values

**Commented [LD4]:** Qualifying Matters as per s771(j) RMA



associated with the relevant Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscape Overlay.

(1) Additions to a building or structure (other than dwellings) existing at 30 September 2013 must comply with the requirements of Standard D11.6.2 (refer to D11 Outstanding Natural Character and High Natural Character Overlay).

**Commented [NP5]:** Qualifying Matter as per s771(j) RMA

### H3A.6.7. Building height

Purpose: to manage the height of buildings to:

- Maintain Achieve the neighbourhood's identified qualifying matters' values and lower intensity residential development-planned suburban built character of predominantly one to two storeys;
- minimise visual dominance effects;
- avoid adverse effects on the relationship of Māori and their culture and traditions where located adjacent to Pukekiwiriki Pā Historic Reserve, Red Hill
- maintain a reasonable standard of residential amenity for adjoining sites;  
and
- provide some flexibility to enable variety in roof forms.

(1) Buildings must not exceed 8m in height except that 50 per cent of a building's roof in elevation, measured vertically from the junction between wall and roof, may exceed this height by 1m, where the entire roof slopes 15 degrees or more, as shown in Figure H3A.6.7.1 Building height in the Residential – Low Density Residential ~~Single-House~~ Zone below.

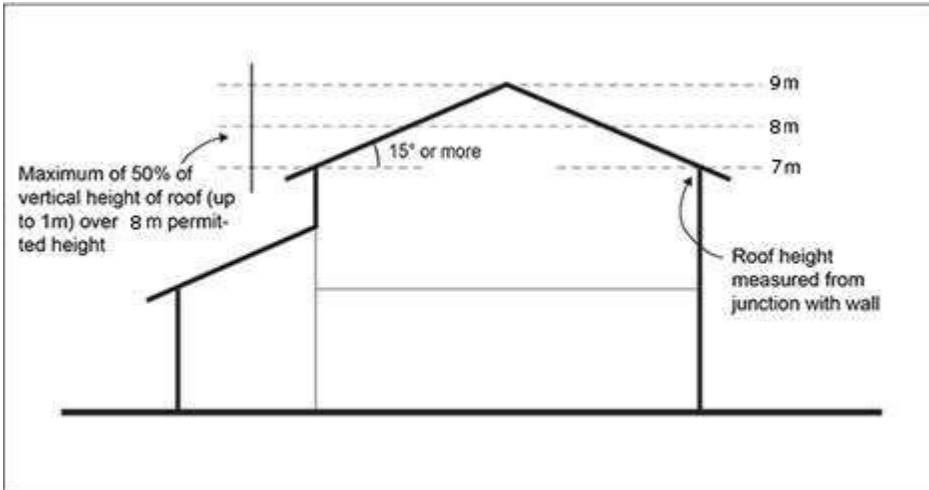
(2) Buildings or structures existing at 30 September 2013 and located within the Outstanding Natural Character Overlay, High Natural Character Overlay or Outstanding Natural Landscape Overlay must not exceed a maximum height of 5 metres (refer to Outstanding Natural Character and High Natural Character Overlay Standard D11.6.2).

**Commented [LD6]:** Qualifying Matter as per s771(a)

(3) Buildings located adjacent to Pukekiwiriki Pā Historic Reserve in Red Hill must not be higher than the height in metres as shown by the Height Variation Control on the planning maps, except that 50 per cent of a building's roof in elevation, measured vertically from the junction between wall and roof, may exceed this height by 1m, where the entire roof slopes 15 degrees or more.

