I hereby give notice that a hearing by commissioners will be held on:

Date:	**Monday 13 to Thursday 16 November 2023** **Monday 20 to Thursday 23 November 2023**
Time:	**9:30am** (unless specified otherwise)
Meeting room:	**Warkworth Town Hall**
Venue:	**2 Alnwick Street, Warkworth**

NOTIFICATION MATERIAL

VOLUME 2

8 NOTICES OF REQUIREMENT FOR THE WARKWORTH PROJECT

TE TUPU NGĀTAHI SUPPORTING GROWTH (AUCKLAND TRANSPORT & WAKA KOTAHI NZ TRANSPORT AGENCY)

COMMISSIONERS

Chairperson	**Richard Blakey**
Commissioners	**Mark Farnsworth**
	Vaughan Smith

Patrice Baillargeon
Kaitohutohu Mataamua Whakawā /
Senior Hearings Advisor

Telephone: 09 890 4692 or 027 338 5383
Email: patrice.baillargeon@@aucklandcouncil.govt.nz
Website: www.aucklandcouncil.govt.nz

Note: The reports contained within this agenda are for consideration and should not be construed as a decision of Council. Should Commissioners require further information relating to any reports, please contact the Team Leader Hearings.

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ASSESSMENT OF THE EFFECTS ON THE ENVIRONMENT

TE TUPU NGĀTAHI
SUPPORTING GROWTH

VOLUME 2

Warkworth Assessment of Effects on the Environment

May 2023

Version 1.0

Document Status

Responsibility	Name
Author	Simon Titter, Sheetal Naidu, Nicholas Jantke and Jess Rose
Reviewer	Chris Scrafton / Tracey Grant / Daniel Wilcocks / Natasha Garvan
Approver	Tracey Grant

Revision Status

Version	Date	Reason for issue
1.0	12/05/2023	Issue for lodgement

The Assessment of Effects on the Environment report and supporting documents are structured as set out in the table below:

Volume	Title	Contents
1	Form 18	Attachment A: Designation Plans; Attachment B: Schedule of Directly Affected Property; and Attachment C: Conditions of Designation
2	Assessment of Effects on the Environment	Appendix A: Assessment of Alternatives Appendix B: Relevant statutory and strategic planning documents assessment Appendix C: Proposed NOR Conditions
3	Design and Designation Boundaries	Appendix A: General Arrangement Layout Plans Appendix B: Property Boundaries and Schedules
4	Supporting Technical Reports	Assessment of Arboricultural Effects Assessment of Archaeological Effects Assessment of Construction Noise and Vibration Effects Assessment of Ecological Effects Assessment of Landscape, Natural Character and Visual Effects Assessment of Flooding and Stormwater Effects Assessment of Traffic Noise and Vibration Effects Assessment of Transport Effects Urban Design Evaluation Report

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Glossary and Abbreviations

Acronym / Term	Description
ADT	Annual Average Daily Traffic
AEE	Assessment of Effects on the Environment (this report)
AGRD	Austroads Guide to Road Design
ARI	Average Recurrence Interval
AT	Auckland Transport
ATAP	Auckland Transport Alignment Project
AUP:OP	Auckland Unitary Plan: Operative in Part
CCRA	Climate Change Response Act 2022
CEMP	Construction Environment Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CTMP	Construction Traffic Management Plan
DBC	Detailed Business Case
FULSS	Future Urban Land Supply Strategy (2017)
FUZ	Future Urban Zone
GPS	Government Policy Statement
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
IBC	Indicative Business Case
Indicative Strategic Transport Network for Warkworth	The indicative strategic transport network identified for Warkworth in the Warkworth Indicative Business Case
LGA	Local Government (Auckland Council) Act 2009
MPD	Maximum Probable Development
MSM	Macro Strategic Model
NES	National Environmental Standard
NOR	Notice of Requirement
NPS-F	National Policy Statement for Freshwater 2020
NPS-HPL	National Policy Statement on Highly Productive Land 2022
NPS-UD	National Policy Statement on Urban Development 2020

Acronym / Term	Description
Plan Change 25	Warkworth North Private Plan Change
PPF	Protected Premises and Facilities
PWA	Public Works Act 1981
RLTP	Regional Land Transport Plan
RMA	Resource Management Act 1991
RPS	Regional Policy Statement
SCEMP	Stakeholder Communication and Engagement Management Plan
SEA	Significant Ecological Area
SH1	State Highway 1
TAR	Threatened – At Risk species
TDM	Transport Design Manual
Te Tupu Ngātahi	Te Tupu Ngātahi Supporting Growth
TfUG	Transport for Future Urban Growth
ULDMP	Urban and Landscape Design Management Plan
Waka Kotahi	Waka Kotahi NZ Transport Agency
Warkworth Package	The package comprising the following new or upgraded transport corridors: Northern Public Transport Hub and Western Link – North Woodcocks Road (Western Section) State Highway 1 – South Matakana Road Sandspit Road Western Link – South Sandspit Link Wider Western Link – North
Warkworth Preferred Transport Network	The preferred transport network identified for Warkworth in the Warkworth Detailed Business Case

1 Introduction

This Assessment of Effects on the Environment (AEE) supports the Warkworth Package of Notices of Requirement (NORs) for Auckland Transport (AT) as a requiring authority under the Resource Management Act 1991 (RMA). The NORs seek to designate land for future strategic transport corridors and associated infrastructure as part of the Te Tupu Ngātahi Supporting Growth Programme to enable the future construction, operation and maintenance of transport infrastructure in Warkworth. Each NOR in the Warkworth Package is listed in Table 1.1, and shown in Figure 1.1 below.

Table 1.1: The Warkworth Package

Project	NOR	Description
Northern Public Transport Hub and Western Link – North	1	New northern public transport hub and associated facilities including a park and ride at the corner of State Highway 1 (SH1) and the new Western Link – North. New urban arterial cross-section with active mode facilities between the intersection of SH1 and Te Honohono ki Tai (Matakana Link Road) to the proposed bridge crossing, enabling a connection for development in the Warkworth Northern Precinct as provided for in the Warkworth North Precinct.
Woodcocks Road - West	2	Upgrade of the existing Woodcocks Road corridor between Mansel Drive and Ara Tūhono (Puhoi to Warkworth) to an urban arterial cross-section with active mode facilities.
State Highway 1 – South Upgrade	3	Upgrade of the existing SH1 corridor between Fairwater Road and the southern Rural Urban Boundary to an urban arterial cross-section with active mode facilities.
Matakana Road Upgrade	4	Upgrade of the existing Matakana Road corridor between the Hill Street intersection and the northern Rural Urban Boundary to an urban arterial cross-section with active mode facilities.
Sandspit Road Upgrade	5	Upgrade of the existing Sandspit Road corridor between the Hill Street intersection and the eastern Rural Urban Boundary to an urban arterial cross-section with active mode facilities.
Western Link – South	6	New urban arterial cross-section with active mode facilities between the intersection of SH1 and McKinney Road and Evelyn Street.
Sandspit Link	7	New urban arterial cross-section with active mode facilities between the intersection of Matakana Road and Te Honohono ki Tai (Matakana Link Road) and Sandspit Road.
Wider Western Link – North	8	New urban arterial cross-section with active mode facilities between Woodcocks Road and the Mahurangi River.

Figure 1.1: Warkworth Package overview

1.1 Te Tupu Ngātahi Supporting Growth

Te Tupu Ngātahi Supporting Growth (Te Tupu Ngātahi) is a collaboration between AT and Waka Kotahi NZ Transport Agency (Waka Kotahi) to plan transport investment in Auckland's future urban zoned (FUZ) areas over the next 10 to 30 years.

AT and Waka Kotahi have partnered with Auckland Council, Manawhenua and KiwiRail Holdings Limited and are working closely with stakeholders and the community to develop the strategic transport network to support Auckland's growth areas, which are shown in Figure 1.2 below.

The key objective of Te Tupu Ngātahi is to protect land for future implementation of the required strategic transport corridors / infrastructure. As a form of route protection, designations will identify and appropriately protect the land necessary to enable the future construction, operation and maintenance of these required transport corridors / infrastructure.

A designation is important as it provides certainty for the requiring authority that it can implement the work. It also provides property owners, businesses and the community with increased certainty regarding future infrastructure, so they can make informed decisions. It can also significantly reduce long-term costs for local and central government and enable more effective land use and transport outcomes.

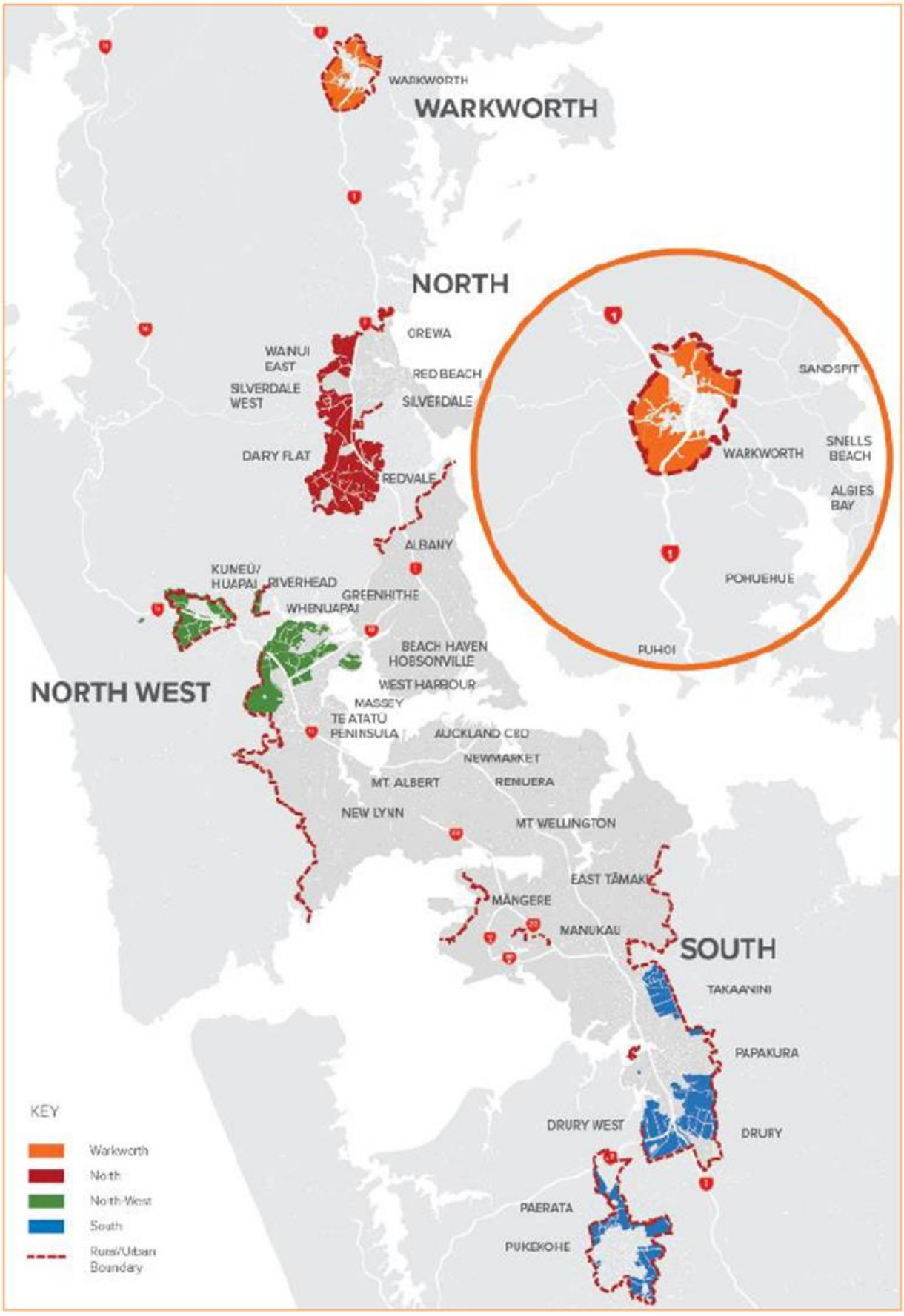


Figure 1.2: Future urban areas of Auckland, highlighting the Warkworth growth area (orange)

1.2 Auckland Transport

AT is financially responsible for Auckland's transport network and services (excluding state highways) including roads, footpaths, cycling, parking and public transport services such as rail. AT is a Council Controlled Organisation (CCO) under the Local Government (Auckland Council) Act 2009 (LGA), which states that AT's purpose is to "contribute to an effective, efficient and safe Auckland land transport system in the public interest".

AT's functions are identified in section 45 of the LGA. These functions include managing and controlling the Auckland transport system in accordance with the LGA, including performing the statutory functions and exercising the statutory powers set out in section 46 as if AT were a local authority or other statutory body, and acting as a requiring authority under section 167 of the RMA.

Under section 47(1) of the LGA, AT is deemed to be approved as a requiring authority and as a network utility operator, under section 167 of the RMA for the purpose of "constructing or operating or proposing to construct or operate roads in relation to the Auckland transport system" and "the carrying out of an activity or a proposed activity (other than an activity described in paragraph (a)) in relation to the Auckland transport system for which it or the Auckland Council has financial responsibility".

AT may therefore designate land to construct, operate and maintain roads and any other activities in relation to the Auckland transport system that Auckland Council has financial responsibility for.

1.3 Notification

AT requests that the NORs 1-8 described in this AEE are publicly notified.

2 Background and context

2.1 The problem

Auckland is New Zealand's largest city, home to approximately 1.65 million people. In 2017, Auckland attracted 36,800 new residents; more than the rest of New Zealand combined. The Auckland Plan 2050 – Development Strategy signals that Auckland could grow by 720,000 people to reach a population 2.4 million over the next 30 years. This will generate demand for more than 400,000 additional homes and require land for 270,000 more jobs.[1] Most of this growth will go into existing urban areas. However, around a third will go into FUZ areas (greenfields) as identified in the Auckland Unitary Plan: Operative in Part (AUP:OP).

In July 2017, the Future Urban Land Supply Strategy (FULSS) was updated in line with AUP:OP zonings, with 15,000 hectares of land allocated for future urbanisation. The FULSS provides for sequenced and accelerated greenfield growth in ten areas of Auckland, including Warkworth.

Warkworth is uniquely located as a satellite town at the northernmost extent of the Auckland region, approximately 60km north of the Auckland city centre, and 30km north of Orewa. The Warkworth FUZ area is less than 5km from the northern extent to the southern extent, and from the eastern extent to the western extent, resulting in compact future urban form.

Based on the FULSS, at full build out, the Warkworth growth areas are expected to accommodate:

17,100 additional people
8,200 new houses (~7,300 in the FUZ area)
4,600 new jobs.

This is a significant increase from the existing population and employment in an area that is currently predominantly rural in character.

The significant growth anticipated will pose a number of future transport challenges for Warkworth, including exacerbating existing transport problems and resulting in the current network being unsuitable to support this planned future growth.

Given the scale and duration of the growth proposed, the early route protection of these critical transport corridors and infrastructure is necessary to provide the required certainty for AT, Waka Kotahi, stakeholders and the community.

2.2 Previous programme phases

In 2015, AT, Waka Kotahi and Auckland Council formed the Transport for Future Urban Growth (TfUG) Programme to investigate, plan and deliver the transport networks needed to connect the urban growth areas across North, North West and South Auckland over the next 30 years. AT, Waka Kotahi and Auckland Council prepared a strategic business case, which confirmed the scale and urgency of the issue and a need to progress a transport response to the growth.

[1] Auckland Plan 2050 Development Strategy: https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/development-strategy/future-auckland/Pages/what-auckland-look-like-future.aspx.

In 2016, AT, Waka Kotahi and Auckland Council worked in partnership to develop a TfUG Programme Business Case. The TfUG Programme Business Case identified route protection of key transport corridors as the priority focus area for the next steps of the programme. The TfUG Programme is now known as the Te Tupu Ngātahi Supporting Growth Programme.

In May 2019, AT and Waka Kotahi Boards approved Indicative Business Cases (IBC) for each of Auckland's growth areas (Warkworth, North, North West and South) to further test and develop the recommendations of the Programme Business Case. The IBCs identified an indicative strategic transport network, which includes indicative locations for new or upgraded public transport connections, walking and cycling links and roads or state highways.

The Warkworth IBC recommended the Indicative Strategic Transport Network for Warkworth as shown in Figure 2.1. This network was endorsed by the AT Board in February 2019 and the Waka Kotahi Board in May 2019.