**Commented [LD7]:** Qualifying Matter as per s771(a)

**Figure H3A.6.7.1 Building height in the Residential – Single-House Low Density Residential Zone**



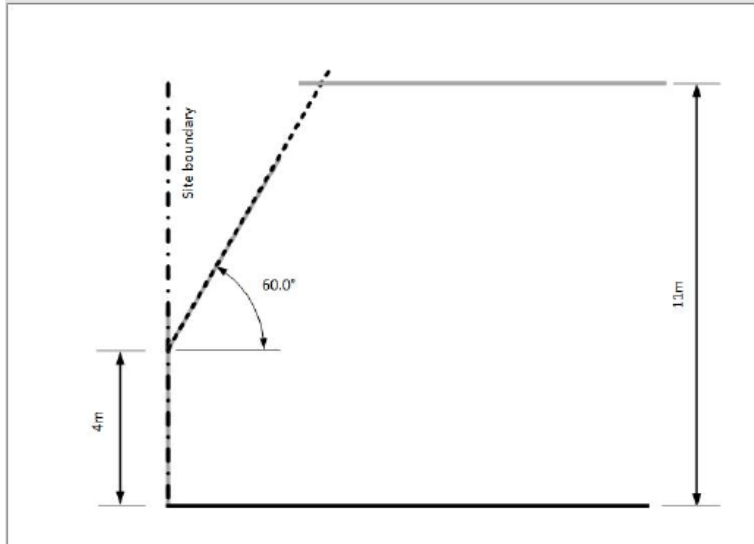
#### H3A.6.8. Height in relation to boundary

Purpose: to manage the height and bulk of buildings at boundaries to maintain a reasonable level of privacy, sunlight access and minimise adverse visual dominance effects to immediate neighbours.

- (1) Buildings must not project beyond a 60 degree recession plane measured from a point 4 metres vertically above ground level along all boundaries, as shown on the following diagram.

**Commented [NP8]:** Incorporated as per s80H RMA

H3A Residential – Single-House Low Density Residential Zone



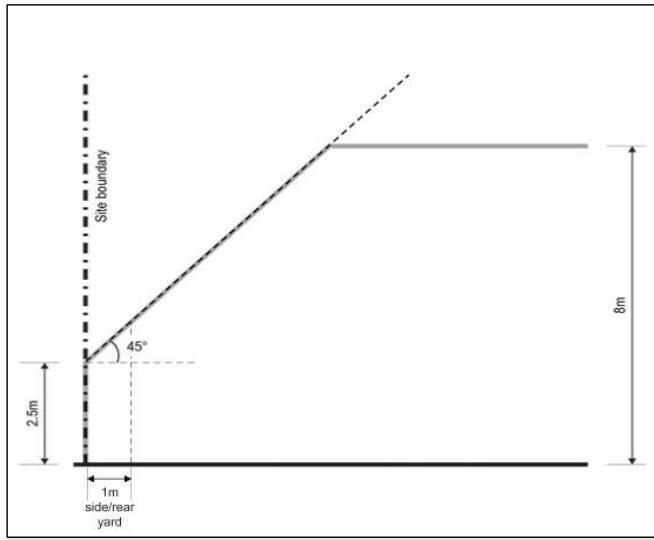
- (2) Buildings identified on planning maps as being located in the High Natural Character overlay or Waitakere Ranges Heritage Area overlay must not project beyond a 45-degree recession plane measured from a point 2.5m vertically above ground level along side and rear boundaries, as shown in Figure H3A.6.8.1 Height in relation to boundary below.

**Commented [LD9]:** Qualifying Matter as per s77I(a) refer to Chapters D11 and D12 of the AUP(OP)

**Figure H3.6.78.1 Height in relation to boundary in the High Natural Character Overlay or Waitakere Ranges Heritage Area Overlay**

**Commented [LD10]:** Qualifying Matter as per s77I(a) refer to Chapters D11 and D12 of the AUP(OP)

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(4) Standard H3.6.7(1) above does not apply to a boundary, or part of a boundary, adjoining any of the following:

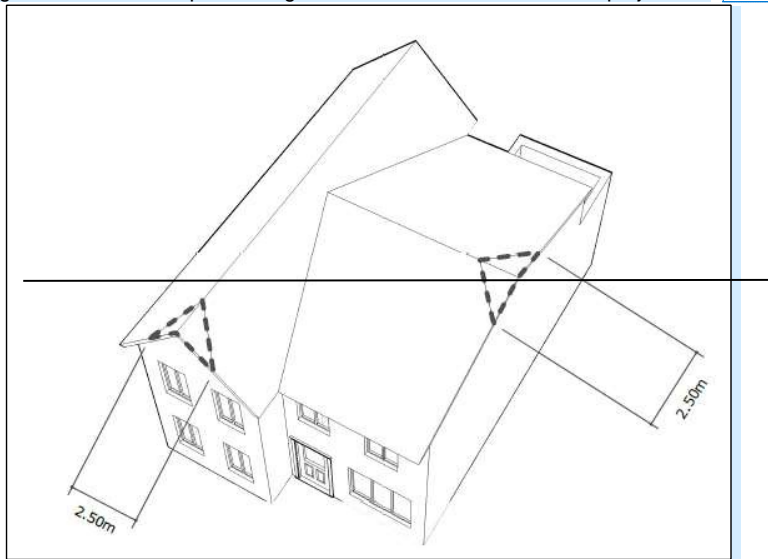
- (a) a Business – City Centre Zone; Business – Metropolitan Centre Zone; Business – Town Centre Zone; Business – Local Centre Zone; Business – Neighbourhood Centre Zone; Business – Mixed Use Zone; Business – General Business Zone; Business – Business Park Zone; Business – Light Industry Zone and Business – Heavy Industry Zone.
- (b) sites within the Open Space – Conservation Zone; Open Space – Informal Recreation Zone; Open Space – Sports and Active Recreation Zone; Open Space – Civic Spaces Zone; or the Open Space – Community Zone:
  - (i) that are greater than 2000m<sup>2</sup>;
  - (ii) where that part of the site in (i) is greater than 20 metres in width, when measured perpendicular to the shared boundary; and
  - (iii) where an open space comprises multiple sites but has a common open space zoning, the entire zone will be treated as a

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single site for the purpose of applying the standards listed below.

- (3) Standards H3A.6.8(1) and H3A.6.8(2) above does not apply to site boundaries where there is an existing common wall between two buildings on adjacent sites or where a common wall is proposed.
- (4) Where the boundary forms part of a legal right of way, entrance strip, access site or pedestrian access way, control in Standards H3A.6.8(1) and H3A.6.8(2) applies from the farthest boundary of that legal right of way, entrance strip, access site or pedestrian access way.
- (6) A gable end, dormer or roof may project beyond the recession plane where that portion beyond the recession plane is:
  - (a) no greater than 1.5m<sup>2</sup> in area and no greater than 1m in height; and
  - (b) no greater than 2.5m cumulatively in length measured along the edge of the roof as shown in Figure H3.6.7.2 Exceptions for gable ends and dormers and roof projections below.

Figure H3.6.7.2: Exceptions for gable ends and dormers and roof projections



- (7) No more than two gable ends, dormers or roof projections are allowed for every 6m length of site boundary.

### H3A.6.9. Yards

Purpose:

Commented [LD11]: Replaced as per s80H RMA

Commented [LD12]: Replaced as per s80H RMA

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- to maintain the neighbourhoods' identified values and lower intensity residential development ~~suburban built~~ character of the streetscape and provide sufficient space for landscaping within the front yard;
- to maintain a reasonable standard of residential amenity for adjoining sites;
- to require that buildings are adequately set back from lakes, streams and the coastal edge to maintain water quality and provide protection from natural hazards; and
- to enable buildings and services on the site or adjoining sites to be adequately maintained.

(1) A building or parts of a building must be set back from the relevant boundary by the minimum depth listed in Table H3A.6.9.1 Yards below.

**Table H3A.6.9.1 Yards**

Yard	Minimum depth
Front	3m
Side	1m
Rear	1m (excluded on corner sites)

**Commented [LD13]:** Qualifying Matters as per s77I(j) RMA

(2) A building or parts of a building must be set back from the relevant edge or boundary by the minimum depth listed in Table H3A.6.9.2 Yards below.

**Table H3A.6.9.2 Yards**

Yard	Minimum depth
Riparian	10m from the edge of all other permanent and intermittent streams
Lakeside	30m
Coastal protection yard	10m, or as otherwise specified in <a href="#">Appendix 6 Coastal protection yard</a>

**Commented [LD14]:** Qualifying Matters as per s77I(a) and (b)

(3) ~~(2)~~ Standards H3A.6.9.1 and H3A.6.9.2 above does not apply to site boundaries where there is an existing common wall between two buildings on adjacent sites or where a common wall is proposed.