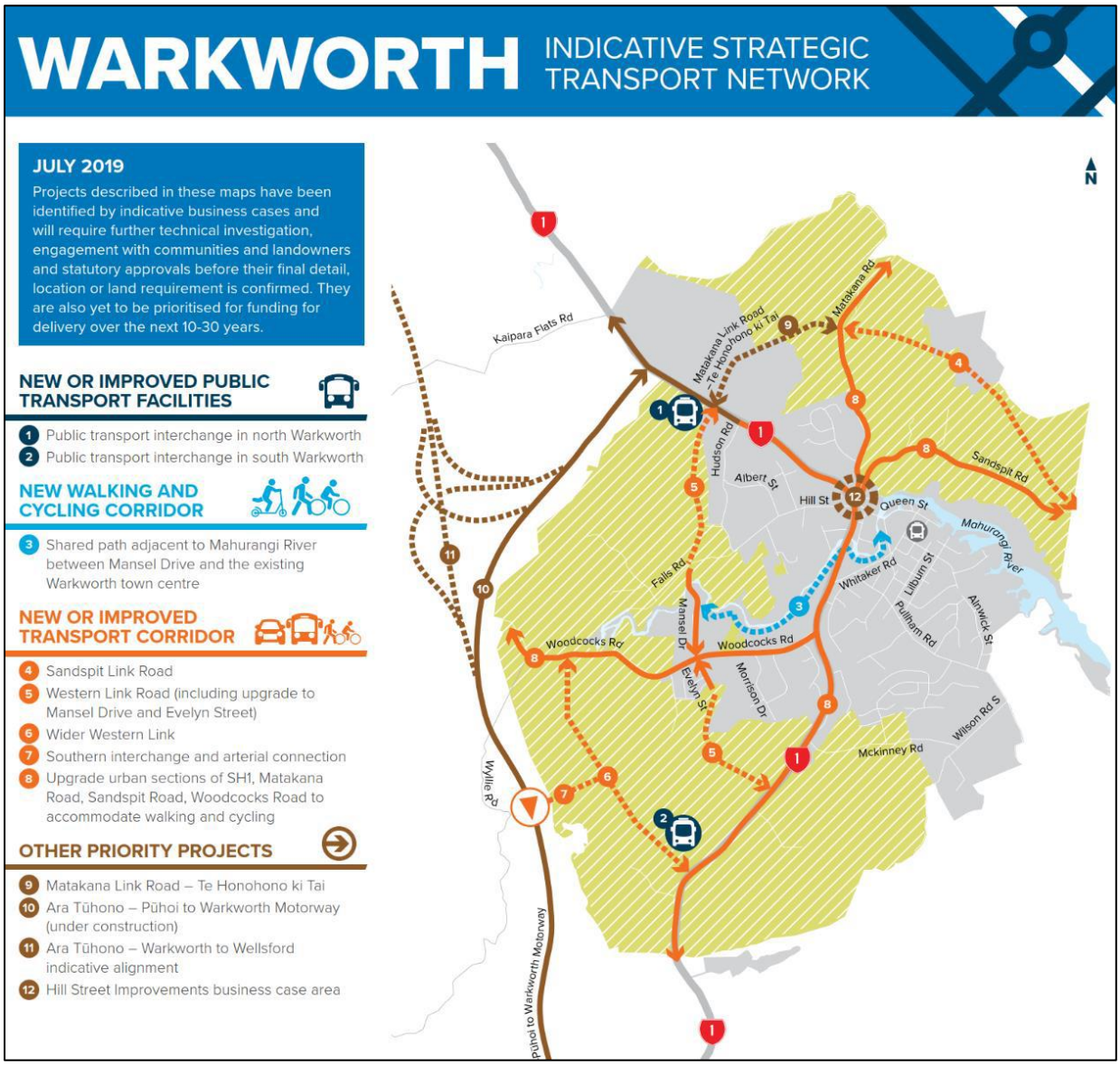


Figure 2.1: Indicative Strategic Transport Network for Warkworth

3 The recommended network

3.1 Purpose of the network

The IBC Indicative Strategic Transport Network for Warkworth was progressed to the Detailed Business Case (DBC) stage in 2022.

The Warkworth DBC identifies that the current transport network is already under pressure and future transport demands will exacerbate existing issues, limiting Warkworth's growth potential. The current form of the transport network in Warkworth is not capable of supporting the significant growth anticipated in the Warkworth FUZ areas, and in some places the transport network does not yet exist.

The key reasons why transport investment is required in Warkworth are set out in Table 3.1 below:

Table 3.1: Key reasons why transport investment is required in Warkworth

Issue	Key reasons why transport investment is required in Warkworth
Access	The current transport network's form and function, lack of active mode facilities and missing transport connections will not support future growth and will result in indirect / longer trips between existing and future key destinations, constraining access to economic and social opportunities in Warkworth.
Reliability / resilience	Without new transport corridors network resilience will be limited and public transport, private vehicles and freight will experience unreliability as transport demand grows.
Travel choice	The majority of travel in Warkworth is undertaken by private vehicle as there is limited provision for travel by alternative modes. The planned growth in Warkworth will generate more trips in the future, and without any investment in high quality, attractive and dedicated alternative modes, the majority of these additional trips will continue to be undertaken by private vehicles The additional trips generated will result in significant congestion on existing routes such as Woodcocks Road, SH1 and the Hill Street intersection, further reducing access to social and employment destinations within Warkworth.
Safety	Existing safety risks are likely to increase on key corridors without investment in safe solutions Active mode safety issues will also be exacerbated without investment in appropriate and safe walking and cycling facilities.
Integration	The current transport network does not support land use integration, nor does it support the desired compact urban form for Warkworth, limiting development potential and the quality of the urban environment.
Mode shift	The current transport system has an over-reliance on private vehicles. This combined with limited low carbon transport alternatives results in significant transport emissions, which is this inconsistent with New Zealand's aspirations for shifting to lower emission travel options.

3.2 Overview of the network

The DBC further refined the IBC Indicative Strategic Transport Network for Warkworth and proposed the Warkworth Preferred Transport Network to support the expected future growth in Warkworth as shown in Figure 3.1 below.

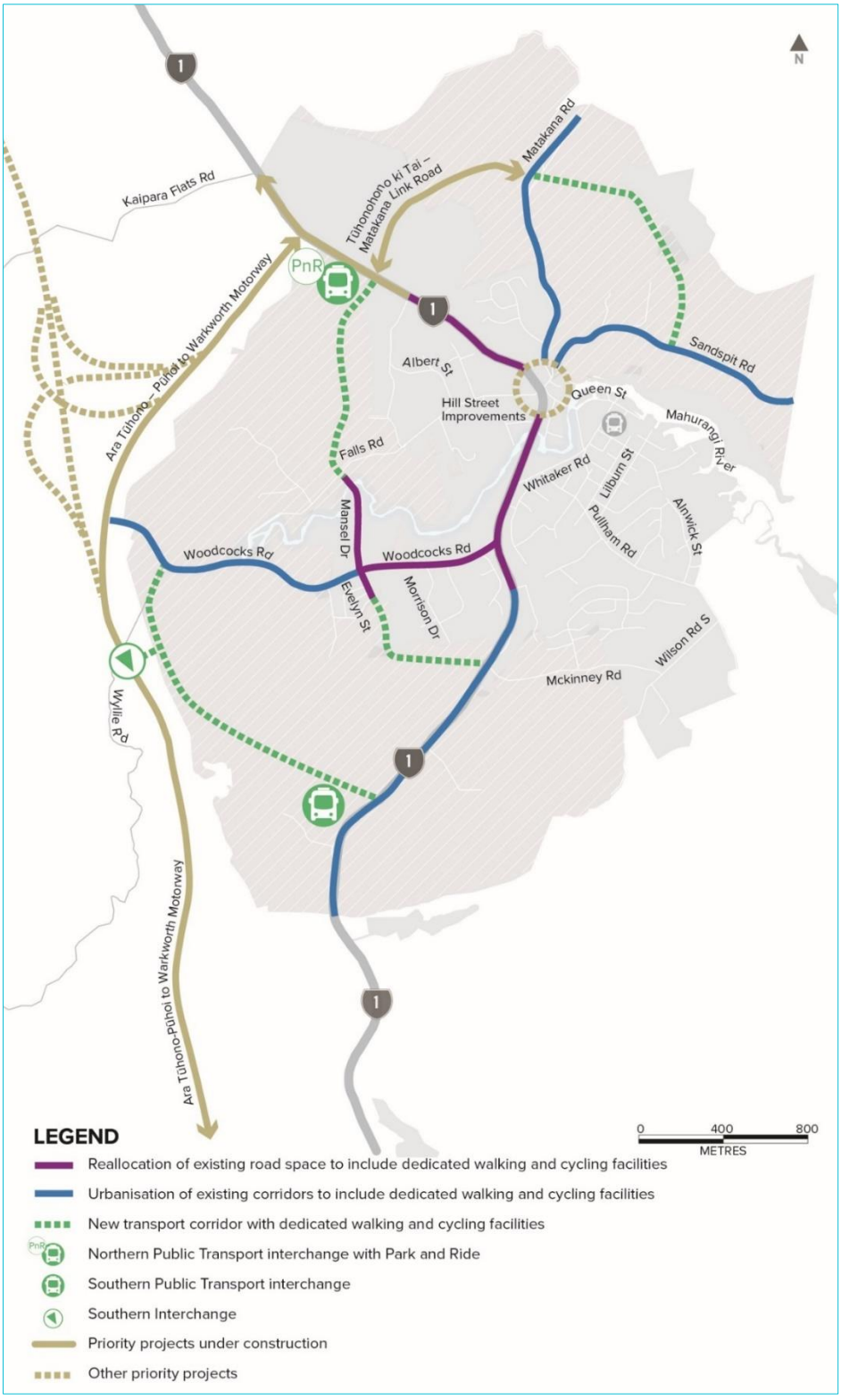


Figure 3.1: Warkworth Preferred Transport Network

The Warkworth Preferred Transport Network encompasses 12 projects from the IBC Indicative Strategic Transport Network for Warkworth, which together form a cohesive transport response for Warkworth to respond to planned future growth. The Warkworth Preferred Transport Network includes provision for frequent public transport, improved walking and cycling, and general traffic connections. Overall, the Warkworth Preferred Transport Network seeks to improve connectivity for Warkworth and support transformational mode shift by providing high quality, safe and attractive transport environments.

The Warkworth DBC was approved by the AT Board in March 2023 and the Waka Kotahi Board in April 2023. As part of the board approval, the decision was endorsed to prepare and lodge (with Council) eight NORs for the upgraded and new transport corridors and associated infrastructure within the Warkworth Package as shown in Figure 1.1 and summarised in Table 1.1 in Section 3.3 of this AEE.

3.3 Land use and transport integration

The required transport networks and infrastructure in Warkworth, which are part of the Warkworth Package, will play a vital role in the success of new neighbourhoods by providing safe, accessible and sustainable travel choices that connect communities and encourage a transformational shift from private vehicles to public transport and active transport.

The implementation of the strategic transport network required to support the growth will be staged over the next 30 years. A key part of this integrated approach is collaborating with Auckland Council. This is in relation to current plan changes in Warkworth to rezone land in the future urban areas, and in relation to subsequent plan changes that Auckland Council may progress to rezone land in the future urban areas in line with the Warkworth Structure Plan which was adopted by Auckland Council in June 2019.

As set out in Table 3.2, the DBC staging has been based on when the FULSS anticipates that Warkworth will be development ready. This has been tested in the Warkworth DBC transport modelling to confirm the anticipated build out of the network. DBC staging is specific to the Warkworth area and accounted for:

Other network projects being developed separately in Warkworth that are complementary to the Warkworth Package including Ara Tūhono (Puhoi to Warkworth) Motorway, Ara Tūhono (Warkworth to Wellsford) motorway, Te Honohono ki Tai – Matakana Link Road, improvements to the Hill Street / SH1 intersection, the Mahurangi Shared Path and the Warkworth Community Transport Hub

Transport demand using the regional transport model (the Macro Strategic Model (MSM)), as well as the Strategic Active Modes Model used for the assessment of the active modes demands and SATURN based traffic models (using MSM outputs)

I11v5 Population Growth Forecasts setting out residents and employments forecasts, with a 2048+ forecast year.

Table 3.2: Warkworth DBC modelled growth and staging

Transport project	FULSS staging	DBC staging	Rationale
Northern Public Transport Hub and Western Link – North	2022	2028 – 2033 (PT Hub) 2022 – 2028 (WLR Nth)	The implementation of the public transport hub is timed to leverage from the land development programmed to occur from 2022 Interrelationship with Western Link northern extents. Roading network required to provide access to the Public Transport Hub The early implementation of public transport infrastructure supports emissions reductions by enabling an efficient public transport network and mode shift outcomes.
Woodcocks Road (Western Section)	2028-2032	2028 – 2033	Follows land release. The requirement for this infrastructure is strongly linked to the release of land in South Warkworth Interrelationship with Wider Western Link – North.
State Highway 1 – South Upgrade	2028-2032	2028 – 2033	The requirement for this infrastructure is strongly linked to the release of land in South Warkworth.
Matakana Road Upgrade	2033-2037	2028 – 2033	Upgrade brought forward to the early part of the 2028-2038 decade in response to land use changes in Warkworth North and around Te Honohono ki Tai – Matakana Link Road Enables connection for residential development at Te Honohono ki Tai intersection to Warkworth Town Centre Surrounding infrastructure upgrades result in interrelationship and connectivity opportunity for wider network between Hill Street Intersection Upgrade and Te Honohono ki Tai – Matakana Link Road.
Sandspit Road	2033-2037	2038 – 2043	North East Warkworth is the latest planned land release Fragmented land ownership likely to support assumption of slower land release.
Western Link – South Upgrade	2028-2032	2028 – 2033	Follows land release. The requirement for this infrastructure is strongly linked to the release of adjacent land Interrelationship with Woodcocks Road and SH1.
Sandspit Link	2033-2037	2038 – 2043	Follows land release. The requirement for this infrastructure strongly linked to the release of adjacent land Plays a resilience role in Hill Street Intersection Upgrades which are programmed for implementation and are expected to operate satisfactorily in the short term.

Transport project	FULSS staging	DBC staging	Rationale
Wider Western Link – North	2028-2032	2033 – 2038	Follows land release. The requirement for this infrastructure strongly linked to the release of land in South Warkworth Interrelationship with Woodcocks Road and SH1 and Southern Interchange with Ara Tūhono (Puhoi to Warkworth) motorway.

The DBC staging shows that overall, the land use staging is generally consistent with work completed as part of the FULSS. However, in practice, the development rate will be influenced by market attractiveness, the owner / developer willingness to develop the surrounding land and regional growth trends meaning it could be many years before each of the areas is fully developed.

These timeframes have informed the project lapse dates which are outlined in Section 7.

3.4 Project objectives

Section 171(1)(c) of the RMA states that: *When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to—*

(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought;

The project objectives for the Project have been developed with section 171(1)(c) tests in mind. Specifically, particular regard to project objectives is had:

a) In the context of considering effects on the environment; and
b) Expressly subject to Part 2

Figure 3.2 illustrates the line of sight between the Indicative Business Case (IBC) and DBC investment objectives.

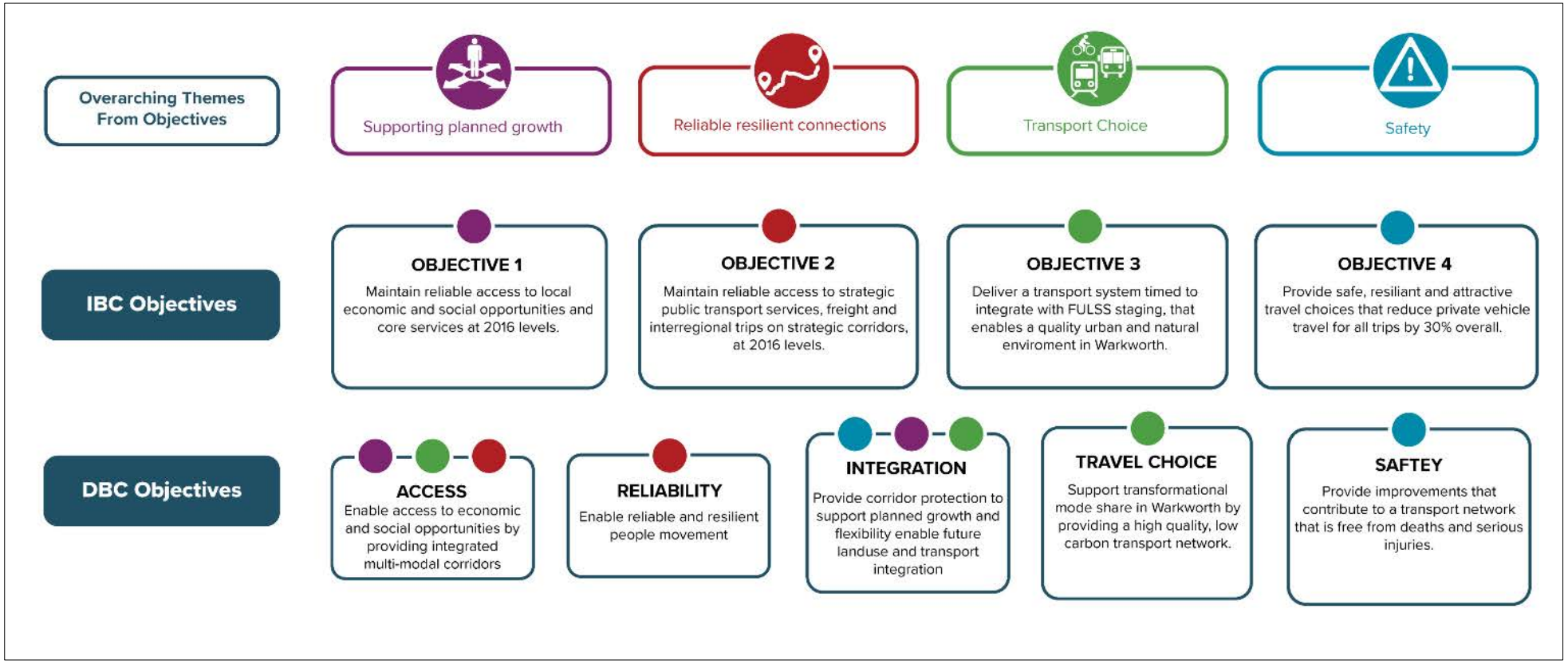


Figure 3.2: Business case objectives and key themes

Having regard to the above, the project objectives outlined below been developed.

Northern Public Transport Hub and Western Link - North
Provide for a transport interchange with associated facilities and park and ride, and a new transport corridor between the existing State Highway 1 and the Western Link North (Northern Section) that:

a) Improves connectivity.
b) Is safe.
c) Improves access to the public transport network.
d) Is efficient resilient, and reliable.
e) Integrates with and supports planned urban growth.
f) Integrates with and supports the existing and future transport network.
g) Improves travel choice and contributes to mode shift.

Woodcocks Road - West Upgrade
Provide for an upgrade to Woodcocks Road between Mansel Drive and Ara Tūhono (Puhoi to Warkworth) that:

a) Improves connectivity.
b) Improves safety.
c) Is efficient, resilient, and reliable.
d) Integrates with and supports planned urban growth.
e) Integrates with and supports the existing and future transport network.
f) Improves travel choice and contributes to mode shift.

State Highway 1 – South Upgrade
Provide for an upgrade to the existing State Highway 1 corridor between the intersection with Fairwater Road and the southern Rural Urban Boundary that:

a) Improves connectivity.
b) Improves safety.
c) Is efficient, resilient, and reliable.
d) Integrates with and supports planned urban growth.
e) Integrates with and supports the existing and future transport network.
f) Improves travel choice and contributes to mode shift.

Matakana Road Upgrade
Provide for an upgrade to Matakana Road between the Hill Street intersection and the northern Rural Urban Boundary that:

a) Improves connectivity.
b) Improves safety.
c) Is efficient, resilient, and reliable.
d) Integrates with and supports planned urban growth.
e) Integrates with and supports the existing and future transport network.
f) Improves travel choice and contributes to mode shift.

Sandspit Road Upgrade
Provide for an upgrade to Sandspit Road between the Hill Street intersection and the eastern Rural Urban Boundary that:
a) Improves connectivity.
b) Improves safety.
c) Is efficient, resilient, and reliable.
d) Integrates with and supports planned urban growth.
e) Integrates with and supports the existing and future transport network.
f) Improves travel choice and contributes to mode shift.

Western Link – South
Provide for a new transport corridor between Evelyn Street and the intersection with the existing State Highway 1 and McKinney Road that:
a) Improves connectivity.
b) Is safe.
c) Is efficient, resilient, and reliable.
d) Integrates with and supports planned urban growth.
e) Integrates with and supports the existing and future transport network.
f) Improves travel choice and contributes to mode shift.

Sandspit Link
Provide for a new transport corridor between Matakana Road and Sandspit Road that:
a) Improves connectivity.
b) Is safe.
c) Is efficient, resilient, and reliable.
d) Integrates with and supports planned urban growth.
e) Integrates with and supports the existing and future transport network.
f) Improves travel choice and contributes to mode shift.

Wider Western Link – North
Provide for a new transport corridor between Woodcocks Road and the Wider Western Link (Southern Section), and the intersection with the existing State Highway 1 that:
a) Improves connectivity.
b) Is safe.
c) Is efficient, resilient, and reliable.
d) Integrates with and supports planned urban growth.
e) Integrates with and supports the existing and future transport network.
f) Improves travel choice and contributes to mode shift.

3.5 Need for route protection

The need for route protection of the transport network in Warkworth is driven by the rate and scale of committed developments, including the planned release of land by Auckland Council and pressure from developers proposing to accelerate urban growth in the area.

This is demonstrated by the Warkworth North Private Plan Change (subsequently the I553 Warkworth North Precinct in the AUP:OP) which rezoned approximately 99 hectares of FUZ land to a mix of business and residential zones to provide for 1,000-1,200 dwellings, 13 hectares of industrial / commercial land and a new neighbourhood centre.

There is also further evidence of ongoing development pressure in Warkworth with various significant land developments occurring, or planned to occur throughout the future urban area in Warkworth. This includes proposed plan changes in South Warkworth, development aspirations adjacent to the new Western Link – South (NOR 6) and the new Western Link – North (NOR 8), potential for plan changes in FUZ land east of SH1 and north-east Warkworth, and a private plan change which is being prepared south of Sandspit Road.

If the transport corridors and infrastructure are not protected ahead of development, this may result in:

Uncertainty for private development investment
Significant disruption to future communities (e.g., if the corridor is built into prior to delivery)
Reduced ability to influence good urban form and land use integration
Compromised ability to deliver a comprehensive transport network which supports public transport and active modes.

As such, it is critical that the future transport network in Warkworth is route protected to ensure the required transport corridors and infrastructure can be provided when required.

4 Section 171 of the RMA

Section 171 of the RMA sets out the matters that a territorial authority must (subject to Part 2), have particular regard to when considering the effects of the environment of allowing a NOR. These matters are set out in Table 4.1 below:

Table 4.1: Section 171 matters to consider

Matter to consider	Section of the AEE where the matter is primarily addressed
Whether particular regard has been had to any relevant provision of:[2] a) A national policy statement b) A New Zealand coastal policy statement c) A regional policy statement or proposed regional policy statement d) A plan or proposed plan.	Refer to Appendix B for assessment against relevant policy documents.
Whether adequate consideration has been given to alternative sites, routes or methods of undertaking the work if:[3] a) The requiring authority does not have an interest in the land sufficient for undertaking the work; or b) It is likely that the work will have a significant adverse effect on the environment.	Refer to section 5 and Appendix A: Assessment of Alternatives for discussion on alternative sites, routes and methods. Refer to sections 10 - 20 for the assessment of effects on the environment.
Whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought.[4]	Refer to section 6.
Any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.[5]	Refer to section 24.2.

[2] Section 171(1)(a) of the RMA.
[3] Section 171(1)(b) of the RMA.
[4] Section 171(1)(c) of the RMA.
[5] Section 171 (1)(d) of the RMA.

5 Assessment of alternatives

5.1 Statutory requirement to consider alternatives

Section 171(1)(b) of the RMA requires that when making a recommendation on a NOR, a territorial authority shall consider whether adequate regard has been given to alternative sites, routes or methods of undertaking the work in circumstances where:

a) The requiring authority does not have an interest in the land sufficient for undertaking the work; or
b) It is likely that the work will have significant adverse effects on the environment.

There are several principles and key considerations for a requiring authority to apply and adhere to when undertaking an assessment of alternatives and identifying a preferred option. Of note are the following:

The process should be adequately transparent and robust, and clearly recorded so that it can be understood by others;
An appropriate range of alternatives should be considered; and
The extent of options considered, and the assessment of these options, should be proportional to the potential effects of the options being considered.

AT does not have sufficient interest in the land required for each NOR and is required to give adequate consideration to alternatives. AT has considered an appropriately broad range of possible alternative sites, routes and methods for undertaking the projects in the Warkworth Package. A summary of the assessment is provided below. The Assessment of Alternatives report provided in Appendix A sets out the assessment of alternatives for each NOR in detail.

5.2 Assessment of alternatives methodology

This section provides an overview of the assessment of alternatives methodology used to develop and assess route options for the Warkworth network and ultimately determine the preferred option(s). This methodology was applied to both the IBC and DBC processes. Refer to Appendix A: Assessment of Alternatives report.

The methodology used for the assessment of alternatives involved the following steps:

a) Gap analysis of recommendation at each new phase of assessment (IBC to DBC)
b) Development of the multi-criteria assessment framework
c) Constraint mapping to inform option development
d) Option development
e) Pre-scoring of options
f) Interdisciplinary workshops
g) Analysis and testing of outcomes from workshops
h) Identification of technical preferred options
i) Engagement with partners and stakeholders
j) Analysis and testing of preferred options following feedback received through engagement
k) Recommendation by the Project Team.

An overview of the alternatives assessment process undertaken across the IBC and DBC is illustrated in Figure 5.1 below:

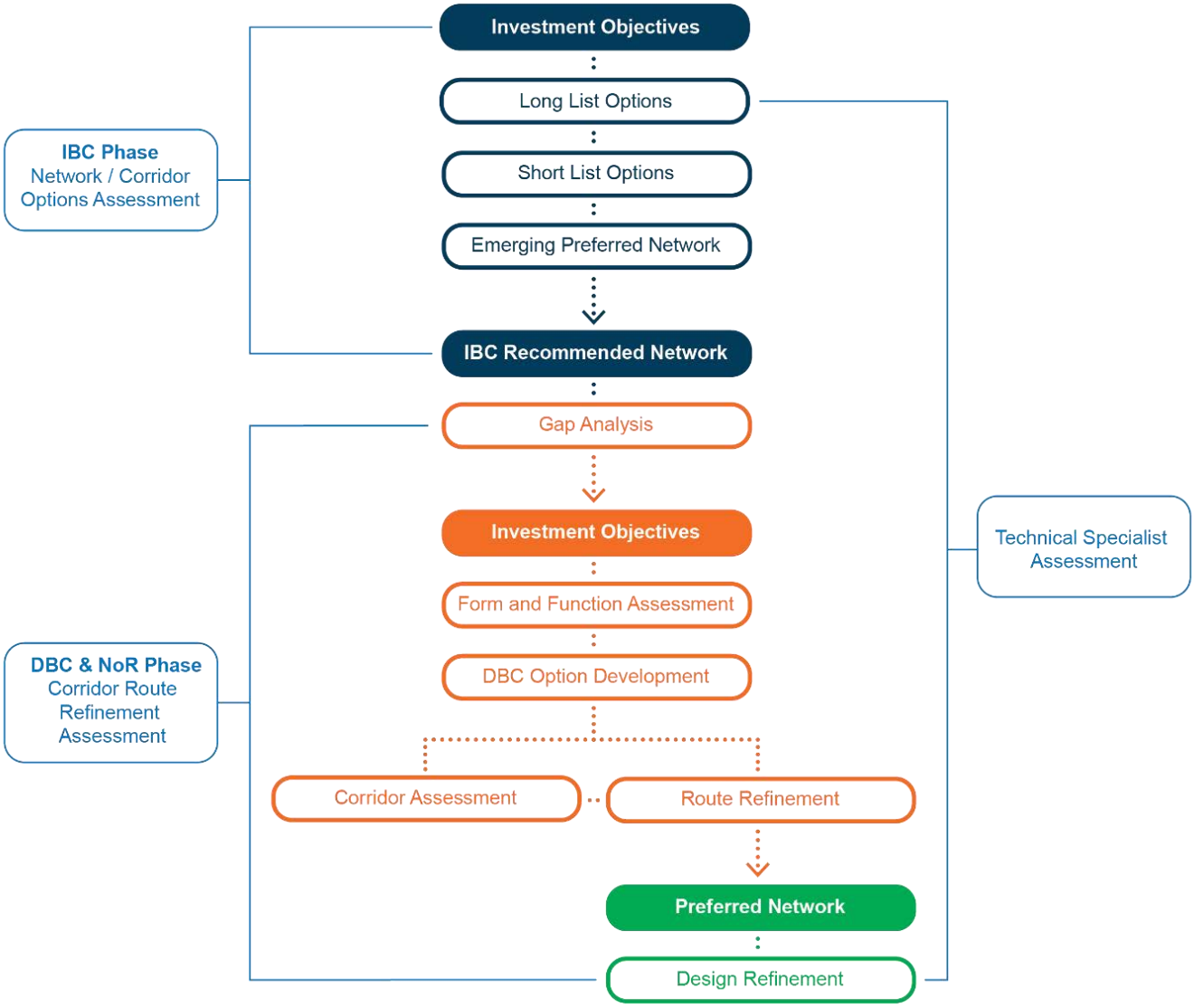


Figure 5.1: Alternatives assessment process

5.3 Consideration of alternative methods

As part of the consideration of alternatives, an evaluation of alternative methods was undertaken during the DBC. A range of methods, in light of a number of contextual elements including project importance, urgency, and complexity, were considered, including:

a) Designations;
b) Resource consents;
c) Plan changes and structure planning (initiated or submitted on);
d) Landowner / developer negotiations; and
e) Traditional property acquisition.

Of the identified methods, short term designations, and resource consents were not considered appropriate methods for the Projects from the outset because they would not offer the appropriate long-term protection of land required to implement the Projects.

Long term designations were generally identified as the preferred method in the context of the Projects as these were considered to be the most logical and effective method to protect a corridor in an evolving environment for the following reasons:

a) Provide certainty to all parties including the community and affected landowners;
b) Are a well-recognised and understood tool for route protection which also enable land acquisition processes through the link to the Public Works Act 1981 (PWA);
c) Maximise flexibility for future implementation;
d) Negate the need for additional land use consents to implement works authorised under the district plan (section 9(3) of the RMA); and
e) Will continually provide for future operation and maintenance requirements.

The other methods considered were discounted for the following reasons:

Resource consents could grant approval under the RMA for the projects but would not enable protection of the land from buildout and would not enable the corridors to be shown publicly in the AUP:OP

Plan changes and structure planning were considered, however Warkworth has already been structure planned, with parts live zoned for urbanisation. The route protection afforded by plan changes and certainty of design outcomes (to meet growth needs) is not high

Landowner and developer negotiations were considered, however where numerous owners are present this can be time prohibitive, and any route protection afforded by negotiations can be piecemeal if agreement cannot be reached with all parties. The route also remains unprotected during the period of negotiation

Traditional property acquisition is not appropriate for the Warkworth Package because property is typically purchased closer to construction when detailed design is available. Purchasing land ahead of detailed design may result in too much or too little land being acquired which would need to be corrected at construction, or otherwise the design may have to be compromised. Traditional acquisition would also not protect temporary construction areas or provide route protection until following acquisition, leaving routes with multiple owners vulnerable to buildout in the interim.

5.4 Summary

The sites, routes and methods chosen will achieve the overarching purpose, which is to identify the required strategic transport network needed to support identified growth in Warkworth over the next 30 years and provide certainty to transport authorities, partners, infrastructure providers, the community and investors / developers of the location and form of the strategic transport network. It will also enable long term integrated planning and investment, and route protect the required land and corridor, enabling phased delivery in line with land release and funding.

The preferred option for each NOR has been based on a comprehensive and robust optioneering process considering specialist assessment and feedback from Manawhenua, stakeholders and landowners and the community. As such it is concluded that adequate consideration has been given

to alternative sites, routes and methods for undertaking the work, satisfying the requirements of section 171(1)(b) of the RMA.

6 Whether the work and designation are reasonably necessary for achieving the objectives

Section 171(1)(c) of the RMA requires a territorial authority to have particular regard to whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought. We consider that "reasonable necessity" allows for a threshold assessment, proportionate to the circumstances to determine whether the Warkworth Package is justified in the context of Section 171(1)(c) of the RMA.