**Commented [LD15]:** Qualifying Matter as per s77I(j)

**H3A.6.10. Maximum impervious area**

Purpose:

- to manage the amount of stormwater runoff generated by a development, particularly in relation to the capacity of the stormwater network and potential flood risks;

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- to support the functioning of riparian yards, lakeside yards and coastal protection yards and water quality and ecology;
  - to reinforce the building coverage and landscaped area standards; and
  - to limit paved areas on a site to improve the site's appearance and cumulatively maintain amenity values in a neighbourhood.
- (1) The maximum impervious area must not exceed 60 per cent of site area ~~except that where a site is subject to the Significant Ecological Area overlay as shown on the planning maps and a land use consent is approved for up to 300m<sup>2</sup> vegetation clearance under rule E15.4.2 (A29) the maximum impervious area is 60 per cent of the site area less the impervious area inside the overlay authorised as building platform and vehicular access.~~
  - (2) ~~Where a site is located in the Outstanding Natural Landscapes Overlay as shown on the planning maps, the maximum impervious area must not exceed 40 per cent of the site area.~~
  - (3) ~~(2)~~ The maximum impervious area within a riparian yard, a lakeside yard or a coastal protection yard must not exceed 10 per cent of the riparian yard, lakeside yard or coastal protection yard area.

**Commented [NP16]:** ~~[deleted]-Qualifying Matter as per s771(a)~~

**Commented [LD17]:** ~~[deleted]-Qualifying Matter as per s771(a)-[Maximum Impervious Area is not a density standard]~~

#### H3A.6.11. Building coverage

Purpose: to manage the extent of buildings on a site to be in keeping with the identified values within the neighbourhood and the lower intensity of achieve the planned suburban building coverage on sites built character of buildings.

- (1) The maximum building coverage must not exceed 35 per cent of net site area.  
On a site subject to a Significant Ecological Area Overlay:
- (2) the maximum building coverage must not exceed 35 per cent of the net site area; and
- (3) the part of the net site area covered by buildings must not be located in any area within 3m of vegetation within a significant ecological area including following the alteration or removal of up to 300m<sup>2</sup> of vegetation for a dwelling per site provided for under E15.3.2(A29) and E15.6.5; and
- (4) other than provided for in H3A.6.11(2), building coverage must not be located within a significant ecological area.

**Commented [LD18]:** Qualifying Matter as per s771(j)

**Commented [LD19]:** Qualifying Matter as per s771(a)

#### H3A.6.12. Landscaped area

Purpose:

- To provide for quality living environments consistent with identified values within the neighbourhood and lower intensity the planned suburban built character of buildings;
- To maintain the landscaped character of the streetscape within the zone.

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- (1) ~~The minimum landscaped area must be at least 40 per cent of the net site area.~~
- (2) ~~At least 50 per cent of the area of the front yard must comprise landscaped area.~~
- (1) A residential unit at ground floor level must have a landscaped area of a minimum of 20 per cent of a developed site with grass or plants, and can include the canopy of trees regardless of the ground treatment below them.
- (2) The landscaped area may be located on any part of the development site, and does not need to be associated with each residential unit.
- (3) ~~For sites located in the Significant Ecological Area Overlay, the development site is the building platform and accessway provided under Vegetation management and biodiversity E15.4.2(A29).~~
- (4) Except that Standards H3A.6.12(1) and (2) do not apply to sites subject to the High Natural Character Overlay or located in Waitakere Ranges Heritage Area Overlay where landscaped area must comply with the following minimum requirements:
- (a) the minimum landscaped area must be at least 40 per cent of the net site area; and
- (b) at least 50 per cent of the area of the front yard must comprise landscaped area