Table 6.1 provides an assessment of why the work and designation are reasonably necessary for achieving the project objectives:

Table 6.1: Assessment of the Warkworth Project against Section 171(1)(c) - reasonable necessity

Notice	Project	Project objectives	Assessment
NOR 1	Northern Public Transport Hub and Western Link – North	Provide for a transport interchange with associated facilities and park and ride, and a new transport corridor between the existing State Highway 1 and the Western Link North (Northern Section) that: a) Improves connectivity b) Is safe c) Improves access to the public transport network d) Is efficient, resilient and reliable e) Integrates with and supports planned urban growth f) Integrates with and supports the existing and future transport network g) Improves travel choice and contributes to mode shift.	The work is reasonably necessary to achieve the objectives because it will: Provide a connection to Ara Tūhono (Puhoi to Warkworth) motorway and the Warkworth network for future urban areas in northwest Warkworth Support Vision Zero and road safety outcomes Support regional and interregional public transport system Support mode shift and resilience by providing capacity for further public transport services, and park and ride facilities Enable an urban standard corridor to support growth and integrate with key transport corridors (Ara Tūhono (Puhoi to Warkworth) motorway, Te Honohono ki Tai – (Matakana Link Road) Support the transition to a low carbon transport network. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.
NOR 2	Woodcocks Road – West Upgrade	Provide for an upgrade to Woodcocks Road between Mansel Drive and Ara Tūhono (Puhoi to Warkworth) that: a) Improves connectivity b) Improves safety c) Is efficient, resilient and reliable	The work is reasonably necessary to achieve the objectives because it will: Improve connectivity between transport networks and development areas throughout Warkworth Support Vision Zero and road safety outcomes Support the development of an efficient and reliable multi-modal transport network for Warkworth

Notice	Project	Project objectives	Assessment
		d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	Provide an upgraded transport corridor that is integrated with the surrounding urban growth areas Enable an urban standard corridor to support growth and integrate with key transport corridors Support mode shift by providing dedicated active mode facilities. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.
NOR 3	State Highway 1 – South Upgrade	Provide for an upgrade to the existing State Highway 1 corridor between the intersection with Fairwater Road and the southern Rural Urban Boundary that: a) Improves connectivity b) Improves safety c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	The work is reasonably necessary to achieve the objectives because it will: Improve connectivity between transport networks and development areas throughout Warkworth Support Vision Zero and road safety outcomes Support the development of an efficient and reliable multi-modal transport network for Warkworth Provide an upgraded transport corridor that is integrated with the surrounding urban growth areas. Enable an urban standard corridor to support growth and integrate with existing and new key transport corridors (Western Link, Wider Western Link, McKinney Road) Support mode shift by providing dedicated active mode facilities. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.
NOR 4	Matakana Road Upgrade	Provide for an upgrade to Matakana Road between the Hill Street intersection and the northern Rural Urban Boundary that: a) Improves connectivity b) Improves safety c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth	The work is reasonably necessary to achieve the objectives because it will: Improve connectivity between transport networks and development areas throughout Warkworth Support Vision Zero and road safety outcomes Support the development of an efficient and reliable multi-modal transport network for Warkworth Provide an upgraded transport corridor that is integrated with the surrounding urban growth areas

Notice	Project	Project objectives	Assessment
		e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	Enable an urban standard corridor to support growth and integrate with existing and new key transport corridors (Te Honohono ki Tai – Matakana Link Road, Sandspit Link) Support mode shift by providing dedicated active mode facilities. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.
NOR 5	Sandspit Road Upgrade	Provide for an upgrade to Sandspit Road between the Hill Street intersection and the eastern Rural Urban Boundary that: a) Improves connectivity b) Improves safety c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	The work is reasonably necessary to achieve the objectives because it will: Improve connectivity between transport networks and development areas throughout Warkworth Support Vision Zero and road safety outcomes Support the development of an efficient and reliable multi-modal transport network for Warkworth Provide an upgraded transport corridor that is integrated with the surrounding urban growth areas Enable an urban standard corridor to support growth and integrate with existing and new key transport corridors (Sandspit Link) Support mode shift by providing dedicated active mode facilities. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.
NOR 6	Western Link – South	Provide for a new transport corridor between Evelyn Street and the intersection with the existing State Highway 1 and McKinney Road that: a) Improves connectivity b) Is safe c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network	The work is reasonably necessary to achieve the objectives because it will: Improve connectivity between transport networks and development areas throughout Warkworth Support Vision Zero and road safety outcomes Support the development of an efficient and reliable multi-modal transport network for Warkworth Provide a new transport corridor that is integrated with the surrounding urban growth areas Enable an urban standard corridor to support growth and integrate with existing and new key transport corridors (SH1)

Notice	Project	Project objectives	Assessment
		f) Improves travel choice and contributes to mode shift.	Support mode shift by providing dedicated active mode facilities. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.
NOR 7	Sandspit Link	Provide for a new transport corridor between Matakana Road and Sandspit Road that: a) Improves connectivity b) Is safe c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	The work is reasonably necessary to achieve the objectives because it will: Improve connectivity between transport networks and development areas throughout Warkworth Support Vision Zero and road safety outcomes Support the development of an efficient and reliable multi-modal transport network for Warkworth Provide a new transport corridor that is integrated with the surrounding urban growth areas Enable an urban standard corridor to support growth and integrate with existing and new key transport corridors (Sandspit Road, Matakana Road, Te Honohono ki Tai – Matakana Link Road) Support mode shift by providing dedicated active mode facilities. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.
NOR 8	Wider Western Link – North	Provide for a new transport corridor between Woodcocks Road and the Wider Western Link (Southern Section), and the intersection with the existing State Highway 1 that: a) Improves connectivity b) Is safe c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network	The work is reasonably necessary to achieve the objectives because it will: Improve connectivity between transport networks and development areas throughout Warkworth Support Vision Zero and road safety outcomes Support the development of an efficient and reliable multi-modal transport network for Warkworth Provide a new transport corridor that is integrated with the surrounding urban growth areas Enable an urban standard corridor to support growth and integrate with existing and new key transport corridors (Ara Tūhono (Puhoi to Warkworth) motorway)

Notice	Project	Project objectives	Assessment
		f) Improves travel choice and contributes to mode shift.	Support mode shift by providing dedicated active mode facilities. The method of designation is reasonably necessary to achieve the objectives because it enables the identification and protection of the land required for the Project for an extended duration.

7 Lapse period sought and rationale

In accordance with section 184 of the RMA, a designation lapses five years after it is included in the district plan unless:

a) It has been given effect to; or
b) Within three months of the designation lapsing, the territorial authority determines that substantial progress or effort has been and continues to be made towards giving effect to the designation, and fixes a longer period; or
c) The designation specifies a different lapse period.

A key objective of the Te Tupu Ngātahi Supporting Growth Programme is to identify and protect land now for future transport networks. We consider that a lapse period of 10 – 25 years is reasonably necessary to achieve this key objective as it provides statutory protection of the future transport corridors in a manner that enables a flexible and efficient infrastructure response to land use. As enabled by section 184(c) of the RMA, lapse periods of 10 – 25 years are specified for the Warkworth Package.

Table 7.1 sets out the proposed lapse dates for each of the NORs in the Warkworth Package:

Table 7.1: Lapse dates for the Warkworth Package NORs

Notice	Project	Lapse period
NOR 1	Northern Public Transport Hub and Western Link – North	20 years
NOR 2	Woodcocks Road (Western Section)	15 years
NOR 3	State Highway 1 – South	15 years
NOR 4	Matakana Road	15 years
NOR 5	Sandspit Road	25 years
NOR 6	Western Link – South	20 years
NOR 7	Sandspit Link	25 years
NOR 8	Wider Western Link – North	20 years

7.1 Need for an extended lapse date

The above lapse dates are proposed based on the modelled land use demands (see Table 3.2) accounting for uncertainty of urbanisation and funding timeframes.

In the context of the projects within the Warkworth Package, extended lapse periods are considered necessary for the following reasons:

It provides statutory protection of the land required for transport infrastructure to support future growth in a manner that recognises the uncertainty associated with the timing of that growth
It supports efficient land use and transport integration by enabling the efficient delivery of transport infrastructure at a time and in a way that is integrated with future urbanisation

It provides the requiring authority sufficient time to:

- Undertake the detailed design of the projects
- Obtain the necessary resource consents
- Procure funding
- Undertake tendering / procurement
- Undertake property and access negotiations and other processes associated with construction of the projects

It provides property owners, businesses and the community certainty on where transport routes will be located (i.e., within the designation boundaries) and within what timeframe (before end of the lapse date).

We also note that:

An extended lapse period does not mean that the designation will not be given effect to until the end of the lapse period sought. A lapse period is a limit and not a target. In other words, if urbanisation were to be confirmed earlier than the lapse date, it is likely that the designation will be given effect to, to enable appropriate integration with development

It is not uncommon for infrastructure projects to have a longer lapse period and this has been confirmed on recent projects such as Te Tupu Ngātahi Drury Arterials, Southern Links (Waka Kotahi), the Northern Interceptor Wastewater Pipeline (Watercare) and the Hamilton Ring Road (Waikato District Council, Hamilton City Council)

Setting a shorter lapse period would not be a significant factor in facilitating earlier availability of funding than is planned at the time the NOR is sought

Setting an unrealistically short lapse period will likely result in an inadequate suite of conditions to manage any uncertainty if the requiring authority is likely seeking to extend the lapse period through section 184 of the RMA.

It is acknowledged that when considering an extended lapse period, it is appropriate to balance the need for that lapse period against the potential prejudicial or "blighting" effects on landowners. These effects are discussed in Section 19.3 of this AEE.

8 Design and assessment approach

As discussed in Section 7 above, it is anticipated that the Warkworth Package will not be constructed for some time. As such, the Te Tupu Ngātahi approach to design and assessment of effects has been developed in a manner that reflects the long-term implementation of the projects, within environments that are likely to change significantly.

8.1 Approach to design

The approach to the Warkworth Package design has been to focus on developing an indicative design of the network that is sufficient to inform the designation footprint. This enables the assessment of an envelope of effects whilst recognising the need for flexibility due to the uncertainty of the future urban environment at the time the projects will be built.

The Warkworth Package alignments are provided in the drawing set in Volume 3. These have informed the designation footprint and include ancillary components, such as indicative construction areas and stormwater requirements. The detailed design will be undertaken before construction and an Outline Plan or Plans (as the Outline Plans may be staged to reflect project phases or construction sequencing) will be submitted to Auckland Council in accordance with section 176A of the RMA. Resource consents will also need to be applied for in the future.

The final design of the Warkworth Package (including the design and location of associated works including bridges, culverts, stormwater management systems, soil disposal sites, signage, lighting at interchanges, landscaping, realignment of access points to local roads, and maintenance facilities), will be refined and confirmed at the detailed design stage.

The drawing set contained in Volume 3 for each project provides a general arrangement plan and including designation boundary.

While the design and effects assessment has focussed on the ultimate form of the transport infrastructure this approach does not preclude the ability for an interim development of part of the transport corridor to take place to support development.

8.2 Urban design

An Urban Design Evaluation (UDE), included in Volume 4 has been completed for the Warkworth project based on the principles set out in the Urban Design Framework (appended to the UDE). The UDE provides urban design commentary on the concept designs of the projects and recommends how urban design opportunities and outcomes could be considered in future design stages of the projects. The opportunities and outcomes identified are either required to mitigate the effects of the projects or could be considered by AT, Waka Kotahi or other parties at future stages of design and development but are not required to mitigate effects of the projects.

In summary, the urban design opportunities and outcomes for the Package include:

The development of a landscape plan which considers recommendations from the Assessment of Landscape, Natural Character and Visual Effects, the Assessment of Arboricultural Effects, the Assessment of Flooding and Stormwater Effects and the Assessment of Ecological Effects including:

- street tree, stormwater raingarden and wetland planting
- construction compound and private property reinstatement and treatment of batter slopes

The landscape plan should also demonstrate integration of Mahurangi River and its tributaries where the corridor intersects or sits adjacent with the existing Blue-Green Network. The landscape outcomes should support the principles of Auckland's Urban Ngahere (Forest) Strategy and reinforce the wider vegetation patterns of the local landscape and create connections to greenways and the wider walking and cycling network

Integration of wetlands to enable an appropriate interface with adjacent land uses

Measures to demonstrate that the project design has included adaptations to climate change such as reducing urban heat island effects in future urbanised areas, supporting modal shift and accounting for flood hazard risks

In future design stages, Manawhenua shall be invited as Partners to provide input into relevant cultural, landscape and design matters including how desired outcomes reflect their identity and values

Potential conflicts between placemaking aspirations within local communities and the operating speed of the corridor should be addressed

Known or planned changes of land use and residential density that have the potential to alter the perceived scale and impact of the corridor functions should be identified and addressed

A modal integration strategy should be developed that addresses the movement and place function of the corridor that incorporates placemaking opportunities arising from adjacent land use

Demonstration of how any residual land portions following the construction of the Project is redefined and integrated with the expected future land use function.

The measures to achieve the opportunities and outcomes listed above will be confirmed at the detailed design stage and form part of the ULDMP as a condition on the designations.

8.3 Design input and standards

The design philosophy that informed the indicative designs for route protection is summarised in the following sections. As appropriate, the following design standards were adopted in the design philosophy for the Warkworth Package:

Transport Design Manual (TDM) – AT
Austroads Guide to Road Design (AGRD).

8.3.1 Geometric design

The indicative design of the Warkworth Package was developed in line with a range of geometric design standards such as:

The horizontal alignment was designed to best accommodate each corridor taking into account the existing topography and future land use

A normal crossfall of 3% is provided on all roads in accordance with the TDM and AGRD

A minimum desirable vertical gradient of 0.5% and a maximum vertical gradient of 8.0% was adopted for the alignments. Where possible, grades have followed the existing ground level, consistent with longitudinal drainage requirements

Generally, unless constrained, 1V:3H or 1V:5H slopes have been adopted as the default batter for cut and fill slopes (depending on the underlying geology) to meet maintenance requirements. Vertical abutment walls or 1V:2H spill through slopes have been adopted as the default approach for

abutments at bridge locations, radially transitioning to 1V:3H side batter slopes. In constrained areas, retaining walls are shown instead of batters in order to reduce construction footprints
Bridge skew angles are limited to a maximum of 30 degrees relative to the service being crossed
The designation footprints allow sufficient space for segregated active mode facilities and active mode crossings at intersections.

8.3.2 Intersections and local road tie-ins

The general approach to indicative designs of intersections is as follows:

New intersections are located on straights where possible or large constant elements such as a single large horizontal radius
Intersection approach angles are limited to between 70° and 110° from the main alignment
Intersection layouts take into consideration the input from traffic modelling data to inform the lane configuration
Intersections are graded to match the road profile and longitudinal grade of the main through road
Tie-ins with side roads are as close to the intersection as possible whist maintaining the safety to the road users. Vertically, the grade on the side road approach is between 0.5% and 8% to help avoid unnecessary earthworks and minimise tie in lengths.

8.3.3 Typical cross-sections

The indicative cross-section design incorporates the AT Urban Street and Road Design Guide and Vision Zero design features. Typical cross-sections have been developed for the projects within the Warkworth Package, which generally incorporate the following elements:

Berm space and ducts for utilities
Footpaths and cycleways
Traffic lanes with a solid or flush median
Stormwater management devices.

Cross sections for each transport corridor are provided in Section 9 of this AEE. Final cross-sections will be produced at detailed design and will be submitted as part of the relevant Outline Plan(s).

8.3.4 Stormwater design and management

The approach to the indicative stormwater design and management has focussed on identifying feasible stormwater treatment methods and locations to inform the required designation footprint (see Table 8.1). This considered the AUP:OP and industry standards, existing stormwater infrastructure and requirements, future discharge and diversion, runoff quality, and flood hazard management. Stormwater treatment for each project in the Warkworth Package will be further developed at the detailed design stage alongside applications for regional resource consents. The Assessment of Flooding and Stormwater Effects provided in Appendix F of Volume 4 provides a description of the method and preferred locations for each NOR.

Table 8.1: Stormwater design and management considerations

Element	Input considerations
Stormwater quality	The footprints allow for stormwater quality treatment in accordance with Auckland Council Guideline GD01 for all existing and future impervious areas, except where a corridor only consists of a pedestrian or cycle path. Generally, the indicative designs adopt treatment wetlands or swales, depending on the local conditions and topography.
Retention and detention	AUP:OP SMAF 1 design criteria for retention and detention measures has been allowed for each corridor in the Warkworth Package that is within the FUZ / greenfield environments, where discharging to freshwater streams. Criteria are summarised as follows: Provide retention (volume reduction) of at least 5mm runoff depth Provide detention and a drain-down period of 24 hours for the difference between the pre- and post-development runoff volumes from the 95th percentile, 24-hour rainfall event minus the 5mm retention.
Flooding	Where required, attenuation storage to match pre-project peak flows to post-project peak flows for either or both the 10 year and 100-year rainfall events has been provided. Attenuation will be provided within devices which can be designed to detain larger storm events, including wetlands, ponds and swales. In some instances, diversions or provision of compensatory flood storage is provided. Resilience to flooding was applied through: Setting the corridor vertical alignment above the 100 year Average Recurrence Interval (ARI) flood plain where practicable Providing 0.5m freeboard for culverts between the headwater level and edge of the corridor Providing freeboard to bridges in accordance with the Waka Kotahi Bridge Manual requirements.
Stream crossings	All existing stream crossings will be maintained through either culverts or bridges. Bridges (existing and / or proposed) are identified at selected locations within the indicative design where appropriate to manage effects on the environment. However, the final form of stream crossings with consideration to upstream ponding, erosion protection and fish passage will be confirmed at the detailed design and regional resource consent phase.

8.3.5 Design elements not developed

A design exercise for each corridor has been undertaken to support the identification of the designation boundary and to inform an adequate assessment of effects on the environment. Further design work for each corridor will be undertaken at the detailed design stage where elements such as pavements, signs, road markings, bus stop locations, safety barriers, lighting and other features will be confirmed.

8.4 Construction methodology

An indicative construction methodology has been developed for the Warkworth Package and has been used to inform the designation footprints, assess potential effects on the environment, and to identify measures to avoid, remedy or mitigate those effects, as appropriate and relevant to the NORs. The construction methodology includes:

Sequencing of the main construction activities
Indicative land required for construction works
Identification of any significant impacts on stakeholders
Approximate duration of activities and indicative construction programme.

This section is structured to address these inputs as they apply across the whole of the Warkworth Package. The construction methodology has been developed based on the design of the projects and current land use / landform in which the projects are located. However, the actual construction detail will be confirmed at detailed design, and will consider measures required to mitigate effects, the designation and any resource consents conditions. Importantly, timing of implementation of the projects will dictate what land development is present along the corridors and will inform the final methodology. As such, AT seeks flexibility in the construction methods for each NOR to accommodate these factors and retain opportunities to reduce the impact and duration of adverse construction effects at delivery. A condition requiring a construction management plan is therefore proposed for each NOR.

8.4.1 Sequencing of main construction activities

The programme assumes a generally staged construction sequence, starting with site establishment, enabling works, main works and ending with finishing works and demobilisation. The main works assume a staged construction process with exact staging to be determined at detailed design. The indicative construction sequencing is set out in Figure 8.1.