**Commented [LD20]:** Incorporated as per s80H RMA

**Commented [LD21]:** Qualifying Matter as per s77I(a)

**Commented [LD22]:** Qualifying Matter as per s77I(a)

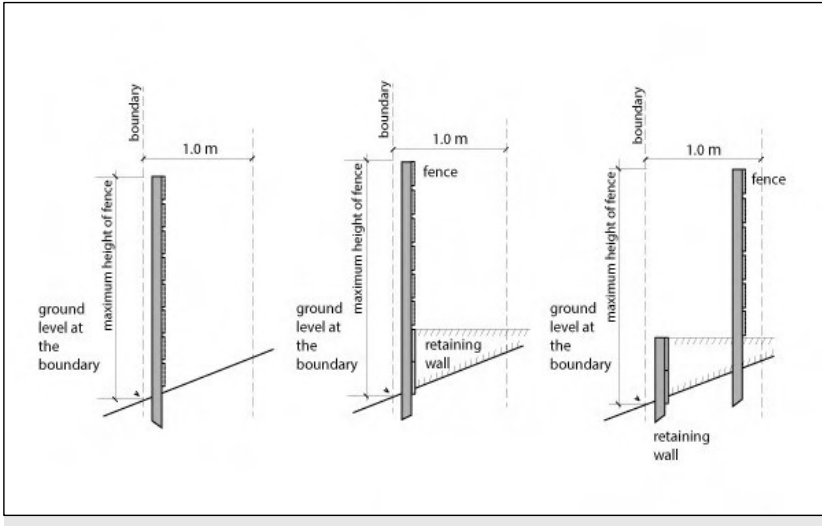
### H3A.6.13. Front, side and rear fences and walls

Purpose: to enable fences and walls to be constructed on a boundary or within a front, side, rear, riparian, coastal protection or lakeside yard to a height sufficient to:

- provide privacy for dwellings while enabling opportunities for passive surveillance of the street or adjoining public place
  - minimise visual dominance effects to immediate neighbours and the street or adjoining public place.
- (1) Fences or walls or a combination of these structures (whether separate or joined together) must not exceed the height specified below, measured from the ground level at the boundary:
- a. Within the front yard, either:
- i. 1.4m in height, or
  - ii. 1.8m in height for no more than 50 per cent of the site frontage and 1.4m for the remainder, or
  - iii. 1.8m in height if the fence is at least 50 per cent visually open as viewed perpendicular to the front boundary.
- b. Within the side, rear, coastal protection, lakeside or riparian yards: 2m.



Figure H3A.3.6.13 42.1 Measurement of fence height



#### H3A.6.14 Outdoor living space

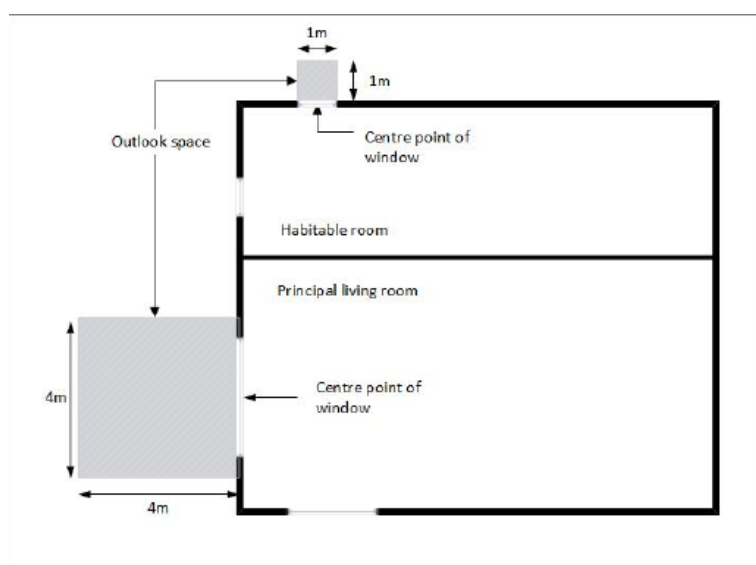
- (1) A residential unit at ground floor level must have an outdoor living space that is at least 20 square metres and that comprises ground floor, balcony, patio, or roof terrace space that:-
  - (a) where located at ground level, has no dimension less than 3 metres; and
  - (b) where provided in the form of a balcony, patio, or roof terrace, is at least 8 square metres and has a minimum dimension of 1.8 metres; and
  - (c) is accessible from the residential unit; and may be—
    - i. grouped cumulatively by area in 1 communally accessible location; or
    - ii. located directly adjacent to the unit; and
    - iii. is free of buildings, accessways, parking spaces, and servicing and manoeuvring areas.
- (2) A residential unit located above ground floor level must have an outdoor living space in the form of a balcony, patio, or roof terrace that—
  - (a) is at least 8 square metres and has a minimum dimension of 1.8 metres; and

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- (b) is accessible from the residential unit; and
- (c) may be—
  - i. grouped cumulatively by area in 1 communally accessible location, in which case it may be located at ground level; or
  - ii. located directly adjacent to the unit.

**H3A.6.15 Outlook space**

- (1) An outlook space must be provided for each residential unit as specified in this clause.
- (2) An outlook space must be provided from habitable room windows as shown in the diagram below:



- (3) The minimum dimensions for a required outlook space are as follows:
  - a) a principal living room must have an outlook space with a minimum dimension of 4 metres in depth and 4 metres in width; and
  - b) all other habitable rooms must have an outlook space with a minimum dimension of 1 metre in depth and 1 metre in width.
- (4) The width of the outlook space is measured from the centre point of the largest window on the building face to which it applies.
- (5) Outlook spaces may be over driveways and footpaths within the site or over a public street or other public open space.
- (6) Outlook spaces may overlap where they are on the same wall plane in the case of a multi-storey building.
- (7) Outlook spaces may be under or over a balcony.
- (8) Outlook spaces required from different rooms within the same building may overlap.
- (9) Outlook spaces must—

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- a) be clear and unobstructed by buildings; and
- b) not extend over an outlook space or outdoor living space required by another dwelling.

**Commented [LD23]:** Incorporated as per s80H RMA

**H3A.6.16 Windows to street**

- (1) Any residential unit facing the street must have a minimum of 20% of the street-facing façade in glazing. This can be in the form of windows or doors.

**Commented [LD24]:** Incorporated as per s80H RMA

**H3A.7. Assessment – controlled activities**

~~There are no controlled activities in this zone.~~

**H3A.7.1. Matters of control**

The Council will restrict its control to all of the following matters when assessing a controlled activity resource consent application:

- (1) For one dwelling per site located in a Significant Ecological Area Overlay:
  - (a) The extent to which the built development is designed to minimise or mitigate adverse effects on the ecological values of the relevant significant ecological area;
  - (b) The location, bulk and scale of built development relative to the surrounding ecological values.

**H3A.7.2 Assessment criteria**

The Council will consider the assessment criteria below for controlled activities to the extent relevant to the proposal:

- (1) For one or more dwellings per site located within a Significant Ecological Area Overlay:
  - (a) refer to Policy H3A.3(9)

**H3A.8. Assessment – restricted discretionary activities**

**H3A.8.1. Matters of discretion**

The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application:

- (1) for healthcare facilities up to 200m<sup>2</sup> gross floor area per site:
  - (a) the effects on the neighbourhood character, residential amenity and the surrounding residential area from all of the following:
    - i. building intensity, scale, location, form and appearance;
    - ii. traffic;
    - iii. location and design of parking and access; and
    - iv. noise, lighting and hours of operation.
- (2) for buildings that do not comply with the relevant Standards specified in Table H3A.4.1 Standard H3A.6.6 Building height; Standard H3A.6.7 Height in

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~~relation to boundary; Standard H3A.6.8 Yards; Standard H3A.6.9 Maximum impervious areas; Standard H3A.6.10 Building coverage; Standard H3A.6.11 Landscaped area; Standard H3A.6.12 Front, side and rear fences and walls:~~