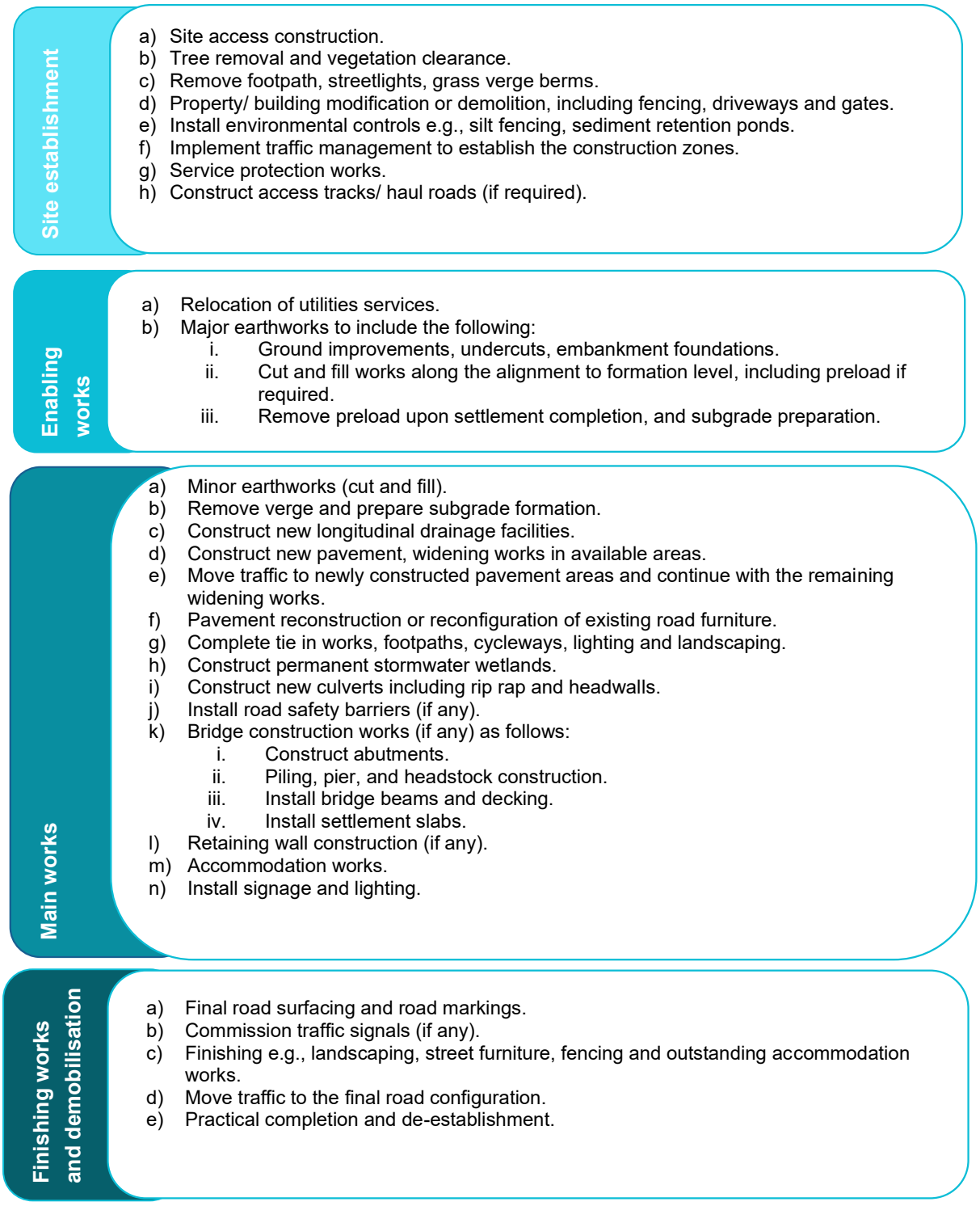
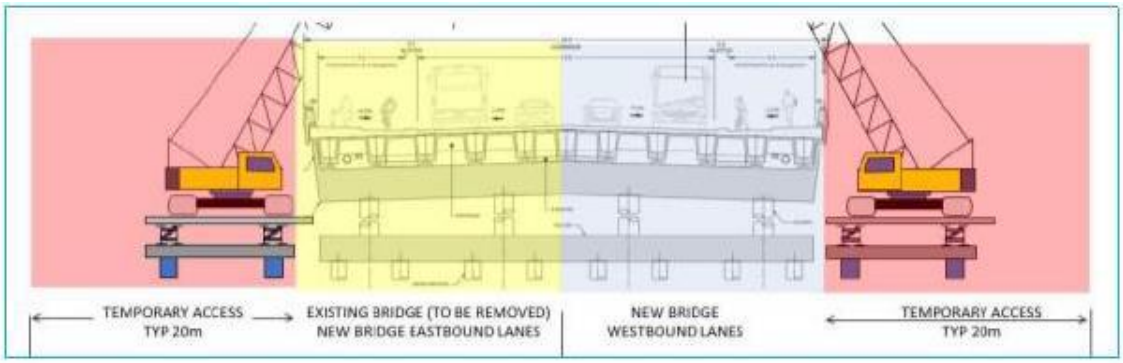


Figure 8.1: Indicative construction sequencing

8.4.2 Identification of land required for construction works

Typical areas required for construction have been identified and applied to the Warkworth Package NORs. These have informed the designation boundaries for each project. The main elements which influence the boundary of the NORs are in Table 8.2. Refer to the drawings provided in Volume 3 for the indicative location and application of construction elements.

Table 8.2: Typical construction areas

Construction element	Discussion
Construction of batter slopes: Rural Urban	For larger earthworks projects, the construction areas will differ significantly to account for the larger plant and equipment likely to be used, construction methodology and temporary works such as haul roads and sediment retention ponds. Typically, 20m from the earthworks batter slopes.
Bridge construction: Abutments Piers Deck	Generally, the design has enabled either a bridge or culvert to be constructed, with the form to be determined at the detailed design and regional consenting stage, unless identified in the AEE as necessary to address effects on the environment. The bridge construction method shall typically follow conventional bottom-up bridge construction techniques. Once the bridge structure is complete, the temporary staging and access ways will be removed. See Figure 8.2 for typical bridge construction area.
 **Figure 8.2: Typical new bridge construction area and methodology**	
Retaining wall construction: Retaining walls up to 5m high (e.g. timber or blockworks) Large retaining walls (e.g. secant pile or sheet pile)	Retaining structures are generally located near the project boundary to overcome overspill of earthworks batters or at the bridge abutments. Typically, retaining walls are constructed of mechanically stabilised earth walls to contain fill embankments and piled retaining walls and soil nails to retain cut batters. The working area required to construct the retaining walls will largely depend on the design and size of the wall. The specific design will be defined at the detailed design stage.
Stormwater treatment construction: Ponds Diversion drains / Overland Flow Path Culvert headwalls and scour protection	New stormwater drains will likely be required on both sides of the corridors. These will connect to the new stormwater wetlands. Additionally, new discharge lines are required from the stormwater wetlands to a suitable discharge point. The size of the working area will vary depending on the size of culvert being installed, the topography of the area, and volume of water being diverted. Works on new culvert constructions may require flow diversion or over pumping. Further investigations will be required to confirm the flow volumes and ecological requirements for the diversions.

Construction element	Discussion
	Access tracks will also be required for delivery of plant and materials. This requirement may change depending on the final design and scope of works, terrain and topography of the respective culvert location. Regional consents (including for earthworks and stream works) will be sought in the future before construction commences.
Temporary works: Sediment retention ponds Haul roads and construction access roads	Surface water running through the earthwork sites will need to be treated prior to discharge. The typical method for doing this is to contain the water from the earthworks areas and channel it into temporary sediment retention ponds. Locating the ponds at the low point of the zones and outside of the permanent works area is ideal so it can be operational and maintained throughout the construction works. Where possible, temporary and permanent ponds will be co-located, so that at the end of construction the pond can be reinstated as a permanent device. Haul roads are typically required for large earthworks projects for the movement of people, plant and materials along the alignment. These haul roads provide access and connectivity to critical work sites such as the culverts, bridge sites, and main cut and fill sites. These are best constructed outside the earthworks extent to avoid clashes with the permanent works.
Site facilities: Main site compound (project office) Additional / satellite site compound Construction yards for laydown / stockpile Construction yards for intersection works	Site compounds and laydown areas are required to support construction along the corridor alignments. The compound site locations identified for each NOR enable easy access to key construction zones and arterial routes. Examples of facilities include: Site offices including lunchrooms and ablution facilities Services connections (power, water and communications) Car parking, waste management and re-fuelling facilities Laydown areas and lockable storage containers Workshop space and plant / equipment storage areas and maintenance facilities Wheel washing and cleaning facilities Facilities for pre-casting products. The use of these compounds will only be required during the construction period and will be reinstated upon completion of the works.
Reconnecting property access Service lanes Access roads / driveways	There may be temporary disruptions to property access during construction. Where this is required, it will be discussed in advance with the affected user / owner. An access way assessment has been carried out on all legal accesses. As required, accesses have been included in the NOR boundary to enable reintegration to the permanent corridor. Where it has been determined that legal safe access cannot be reinstated after construction (e.g., due to gradient, angle, proximity), the property in its entirety is included in the designation.

8.4.3 Approximate activities duration and construction programme

Table 8.3 sets out the expected construction timing[6] and duration of each project within the Warkworth Package. The projects are generally expected to be constructed in a staged method along the corridor, however the exact approach will be confirmed at the detailed design and Outline Plan stage.

Table 8.3: Transport corridor construction timing and expected duration of programme

Notice	Project	Approximate timing of construction (implementation)	Approximate duration of construction
NOR 1	Northern Public Transport Hub and Western Link – North	2028 - 2033	2 – 3 years
NOR 2	Woodcocks Road (Western Section)	2028 - 2033	2.5 – 3.5 years
NOR 3	State Highway 1 – South	2028 - 2033	2.5 – 3.5 years
NOR 4	Matakana Road	2028 - 2033	2.5 – 3.5 years
NOR 5	Sandspit Road	2038 – 2043	2.5 – 3.5 years
NOR 6	Western Link – South	2028 – 2033	2.5 – 3.5 years
NOR 7	Sandspit Link	2038 – 2043	3 – 4 years
NOR 8	Wider Western Link – North	2033 – 2038	2 – 3 years

The construction of the projects will be undertaken within a management plan framework (see Section 21) and will be consistent with the conditions of each of the designations. If at the time of delivery, contractors are required to undertake activities that are not within the scope of the designations (or future resource consents) additional authorisations may need to be obtained.

8.5 Approach to the assessment of effects

Section 171(1) of the RMA sets out the matters that must be considered by a territorial authority in making a recommendation on a NOR for a new designation.

The assessment of effects on the environment has been limited to matters that trigger a district plan consent requirement under the AUP:OP as these are the only activities authorised by the designations. Where NES or regional plan consenting requirements are triggered, these will not be authorised by the designations and will require resource consents in the future. Notwithstanding this, relevant national and regional resource consent matters have been considered to inform the design of the projects, the alternatives assessment process and the designation footprint.

[6] Warkworth DBC Appendix N : Warkworth Proposed Staging Considerations

Prior to construction, the Project will require NES and regional resource consents for a number of activities to enable the construction and operation of the projects. These resource consents will be sought when detailed design for the Project is completed in order to understand the actual or potential effects of the activities that require consent and define the measures proposed to manage any adverse effects.

8.6 Approach to assessing the likely receiving environment

As set out above, a key purpose of these NORs is to protect the necessary transport network that will support the future urbanisation of Warkworth. Accordingly, it is anticipated that the network will not be constructed and operational until urbanisation of the Warkworth growth areas has at least been confirmed or is under development.

Assessing the effects on the environment solely as it exists today (i.e. at the time of this assessment) will therefore not provide an accurate reflection of the environment in which the effects of the construction and operation of the transport infrastructure will be experienced.

Within the Warkworth growth areas there are a range of existing and future urban zoning patterns, which influence the likely future environment for assessment purposes. The projects which are within existing urban zoning that is not identified for future urban growth are not likely to materially change in the future. Whereas those projects within areas that are currently rural zoned but have recently been live zoned or up-zoned for urban development, or have a future urban zoning (FUZ) are likely to experience material change because of the urbanisation contemplated by the operative planning provisions.

The Table 8.4 sets out our understanding of the current land use zoning, its likelihood of change and its potential future zoning for the Warkworth area.

Table 8.4: Land use likelihood of change based on current and potential future zoning

Land use today	Zoning type	Likelihood of change for the environment	Likely future environment
Residential	Residential	Low	Urban
Business	Business	Low	Urban
Open Space	Open Space	Low	Open Space
Special Purpose	Special Purpose	Low	Special Purpose
Rural	Countryside Living	Low	Rural
	Mixed Rural Use	Low	Rural
Greenfield / Rural	FUZ	High	Urban
Greenfield / Rural	Residential or Business	High	Urban

Where transport infrastructure is within FUZ, it is likely the construction of the infrastructure will occur ahead of, or in parallel to, the urbanisation of these areas. Accordingly, when considering the environment within which the effects of the construction and operation of the transport infrastructure is likely to occur, it is important to consider the likely future environment for each NOR.

Where relevant, the urban land use patterns outlined in Auckland Council's Structure Plan for the Warkworth growth areas has been considered together with proposed plan changes informed by how far advanced they are through the plan making process.

The likely future environment assessment has also been guided by overlays within the AUP:OP which identify features considered to be of high natural, cultural or heritage value with associated controls that apply to development which may adversely affect those features. The overlays and protective rules provide useful guidance on areas that are likely to remain unchanged or undeveloped in the future urban environment.

Section 9 of this AEE sets out the receiving environment including the existing environment and likely future environment for each NOR within the Warkworth Package.

8.7 Approach to the interface between the Warkworth Package and other projects

There are several projects being developed in Warkworth that will integrate with or affect the Warkworth Package.

Given the long-term delivery of the projects within the Warkworth Package, the assessment of effects considers the operational impacts of the Warkworth Package in the context of full build out of all urban areas at 2048+. This therefore accounts for the wider infrastructure upgrades not being progressed by Te Tupu Ngātahi that are anticipated to be in place at the time the Warkworth Package is operational.

Table 8.5 summarises these projects and demonstrates how their delivery may affect the Warkworth Package.

Table 8.5: Interface of the Warkworth Package with other projects

Project	Interface with the Warkworth Package	Status and agent
Ara Tūhono (Puhoi to Warkworth) Motorway – Section 1 Extension of motorway from the Johnstone's Hill tunnels to Warkworth. Expected Outcomes: The project will provide a safer, more resilient, and reliable route between Pūhoi and Warkworth.	Ara Tūhono (Puhoi to Warkworth) motorway is currently being constructed to provide a new route between Puhoi and Warkworth. It is expected this will reduce traffic on the existing SH1 and allow SH1 to provide an arterial function. Expected opening is 2023. The Warkworth Package ties into the Ara Tūhono project at the western extent of the Woodcocks Road Upgrade. The upgrade of Woodcocks Road will provide a safer, more resilient link to central Warkworth from Ara Tūhono. The new Wider Western Link – Northern Section provides access to the southern growth area of Warkworth from the new Ara Tūhono motorway interchange.	**Expected to open 2023** **Waka Kotahi**
Ara Tūhono (Warkworth to Wellsford) Motorway – Section 2	Waka Kotahi continues to work towards securing land designation and resource consents for the Warkworth to Wellsford project. NOR appeals were filed with the Environment Court in July 2021.	**Notice of Requirement, appeals closed 2021**

Project	Interface with the Warkworth Package	Status and agent
Extension of motorway from Warkworth to Wellsford Expected Outcomes: The project will provide a safer, more resilient and reliable route between Warkworth and Wellsford.		**Waka Kotahi**
Te Honohono ki Tai – Matakana Link Road New road connecting Matakana Road and SH1 Expected Outcomes: Facilitate future growth and improve safety and resilience for access to eastern beaches.	The Warkworth Package ties into Te Honohono ki Tai at Matakana Road. The Matakana Link Road will connect Matakana Road and Sandspit Road which will tie into the eastern end of Te Honohono ki Tai. The Warkworth Package also includes an upgrade to Matakana Road to coincide with urbanisation of the surrounding area. The new Western Link - North (associated with the Northern Public Transport Hub) ties into the intersection with Te Honohono ki Tai.	**Expected to open 2023** **AT**
Improvements to the Hill Street / SH1 intersection Redesign and upgrade of the intersection to facilitate ease of access and way finding for all modes through the intersection.	The Warkworth Package includes an upgrade to Sandspit Road and an upgrade to Matakana Road. These road upgrades will complement the Hill Street intersection improvement. Sandspit Road and Matakana Road are important arterial routes that link Warkworth to communities such as Matakana, Omaha and Snells Beach via the Hill Street intersection.	**Expected to open 2026** **AT**
The Warkworth Community Transport Hub Interim Park and Ride facilities Expected Outcomes: Support mode shift in Warkworth	The Warkworth Community Transport Hub was constructed as an interim solution to supporting mode shift in Warkworth. The Warkworth Package includes a new location for a Public Transport Hub with greater capacity in anticipation of further growth and usership of shared modes in Warkworth.	**Completed** **AT**

9 Strategic context and receiving environment

Section 9.1 provides an overview of the strategic context across the Warkworth area. Each NOR in the Warkworth Package is specifically discussed in Sections 9.3 to 9.10 including a description of the existing environment and likely future environment for each project. For detailed discussion of specialist topics, refer to Volume 4: Supporting Technical Reports.

9.1 Overview of the strategic context

9.1.1 Warkworth Structure Plan

The Warkworth Structure Plan was adopted by Auckland Council in June 2019. The Structure Plan sets out the pattern of land uses and supporting infrastructure network for the future growth areas of Warkworth. The land use will be progressively 'live zoned' through private and Auckland Council initiated plan changes. Figure 9.1 shows the indicative land uses as set out in the Structure Plan.

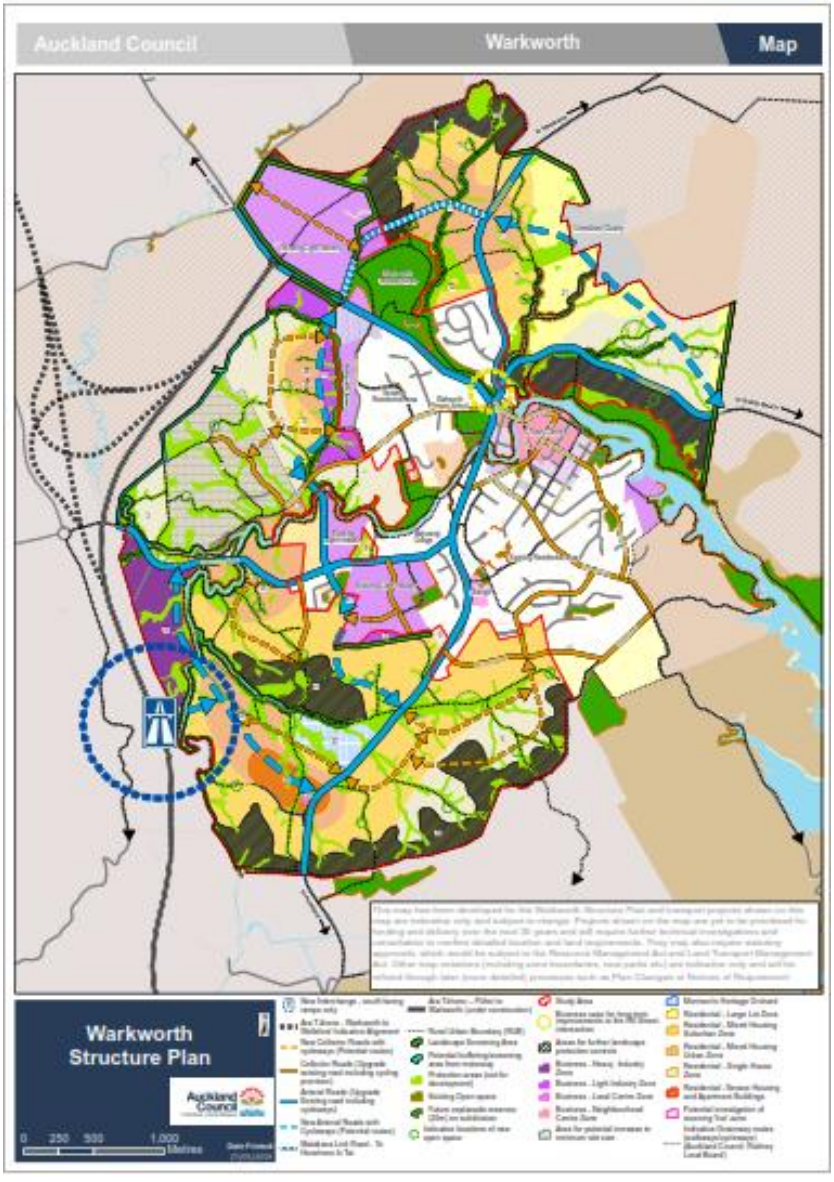


Figure 9.1: Warkworth Structure Plan

9.1.2 Plan changes and resource consents

There are numerous developer interests in the wider Warkworth area, with some areas already live zoned and others preparing plan change documents and resource consent applications or with lodged applications. These include:

Plan Change 25 (Warkworth North) was approved in March 2020**.** The plan change has resulted in the rezoning of approximately 99 hectares of FUZ land to a mix of business and residential zones to provide for 1,000-1,200 dwellings, 13 hectares of industrial / commercial land and a new neighbourhood centre. The resultant zoning has a higher density than previously expected, a local centre and additional mixed-use zoned land. Results of recent appeals have confirmed that the residual FUZ zoning in the Plan Change area adjacent SH1 will remain as general business zoning.

Plan Change 72 (McKinney Road, Warkworth) seeks to rezone approximately 8.2 hectares of land north of McKinney Road, from FUZ to Residential – Mixed Housing Suburban and to introduce a new precinct within the AUP:OP to address wastewater infrastructure staging, transport network, ecology, and water quality effects. It will also extend the SMAF 1 overlay across the plan change area. The plan change will enable approximately 150 to 200 dwellings to be built. The plan change has been approved, subject to appeals.

Waimana Warkworth South Proposed Plan Change seeks to rezone 165 hectares of land to provide for 1600 new residential lots, parks, a retail / business centre, public transport hub and possibly a school. The proposed plan change also recognises an opportunity for a future public transport interchange and the wider western link. The plan change is currently being reviewed by Auckland Council and is yet to be publicly notified.

The Kilns Limited Sandspit Road Private Plan Change and Resource Consent Application - a Private Plan Change application was made to Auckland Council in September 2021 for the rezoning of the site(s) at 34 and 36 Sandspit Road. The application is currently on hold awaiting further information from the applicant and is yet to be opened for public submission. A resource consent application was subsequently made to Council in April 2022 for the residential development of the site(s) 34 and 36 Sandspit Road, including enabling works and associated infrastructure. The application was publicly notified in June 2022, with a hearing on the resource consent application held on 28 and 29 March 2023. At the time of writing no decision had been made on the consent application.

Proposed Plan Change 78 (Intensification) has been prepared in response to the National Policy Statement on Urban Development (NPS-UD) and requirements of the RMA to enable more intensive development in and around neighbourhood, local, town and city centres and rapid transit stops and incorporate Medium Density Residential Standards into the AUP:OP. Areas of residentially zoned land adjacent to Woodcocks Road, Great North Road, SH1, Matakana Road, and McKinney Road are proposed to be upzoned from Single House Zone to Mixed Housing Urban Zoned and Mixed Housing Urban Zone to Terrace Housing and Apartment Building Zone.

Mason Heights, Warkworth Resource Consent Application – A resource consent application was made to Council in February 2021 to undertake a 72-lot subdivision on a site located within the FUZ consisting of 71 residential lots and 1 lot set aside for future light industry or commercial activities. The application was publicly notified on February 2022, with a hearing scheduled for 18 April 2023. At the time of writing no decision had been made on the consent application.

9.2 Overall hydrological context

The Warkworth Package falls within the Warkworth stormwater catchment which has an overall area of approximately 5,893 hectares with the township of Warkworth at its outlet. The extent of the catchment is shown in Figure 9.2. The main river running through the catchment is the Mahurangi River. Many unnamed tributaries within the Warkworth catchment feed into the Mahurangi River, which runs past the Warkworth Town Centre before discharging to the Mahurangi Harbour.

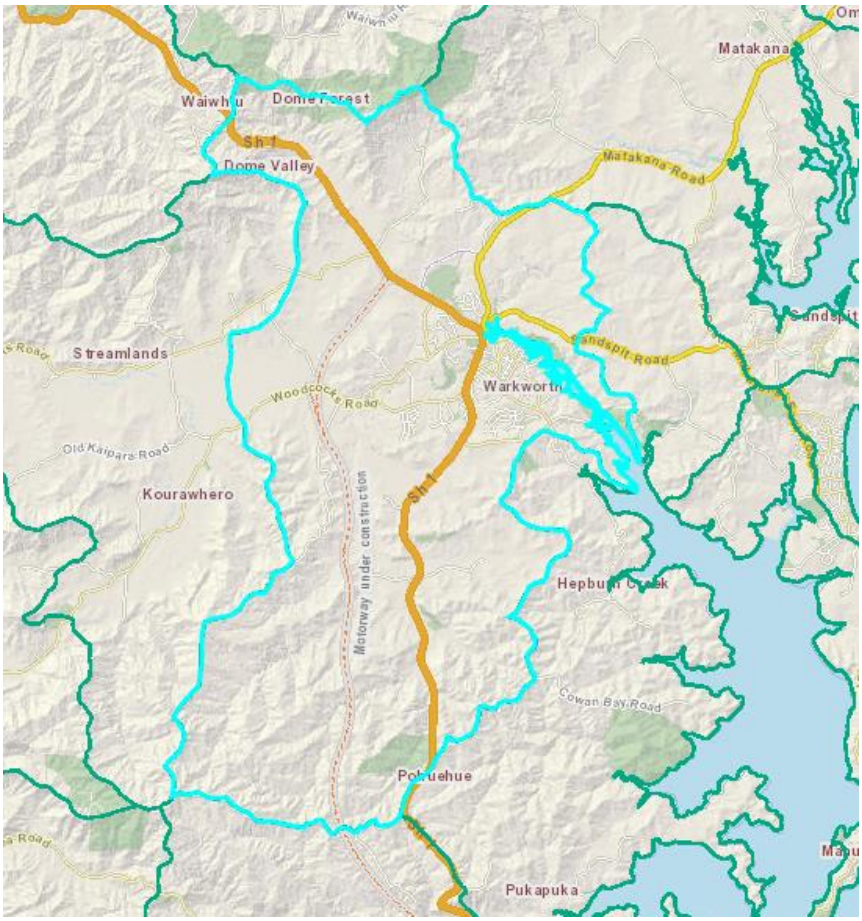


Figure 9.2: Warkworth Stormwater Catchment Boundary outlined in blue

9.3 NOR 1 – Northern Public Transport Hub and Western Link – North

9.3.1 Project overview

The new designation will provide for:

a) A new Northern Public Transport Hub and associated facilities including a park and ride, cycle storage, electric charging facilities and bus layover spaces to support Warkworth Town Centre services; and
b) A new urban arterial cross section with active mode facilities between the intersection of SH1 and Te Honohono ki Tai - Matakana Link Road to the proposed bridge crossing.

The new Northern Public Transport Hub will provide a long-term public transport interchange to support a more resilient public transport system and help to transition Warkworth to a low carbon transport network. The Northern Public Transport Hub will support regional and interregional public transport access for northern Warkworth, and the provision of a park and ride facility will support the wider rural catchments of the Kōwhai Coast to use public transport for longer interregional trips.

The new Western Link – North will enable access to the North Warkworth Precinct in the north Warkworth growth area, including a proposed local centre. The corridor will support mode shift by enabling reliable bus access to northern Warkworth and by future proofing for bus lanes to support the corridors function as a key public transport link for Warkworth. The corridor will provide safe and connected active mode facilities to support active mode access. The corridor provides an alternative north-south route to SH1 that will reduce the pressure on the existing SH1 / Hill Street intersection, increasing resilience. It will also provide direct connectivity to Te Honohono ki Tai-Matakana Link Road to improve access to the Kōwhai Coast and surrounding rural areas.

The designation footprint as shown in Figure 9.3 shows the envelope required to construct, operate and maintain the Northern Public Transport Hub and Western Link – North project. The designation footprint includes sufficient space for the intersections with the future Western Link - North and SH1, and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

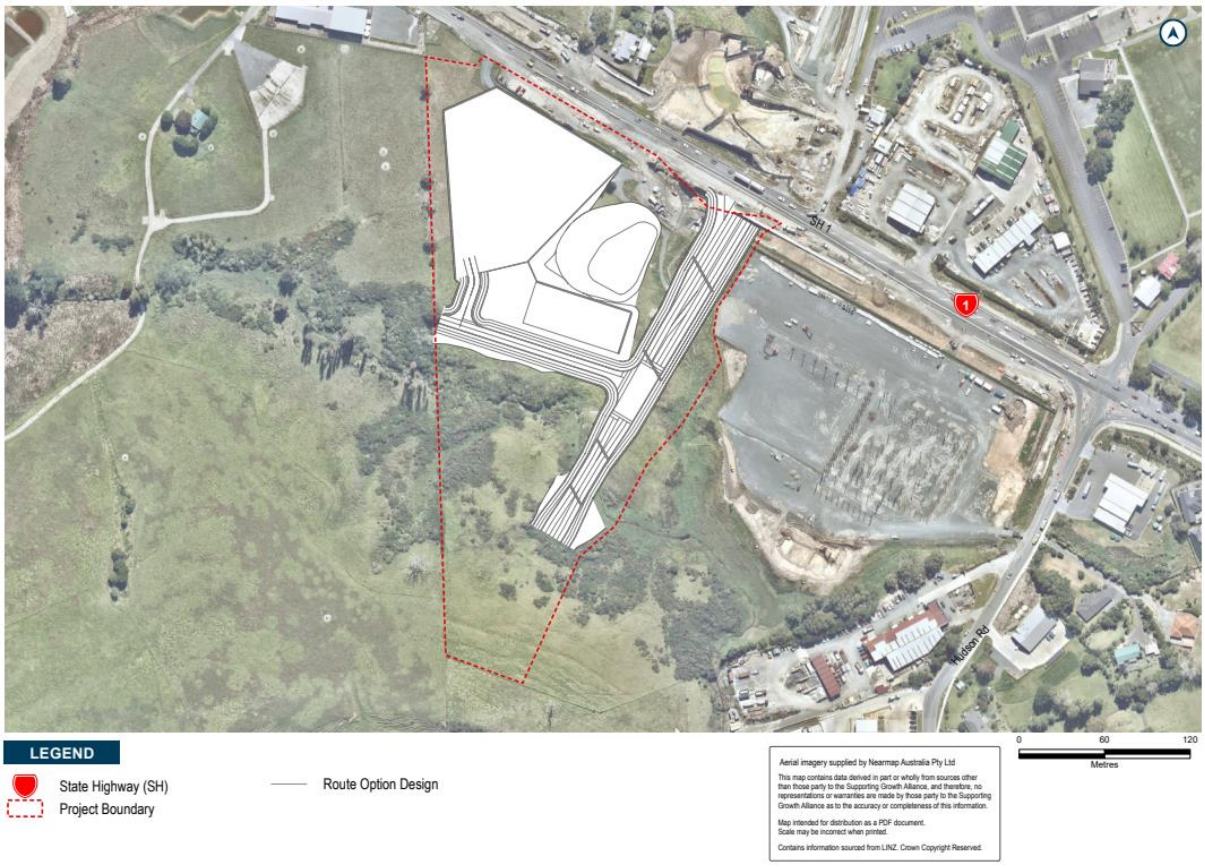


Figure 9.3: NOR 1 – Northern Public Transport Hub and Western Link – North indicative designation footprint

The key features of the Northern Public Transport Hub and Western Link – North project include:

A new Northern Public Transport Hub located adjacent to the intersection of SH1 and the new Western Link - North including all associated facilities such as a park and ride, cycle storage, electric charging facilities and bus layover spaces to support Warkworth Town Centre services
Tie-ins with existing roads and localised widening around the existing intersections to accommodate new intersection forms
New or upgraded stormwater ponds, bridges and culverts (where applicable)
Batter slopes to enable widening of the corridor, and associated cut and fill earthworks
Vegetation removal along the existing road corridor
Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.4 shows the indicative cross section for the Western Link – North.

Figure 9.4: NOR 1 – Indicative cross section for the Western Link - North

9.3.2 Receiving environment for NOR 1

Table 9.1 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.1: Summary of relevant receiving environment features for NOR 1

Features	Description
Planning context and land use	
Current land use and urban form	The site is currently rural in nature with one residential property located near the centre of the site and construction activities associated with the Ara Tūhono (Puhoi to Warkworth) motorway project along the road edge of the site.
Current zoning	Future Urban Zone Business – General Business Zone

Features	Description
Likely future zoning – Warkworth Structure Plan	Business – Light Industry Zone Business – General Business Zone.
Overlays	High-Use Stream Management Areas Overlay High-Use Aquifer Management Areas Overlay.
Controls	Macroinvertebrate Community Index Stormwater Management Area Control (south of the Northern Public Transport Hub and Western Link - North (Public Transport Hub Section)) Vehicle Access Restriction Control (Motorway Interchange Control).
Existing designations	Designation 6763 – State Highway 1 from Titfords Bridge, Puhoi to Ross Road, New Zealand Transport Agency Designation 6764 – Road widening, State Highway 1 intersection with Hudson Road, New Zealand Transport Agency Designation 6769 – Construction, operation and maintenance of a State Highway (Ara Tūhono Pūhoi to Wellsford Road of National Significance: Pūhoi to Warkworth Section), State Highway 1, Puhoi to Warkworth, New Zealand Transport Agency.
Human environment	
Transport	*Existing Environment* The existing Warkworth public transport network is largely reflective of the predominantly rural or semi-rural environment. The buses are relatively infrequent and Auckland city bound services are supplemented by private bus services (the Mahu Express). The core focus of the current public transport route services is focused on the Warkworth Town Centre. The Town Centre experiences significant congestion and has limited facilities for drivers, layover facilities and other ancillary activities such as charging. To address this immediate need, the Rodney Local Board worked with AT to provide an interim facility in the north of Warkworth. The interim facilities include 137 parking spaces, two bus stops and a bus layover. While the site has been designed to support an immediate need, it is bound by SH1 and the Mahurangi River with limited opportunities to expand. The site is not adequate to accommodate the forecasted increase in demand for park and ride, bus stops, bus layovers and charging facilities. It also does not provide sufficient space to provide for driver facilities required to support operational increases in bus services. *Likely Future Environment* By 2038, there is likely to be significant increase in public transport services, largely as a response to the majority of land release in Warkworth being completed. The exception to this is the north eastern growth areas, which is forecast to be the last land area released. It is anticipated that there will be a public transport interchange located at the subject site (known as a Northern Public Transport Hub) and an additional southern public transport interchange located to the south of Warkworth. It is assumed that both new public transport interchanges and the park and ride will be operational and will be serviced by a number of public transport routes. The southern station in particular will provide a terminus for up to four routes, and the northern station will provide charging and layovers for up to four services.