- (a) any policy which is relevant to the standard;
  - (b) the purpose of the standard (where specified);
  - (c) the effects of the infringement of the standard;
  - (d) the effects on the lower intensity suburban built character of the zone;
  - (e) the effects on the amenity of neighbouring sites;
  - (f) the effects of any special or unusual characteristic of the site which is relevant to the standard;
  - (g) the characteristics of the development;
  - (h) any other matters specifically listed for the standard; and
  - (i) where more than one standard will be infringed, the effects of all infringements.
- (3) for two or more dwellings on a site
- (a) the effects on the neighbourhood character, residential amenity, safety, and the surrounding residential area from all of the following:
    - i. scale, location, form and appearance of built development including how the development is designed to provide for the balance between a good standard of privacy and opportunities for passive surveillance;
    - ii. traffic; and
    - iii. location and design of access and parking (if proposed).
  - (b) The effects on the values of the qualifying matter including any reason for consent required under a qualifying matter rule.
- (4) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control.
- (a) Infrastructure and servicing.
- (5) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.
- (a) Stormwater disposal.

### **H3A.8.2. Assessment criteria**

The Council will consider the relevant assessment criteria below for restricted discretionary activities:

- (1) for ~~dairies up to 400m<sup>2</sup> gross floor area per site; and~~ healthcare facilities up to 200m<sup>2</sup> gross floor area per site:
- a. building intensity, scale, location, form and appearance:
    - i. whether the intensity and scale of the activity, the building location, form and appearance is compatible with the character and residential amenity provided for within the zone and compatible with the surrounding residential area.
  - b. traffic:
    - i. whether the activity avoids or mitigates high levels of additional non-residential traffic on local roads.
  - c. location and design of parking and access:
    - i. whether adequate parking and access is provided or required.
  - d. noise, lighting and hours of operation:
    - i. whether noise and lighting and the hours of operation of the activity avoids, remedies or mitigates adverse effects on the residential amenity of surrounding properties, by:
      - locating noisy activities away from neighbouring residential boundaries; and
      - screening or other design features; and
      - controlling the hours of operation and operational measures.
- (2) for building height:
- (a) refer to Policy H3A.3(1);
  - (b) refer to Policy H3A.3(2); ~~and~~
  - (c) refer to Policy H3A.3(34);
  - (d) refer to Policy H3A.3(8);
  - (e) refer to Policy H3A.3(9);
  - (f) refer to Policy H3A.3(10);
  - (g) refer to Policy H3A.3(16); and

#### **~~Relationship of Māori and their culture and traditions~~**

~~(h) The extent to which proposed building heights as viewed both from and to Pukekiwiri Pā Historic Reserve maintain the culture and traditions of Māori on this site, taking into account:~~

- ~~(i) The site's historic function as an observation and defensive site.~~
- ~~(ii) The site's contemporary function as an educational site and site of cultural importance.~~

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(3) for height in relation to boundary:

- (a) refer to Policy H3A.3(1);
- (b) refer to Policy H3A.3(2); ~~and~~
- (c) refer to Policy H3A.3(~~3~~4);
- (d) refer to Policy H3A.3(8);
- (e) refer to Policy H3A.3(9);
- (f) refer to Policy H3A.3(10); and
- (g) refer to Policy H3A.3(16).

(4) for yards:

- (a) refer to Policy H3A.3(1);
- (b) refer to Policy H3A.3(2);
- (c) refer to Policy H3A.3(~~3~~4); ~~and~~
- (d) refer to Policy H3A.3(~~4~~5); -
- (e) refer to Policy H3A.3(8);
- (f) refer to Policy H3A.3(9);
- (g) refer to Policy H3A.3(10);
- (h) refer to Policy H3A.3(11); and

**For yards in the High Natural Character Overlay, Waitakere Ranges Heritage Area Overlay**

- (i) refer to Policy H3A.3(16);
- (j) The effects of a front yard infringement on the streetscape and on the values of the High Natural Character Overlay or Waitakere Ranges Heritage Area Overlay.
- (k) The effects of a side or rear yard infringement on the adjoining site and on the values of the High Natural Character Overlay or Waitakere Ranges Heritage Area Overlay.