Features	Description
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage or archaeological sites on the subject site. Any unrecorded archaeological sites are protected under provisions of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) but will not be uncovered until works commence (if present). *Likely Future Environment* The existing environment as it relates to historic heritage and archaeological values is likely to remain the same in the future.
Community and recreational facilities	*Existing Environment* There are no community and recreational facilities on the subject site. The site is located approximately 500 m north of the Warkworth Show Grounds and Mahurangi Rugby Club. The Warkworth Town Centre is located approximately 2 km from the site. *Likely Future Environment* It is likely additional community facilities will be provided in the wider surrounding area as the population increases. However, as the subject site and surrounding land uses are expected to be zoned for industrial and business land uses, additional community and recreational facilities in proximity to the site are anticipated to be limited.
Noise and vibration	*Existing Environment* The site for the Northern Public Transport Hub is currently located in a rural environment with few dwellings nearby. The noise environment is dominated by road traffic noise from vehicles using SH1. *Likely Future Environment* The subject site and surrounding land uses are expected to be zoned for industrial and business land uses. This zoning would likely result in an increase in ambient noise levels.
Natural and physical environment	
Geology	The underlying geology of the site is expected to be Mahurangi Limestone. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* An unnamed stream runs through the site from south to north. The site is affected by the existing flooding of SH1 due to the existing SH1 culvert. Existing flood prone areas have been identified by Auckland Council GeoMaps on the eastern edge of the site and across SH1. *Likely Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. It is understood that the Ara Tūhono (Puhoi to Warkworth) motorway project will replace the existing culvert underneath SH1 which connects to the site with a larger 2.4 m diameter culvert on the existing culvert alignment. This will reduce the risk of SH1 overtopping, flooding of the SH1 and Te Honohono ki Tai (Matakana Link Road) intersection and upstream of the culvert inlet. A new wetland on the site will provide water

Features	Description
	quality treatment and attenuation for the additional impervious area created by the Public Transport Hub.
Terrestrial ecology	*Existing Environment* Habitat The ecological features associated with the Public Transport Hub and park and ride footprint are mainly characterised by a south-east facing hillslope bordered by two stream wetland complexes; one to east and one to the south of the footprint. Terrestrial areas mainly consist of exotic pasture species and gorse. Wetland areas are indicated by exotic grass and sedges. The area is associated with an unnamed tributary of the Mahurangi River. Species Long-tailed bats have been recorded within a 3km radius of the site. A number of avifauna have been observed or are likely to appear in the project area, including a number of Threatened – At Risk (TAR) species including Australasian bittern, New Zealand pipit and Spotless crake. There are records of Copper skink, inhabiting the project area. Two existing wetlands are associated with the area, they are: WW1-W1 is a natural inland wetland assessed as having a moderate ecological value. It is a known foraging area for Australasian bittern. It is also a known nesting and foraging area for spotless crake WW1-W2 is a natural inland wetland assessed as having a low ecological value. It is not likely a supporting habitat for any TAR species. *Likely Future Environment* The AUP:OP places emphasis on the protection and enhancement of existing watercourses such as the Mahurangi River, wetlands and areas of significant natural value, such as riparian vegetation. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Mature trees associated with roadside and shelterbelt are expected to be removed in the future environment as vegetation clearance (excluding within riparian areas, notable trees and certain street trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario.
Topography and landscape context	*Existing Environment* The designation and surrounding area are on the existing urban fringe of Warkworth to the west. Adjacent to the designation is a developing industrial area. The landscape is dissected by the existing SH1, which runs parallel to the designation. To the north, Te Honohono ki Tai (Matakana Link Road) provides a new transport corridor through a once rural landscape, which is in the process of being urbanised. The area is relatively flat, with elevated land to the north and south. The designation is located away from prominent landforms. The hill above the designation, between Hudson Road and Falls Road, is a notable landform in Warkworth. *Likely Future Environment* Through zoning and precincts in the AUP:OP, it is anticipated that the future area of the designation and surrounding landscape will be characterised by business activities

Features	Description
	(including light industry, a local centre and mixed use), residential urban mixed housing, FUZ, and open space for sport and active recreation (to the north across the current SH1). It is acknowledged that the area may undergo some landform modifications as part of the urbanisation process of Warkworth separate to the Warkworth Package.

9.4 NOR 2 – Woodcocks Road (Western Section)

9.4.1 Project overview

Woodcocks Road is an existing arterial corridor, which provides an important east-west connection from SH1 in the east to Ara Tūhono (Puhoi to Warkworth) motorway in the west.

The new designation will provide for the upgrade of the existing rural section of the Woodcocks Road corridor from the interchange with Te Ara Tūhono (Puhoi to Warkworth) motorway in the west to the Mansel Drive intersection in the east to an urban arterial with active mode facilities.

Urbanisation of the existing rural section of Woodcocks Road will connect key land uses along the corridor and the provision of safe walking and cycling facilities on Woodcocks Road will contribute to a connected active mode network in Warkworth, enabling the transition to a low carbon transport network and supporting the desired compact urban form.

The remainder of the Woodcocks Road corridor from the intersection with Mansel Drive through to SH1 (the urban section) is not being designated as the existing road space can be reallocated to upgrade the road corridor to provide for dedicated walking and cycling facilities.

The designation footprint in Figure 9.5 shows the envelope required to construct, operate and maintain the Woodcocks Road project. The designation footprint includes sufficient space for the intersections with the Wider Western Link and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

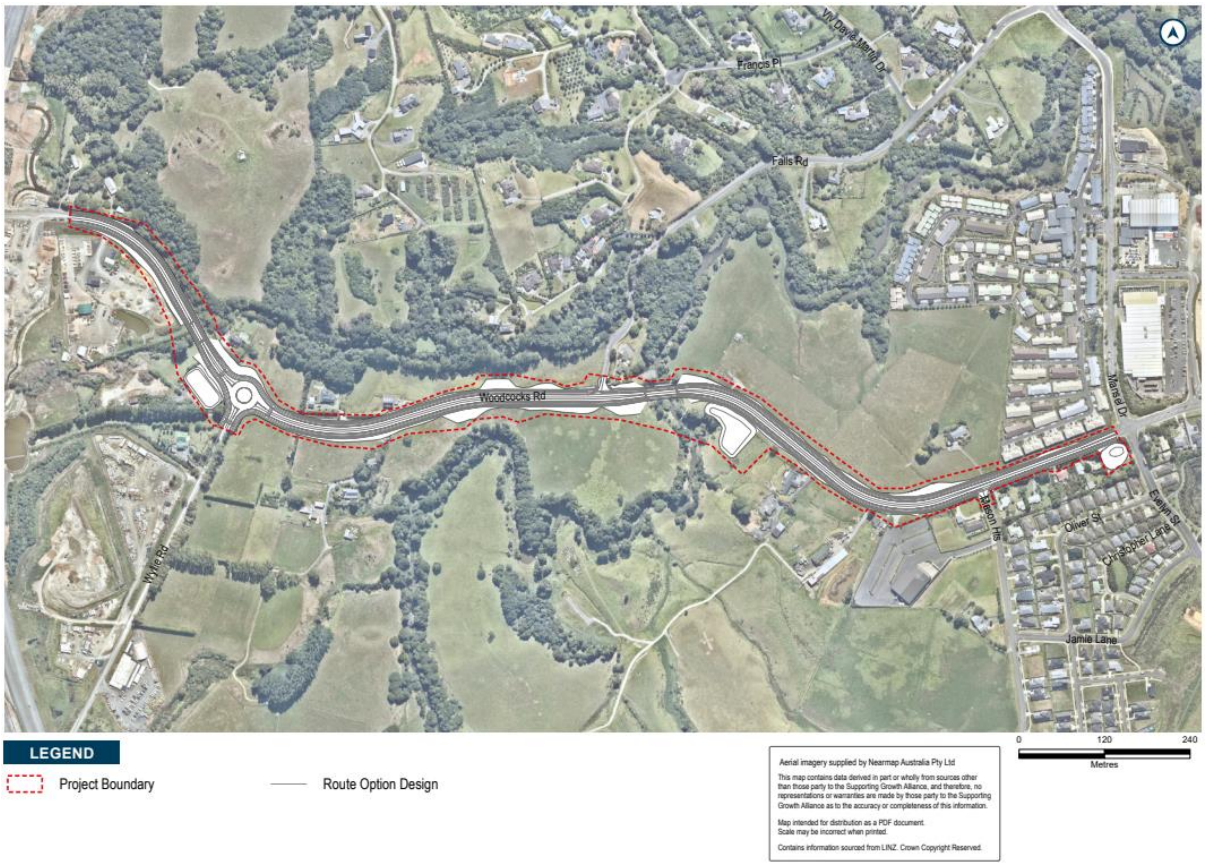


Figure 9.5: NOR 2 – Woodcocks Road indicative designation footprint

The key features of the Woodcocks Road project include:

Widening of Woodcocks Road from its current general width to an urban arterial cross section including cycle lanes and footpaths

Tie-ins with existing roads and localised widening around the existing intersections to accommodate new intersection forms.

New or upgraded stormwater ponds, bridges and culverts (where applicable)

Batter slopes to enable widening of the corridor, and associated cut and fill earthworks

Vegetation removal along the existing road corridor

Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.6 shows the indicative cross section for the Woodcocks Road project.

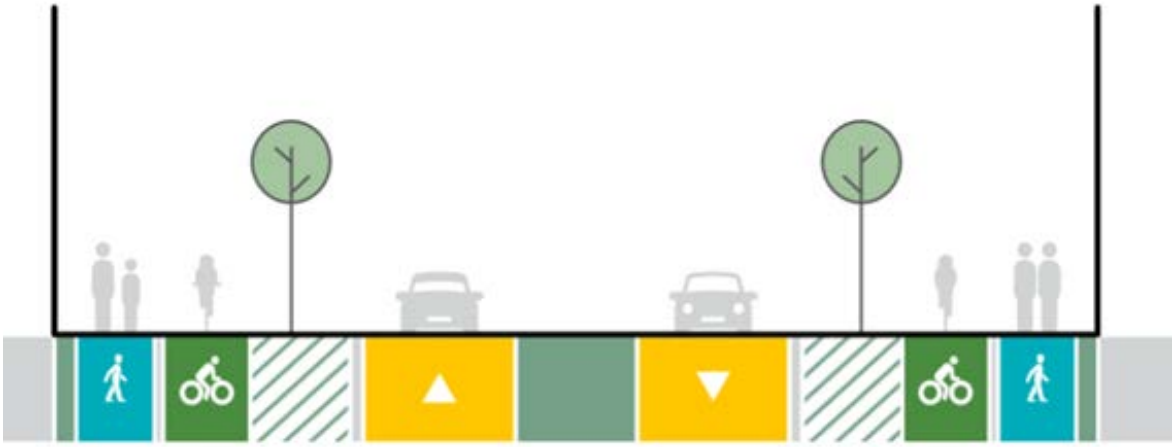


Figure 9.6: NOR 2 - Indicative cross section for the Woodcocks Road project

9.4.2 Receiving environment for NOR 2

Table 9.2 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.2: Summary of relevant receiving environment features for NOR 2

Features	Description
Planning context and land use	
Current land use and urban form	The eastern end of Woodcocks Road is urbanised in nature, with residential and industrial land uses bordering both sides of the road. Further west, surrounding land uses become more rural in nature.
Current zoning	Future Urban Zone Residential – Single House Zone Residential – Mixed Housing Suburban Zone.
Likely future zoning – Warkworth Structure Plan	Residential – Mixed Housing Suburban Zone Residential – Mixed Housing Urban Zone Open Space Zones Business – Heavy Industry Zone.
Overlays	High-Use Stream Management Overlay Significant Ecological Areas (SEA) Overlay (terrestrial) High-Use Aquifer Management Areas Overlay.
Controls	Macroinvertebrate Community Index Stormwater Management Area Control - Flow 1.
Existing designations	6769, State Highway 1 – Puhoi to Warkworth, New Zealand Transport Agency
Human environment	
Transport	*Existing Environment* The posted speed limit along Woodcocks Road is currently 60 km/h between

Features	Description
	Mason Heights and Falls Road, the speed limit then becomes unrestricted through the remainder of the rural section. Woodcocks Road is rural in character with two general traffic lanes (one in each direction). There is no kerb and channel on either side of the corridor and no footpaths. Woodcocks Road connects to SH1 to the east of the corridor. The latest traffic data for the rural portion of Woodcocks Road shows that the corridor has an Annual Average Daily Traffic (ADT) count of 4,529. There are no existing bus services on Woodcocks Road. There are three intersections along the corridor as follows: Woodcocks Road / Wyllie Road - priority controlled intersection Woodcocks Road / Falls Road - priority controlled intersection Woodcocks Road / Mason Heights - no control. *Likely Future Environment* It is expected that the upgraded road will have an urban character with two general traffic lanes (one in each direction) and a central median, with a posted speed limit of 60 km/h. There will be a consistent corridor form with kerb and channels on both sides and continuous footpaths and cycle facilities. There will be connections to SH1 to the east, connections to the Wider Western Link to the south and the Western Link to the west. The indicative 2048 AT bus network forecasts 8 buses during the peak hour along the road. The forecast ADT in 2048 is 9,000 vehicles. The Woodcocks Road / Falls Road intersection is likely to be closed-off. There will be two intersections along the road including: Woodcocks Road / Wyllie Road/ Wider Western Link – single-lane roundabout Woodcocks Road / Mason Heights – priority-controlled intersection.
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage sites within the designation footprint that will be impacted by the upgraded transport corridor, however the following archaeological features are present within the designation footprint: Archaeological site: R09/2244 (Cherry's Bridge). Colonial period site construction in 1937 named after local landowner Francis Cherry. No surface evidence of 19th Century structures visible due to vegetation in the area Archaeological site: R09/2247 (artefacts). Site was recorded in 2018 during earthworks for the construction of Ara Tūhono (Puhoi to Warkworth) motorway. A number of wooden artefacts were encountered in a former tributary of the Mahurangi River Auckland Council CHI site: 17004 (WWII Camp). This is the site of one of several WWII camps around Woodcocks Road. *Likely Future Environment* There is some potential for archaeological or historic material and features from R09/2244 (Cherry's Bridge), R09/2247 (artefacts), and 17004 (WWII Camp) to be affected by the road upgrade works. However, the environment as it relates to historic heritage and archaeological values is otherwise likely to remain the same in the future.
Community and	*Existing Environment*

Features	Description
recreational facilities	There are no community or recreational facilities along the designation corridor of Woodcocks Road. Mahurangi College is located approximately 1 km east of the designation boundary. There is a Mitre 10 Mega located on Mansel Drive, and a landscape and garden supplies store near the intersection of Woodcocks Road and Wyllie Road. *Likely Future Environment* It is likely additional community facilities will be provided in the wider surrounding area as the population increases. Recreational opportunities are also likely to increase as the area develops. Schools in the area are expected to remain and could grow as the population in the area increases.
Noise and vibration	*Existing Environment* The noise environment is dominated by road traffic noise from vehicles on Woodcocks Road. *Likely Future Environment* The Warkworth Structure Plan indicates that the area surrounding Woodcocks Road is likely to be zoned as Residential. This zoning would likely result in an increase in ambient noise levels as the area urbanises.
Natural and physical environment	
Geology	The underlying geology of the road corridor is expected to be Pakiri Formation and alluvium. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* Woodcocks Road has two bridge crossings across the Mahurangi River. The first is located east of Falls Road and the second is located adjacent to 2 Wyllie Road. There are no significant floodplains impacting the road. Existing flood prone areas have been identified by Auckland Council GeoMaps along the periphery of the Mahurangi River which runs along the northern edge of Woodcocks Road. *Likely Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. The two existing bridges will be upgraded as part of the road upgrade works. Flood modelling will be required at the detailed design phase to confirm the bridges will comply with the NOR conditions. The aim being to stay within flood design criteria, particularly with the downstream catchments being future development, which could occur before this NOR is constructed.
Terrestrial ecology	*Existing Environment* <u>Habitat</u> The corridor features an east-west alignment, crossing the right branch of the Mahurangi River and running parallel to the left branch for approximately 800m. The riparian features associated with the Mahurangi River north of Woodcocks Road constitutes a terrestrial SEA (T 6676). The SEA is relatively consistent with a Kauri, podocarp broadleaved forest type. However, the portion of the SEA north of the Mahurangi River (left branch) crossing is more consistent with a native and