(5) for maximum impervious areas:

- (a) refer to Policy H3A.3(6) and
- (b) refer to Policy H3A.3(9).

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(6) for building coverage:

- (a) refer to Policy H3A.3(1);
- (b) refer to Policy H3A.3(2); ~~and~~
- (c) refer to Policy H3.3(4); -
- (d) refer to Policy H3A.3(8);
- (e) refer to Policy H3A.3(9); and
- (f) refer to Policy H3A.3(10)

(7) for landscaped area:

- (a) refer to Policy H3A.3(1);
- (b) refer to Policy H3A.3(2); ~~and~~
- (c) refer to Policy H3A.3(~~34~~);
- (d) refer to Policy H3A.3(8);
- (e) refer to Policy H3A.3(9); and
- (f) refer to Policy H3A.3(16).

(8) for front, side and rear fences and walls:

- (a) refer to Policy H3A.3(1);
- (b) refer to Policy H3A.3(2);
- (c) refer to Policy H3A.3(~~3~~ 11); and
- (d) refer to Policy H3A.3(~~3~~ 4).

(9) for two or more dwellings on a site:

- (a) whether the development achieves the purpose, where specified, in the standards identified in Table H3A.4.1 or what alternatives are provided that result in the same or a better outcome.
- (b) whether the scale and location of built development, its form and appearance are of a high-quality and compatible with the lower intensity residential built character and residential amenity of the surrounding residential area provided for within the zone.
- (c) whether buildings are designed to manage building length and bulk and visual dominance by:
  - i. placing taller buildings on the frontage
  - ii. varying roof form and building height

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- iii. using modulation and articulation to break up the mass of buildings into visually distinct elements
  - iv. using the proportions and arrangement of windows and doors to provide relief to building length and bulk
  - v. using other building elements including materials, surface detailing, architectural detail and roof design to provide visual interest along building facades including blank side/party walls
  - vi. providing adequate breaks in long continuous to minimise the appearance of length
  - vii. placing deep soil areas and/or communal outdoor spaces within the breaks in buildings to provide space around buildings and soften the built form
  - viii. designing balconies as an integral part of the building.
- (d) whether buildings use quality, durable and easily maintainable materials.
- (e) whether buildings create positive frontages that contribute to the visual amenity and safety of public streets, public open spaces, and private vehicle and pedestrian accessways by:
- i. having clearly defined fronts that provide passive surveillance from windows and balconies whilst not impacting on privacy.
  - ii. maximising doors, windows and balconies over all levels on the front façades.
  - iii. maximising the number of dwellings that directly front, align and orientate to public streets and private accessways (vehicle and pedestrian).
  - iv. ground level dwellings closest to the street to each have direct and clearly defined pedestrian access from the street in preference to a single building entrance.
- (f) the extent to which built development will affect the values of the relevant qualifying matter on the site by:
- i. the intensity and location of built development relative to the qualifying matter.
  - ii. increasing natural hazard risk.
  - iii. compromising the integrity and quality of the qualifying matter.
- (10) For developments containing more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control or the Infrastructure – Water and Wastewater Constraints Control
- (a) Whether there is adequate capacity in the existing public reticulated water supply and / or wastewater network to service the proposed dwelling(s).



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- (b) Whether sufficient water supply and access to water supplies for firefighting purposes in accordance with the NZ Fire Service Fire Fighting Water Supplies Code of Practice SNZ PAS 4509:2008 is available.
  - (c) Whether there is the ability connect the dwelling(s) to a reticulated water supply and / or wastewater network in the future.
- (11) For more than one dwelling per site in areas identified on the planning maps as being subject to the Infrastructure – Residential Single Dwelling and Subdivision Stormwater Disposal Constraints Control.
- (a) Whether there is the ability to adequately dispose of stormwater from the site via a connection to the public stormwater network.
  - (b) Whether stormwater from the site can be disposed of in accordance with the current version of Guideline Document 007 Stormwater Soakage and Groundwater Recharge in the Auckland Region, and the Auckland Stormwater Code of Practice.

**H3A.9. Special information requirements**

There are no special information requirements in this zone.