Features	Description
	exotic treeland mix. To the south of the crossing the riparian features are generally consistent with Kanuka shrub forest. The Woodcocks Road upgrade section is associated with three tributaries of the Mahurangi River (two left branch tributaries, and one right branch tributary). Two wetlands as defined by the NES-F are associated with this section of Woodcocks Road. Both of these wetlands have been assessed as unlikely to be habitats for TAR species WW2-W1 is a natural inland wetland assessed as having low ecological value WW2-W2 is a natural inland wetland assessed as having low ecological values. <u>Species</u> Long-tailed bats have been recorded within a 2.3km radius of the area. A number of avifauna have been observed or are likely to appear in the project area including a number of TAR species. Black shag, Little black shag, Little shag, Long-tailed cuckoo, New Zealand pipit, North Island kākā and Pied shag are all likely to inhabit the surrounding area. There are records of a large range of herpetofauna inhabiting the area too such as; Copper skink, Elegant gecko, Forest gecko, Ornate skink and Pacific gecko. It is also likely a number of invertebrates inhabit the area including flax snails, large land snails and Auckland tree wētā. *Likely Future Environment* The AUP:OP places emphasis on the protection and enhancement of existing watercourses such as the Mahurangi River, wetlands and areas of natural value, such as riparian vegetation. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Mature trees associated with roadside and shelterbelt are expected to be removed in the future environment as vegetation clearance (excluding within riparian areas, notable trees and certain street trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario.
Topography and landscape context	*Existing Environment* Woodcocks Road is currently a rural road. Within the designation and adjacent area, there is an extensive amount of pastural farmland, which is fragmented in places by native bush and the sinuous left and right branches of the Mahurangi River. Towards the eastern extent of the designation there is an existing residential area on either side of the road. The designation is within the flat basin west of Warkworth Town Centre. Rolling hills gently extend upwards to the north and south of Woodcocks Road. *Likely Future Environment* As part of the AUP:OP zoning, it is expected that the future area will be largely urbanised, with the exception of Open Space Conservation zoned land adjacent the Mahurangi River. The existing residential area at the eastern extent of the designation is zoned as Residential Single House and Residential Mixed Housing on the southern side of Woodcocks Road, and Residential Mixed Housing on the northern side of the road. Although, the designation is located away from prominent landforms, views of the transport corridor will likely be attainable from

Features	Description
	adjacent raised areas, such as along Viv Davie-Martin Drive looking south.

9.5 NOR 3 – State Highway 1 – South

9.5.1 Project overview

The existing SH1 bisects Warkworth and plays a key role for traffic moving through Warkworth, as well as for traffic travelling within Warkworth. When Ara Tūhono (Pūhoi to Warkworth) motorway opens the role of the existing SH1 will change. Much of the existing traffic through Warkworth will shift from SH1 to Ara Tūhono, allowing this part of SH1 to function as an urban arterial, as opposed to a state highway as a main central route for public transport as well as active modes. Waka Kotahi is currently undertaking a revocation process of the existing State Highway status in anticipation of the opening of the new SH1 corridor to then transfer of the urban arterial corridor to AT.

A new designation will provide for the upgrade of the existing SH1 corridor between Fairwater Road and the southern Rural Urban Boundary from Valerie Close to an urban arterial cross-section with active mode facilities.

The upgrade of SH1 – South will provide improved access to and from social and employment opportunities in the south Warkworth growth area and the Warkworth Town Centre. Provision of multimodal facilities will support a shift from private vehicles to active modes and public transport, and a reduction in road hierarchy to an arterial function along with a reduced speed environment will support improved access east-west across SH1.

The remainder of the existing SH1 corridor through Warkworth from Fairwater Road to Hudson Road is not being designated as the existing road space can be reallocated to upgrade the road corridor to provide for dedicated walking and cycling facilities.

The designation footprint as shown in Figure 9.7 shows the envelope required to construct, operate and maintain the project. The designation footprint includes sufficient space for the intersections with McKinney Road, the Wider Western Link, Valerie Close and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

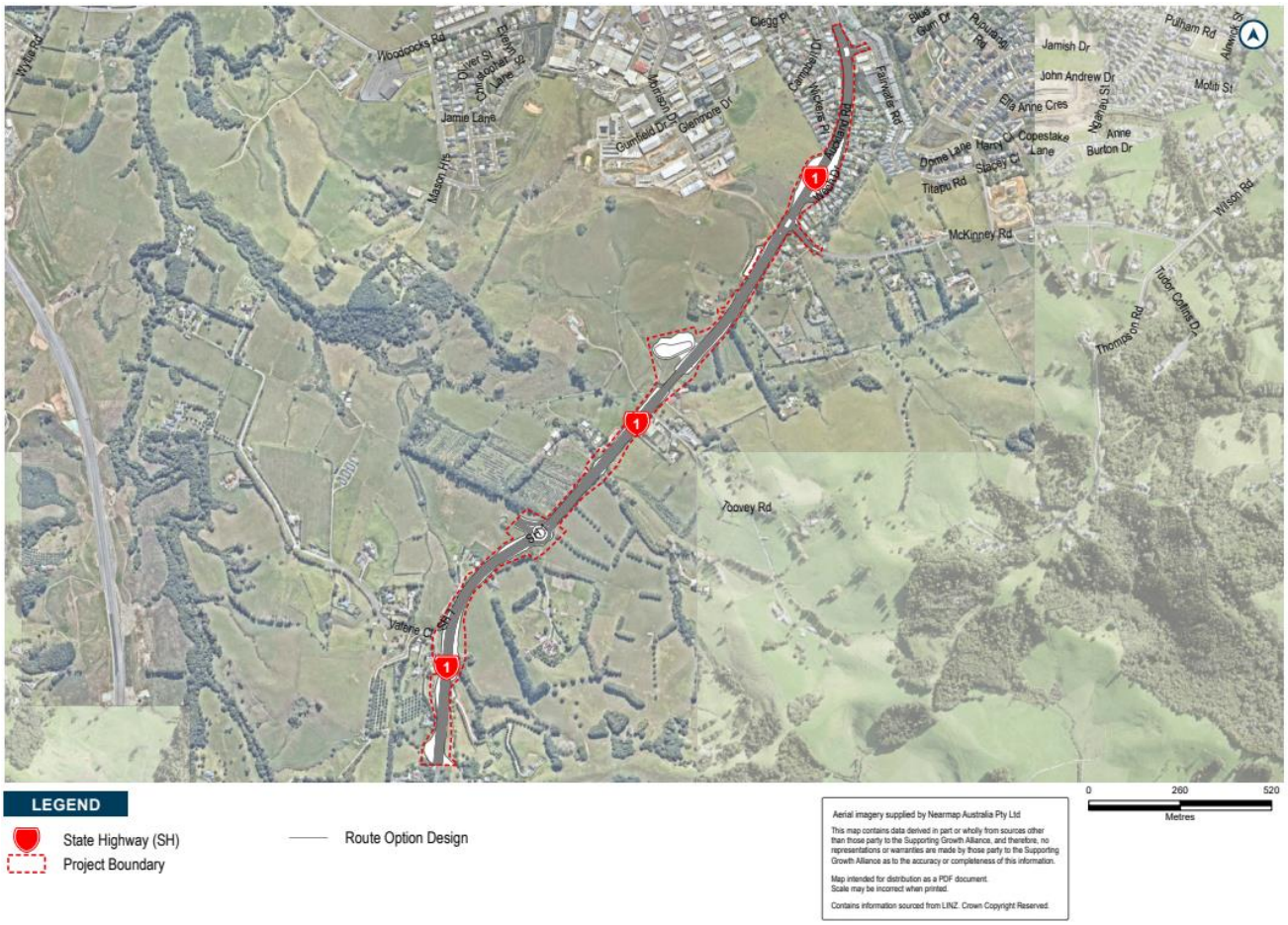


Figure 9.7: NOR 3 – State Highway 1 – South indicative designation footprint

The key features of the SH1 – South project include:

Widening and upgrading of SH1 to an urban arterial cross section including cycle lanes and footpaths
A bidirectional cycling facility from Woodcocks Road to McKinney Road
Tie-ins with existing roads and localised widening around the existing intersections to accommodate new intersection forms
New or upgraded stormwater ponds, bridges and culverts (where applicable)
Batter slopes to enable widening of the corridor, and associated cut and fill earthworks
Vegetation removal along the existing road corridor
Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.8 shows the indicative cross section for the SH1 project.

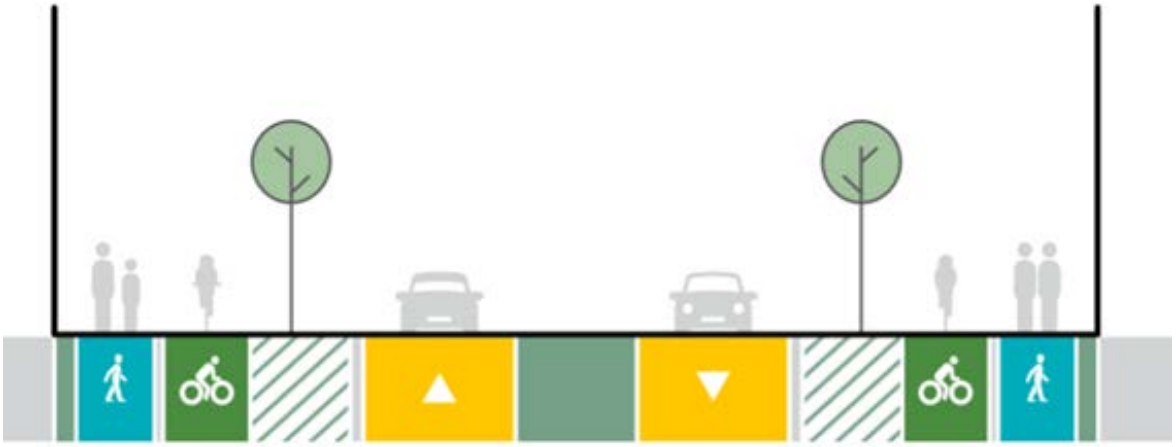


Figure 9.8: NOR 3 – Indicative cross section for State Highway 1 – South

9.5.2 Receiving environment for NOR 3

Table 9.3 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.3: Summary of relevant receiving environment features for NOR 3

Features	Description
Planning context and land use	
Current land use and urban form	The existing SH1 is the main highway and arterial route between Auckland, Warkworth and further north. Surrounding land uses are rural in nature, with lifestyle properties and farming activities bordering the highway. Further north towards Warkworth, residential land uses become more dominant.
Current zoning	Future Urban Zone Residential – Single House Zone Business – Local Centre Zone.
Likely future zoning – Warkworth Structure Plan	Residential – Terrace Housing and Apartment Building Zone Residential – Mixed Housing Urban Zone Residential – Single House Zone Open Space Zones.
Overlays	High-Use Stream Management Areas Overlay High-Use Aquifer Management Areas Overlay.
Controls	Macroinvertebrate Community Index Stormwater Management Area Control.
Existing designations	6763 – State Highway 1 from Titfords Bridge, Puhoi to Ross Road, New Zealand Transport Agency.
Human environment	
Transport	*Existing Environment*

Features	Description
	The posted speed limit along SH1 is currently 100 km/h from the edge of the FUZ to McKinney Road. SH1 has urban character with two general traffic lanes (one in each direction) between Woodcocks Road and Fairwater Road. This changes to rural character with two general traffic lanes (one in each direction) between Fairwater Road and Valerie Close. The latest traffic data for SH1 was obtained from AT. The data was recorded in March 2001 and shows that the corridor has an ADT count of 18,840 vehicles. SH1 currently has the following intersections: SH1 / Fairwater Road – priority-controlled intersection SH1 / Welch Drive – priority-controlled intersection SH1 / McKinney Road – priority-controlled intersection SH1 / Toovey Road – no control SH1 / Valerie Close – priority-controlled intersection. Currently there are no existing walking and cycling facilities along the rural portion of the corridor extents between Fairwater Road and Valerie Close. There is a footpath on the eastern side of the corridor and on-road cycle lanes on both sides of the corridor between Fairwater Road and Woodcocks Road. The cycle lanes are narrow and have inconsistent markings to indicate priority. There is one existing bus service along SH1. The 995 has a service frequency of every 30 minutes during the peak hour. *Likely Future Environment* It is expected that once constructed, Ara Tūhono (Puhoi to Warkworth) motorway will become SH1 and the existing SH1 will undergo a revocation process and become an urban arterial. The road will have an urban character with two general traffic lanes (one in each direction) and a central median, with a posted speed limit of 50 km/h. The road will have a consistent corridor form with kerb and channels on both sides and continuous footpaths and cycle facilities. There will be connections to the Western Link - South the Wider Western Link. The forecast ADT in 2048 is 15,400 vehicles. The following intersections are expected to be provided: SH1 / Fairwater Road – signalised intersection SH1 / Welch Drive – priority-controlled intersection SH1 / Western Link/ McKinney Road – signalised intersection SH1 / Toovey Road – priority-controlled intersection SH1 / Wider Western Link – single-lane roundabout SH1 / Valerie Close – priority-controlled intersection The indicative 2048 AT bus network forecasts 10 buses during the peak hour.
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage or archaeological sites along the project alignment. Any unrecorded archaeological sites are protected under provisions of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) but will not be uncovered until works commence (if present). *Likely Future Environment* The existing environment as it relates to historic heritage and archaeological values is likely to remain the same in the future.

Features	Description
Community and recreational facilities	*Existing Environment* There are no zoned community or recreational facilities along the designation corridor of SH1. There is a driving range located at 1794 SH1. Mahurangi College is located approximately 1 km north of the designation boundary. The Warkworth Town Centre is located approximately 2km from the designation boundary. *Likely Future Environment* It is likely additional community facilities will be provided in the wider surrounding area as the population increases. Recreational opportunities are also likely to increase as the area develops. Schools in the area are expected to remain and could grow as the population in the area increases.
Noise and vibration	*Existing Environment* The land on both sides of the southern section of the alignment is zoned FUZ. The northern section of the alignment is predominantly zoned as Residential – Single House Zone and to the east of the corridor as Business – Local Centre Zone. SH1 is an existing busy motorway with commercial buildings and residential dwellings along the road corridor. The noise environment is dominated by road traffic noise from vehicles on SH1. *Likely Future Environment* The Warkworth Structure Plan indicates that the area surrounding the existing SH1 is likely to be zoned as Residential. This zoning would likely result in an increase in ambient noise levels as the area urbanises. Road noise may reduce, as the speed limit along the alignment will be reduced.
Natural and physical environment	
Geology	The transport corridor is identified as being within the Pakiri Formation which is part of the Waitematā Group. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* This section of SH1 has two culvert crossings of tributaries of the Mahurangi River. There are some flood plains in this area which cross SH1. Existing flood prone areas have been identified by Auckland Council GeoMaps on the eastern and western edges of SH1. *Likely Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. SH1 is likely to be raised as part of the upgrade works. In addition, the two existing culvert crossings are likely to be upgraded to bridges with raised road formations and longer / wider bridge spans. A treatment pond is proposed to be located near 81 Morrison Drive on the downstream side which will be out of the flood plain after the road is raised.
Terrestrial ecology	*Existing Environment*

Features	Description
	Habitat Existing ecological features associated with the SH1 southern section upgrade mostly include exotic roadside planting, exotic shelterbelt, exotic pasture, several stream crossings (west draining tributaries of the Mahurangi River) and exotic wetlands (notably to the south-west of the State Highway and McKinney junction, as well as to the west of the State Highway opposite the driving range). Five wetlands as defined by the NES-F are associated with the SH1 southern section upgrade. These are: WW3-W1 is a natural inland wetland assessed to have a moderate ecological value. It is known to be a foraging habitat for Australasian bittern and a nesting and foraging habitat for spotless crake WW3-W2 is a natural inland wetland assessed to have a low ecological value. It is not likely a supportive habitat for any TAR species WW3-W3 is a natural inland wetland assessed to have a moderate ecological value. It is known to be a foraging habitat for Australasian bittern and a nesting and foraging habitat for spotless crake WW3-W4 is a natural inland wetland assessed to have a moderate ecological value. It is known to be a foraging habitat for Australasian bittern and a nesting and foraging habitat for spotless crake WW3-W5 is a natural inland wetland assessed to have a low ecological value. It is known to be a foraging habitat for Australasian bittern and a nesting and foraging habitat for spotless crake Species. Long-tailed bats have been recorded within a 3.5km radius of the project area. A number of avifauna have been observed or are likely to appear in the project area including a number of TAR species such as; Australasian bittern, New Zealand pipit and Spotless crake. There are records of a range of Copper skink inhabiting the project area including. It is likely that invertebrate species also inhabit the nearby area. Kauri snail were identified in a desktop study approximately 1km east of the area. *Likely Future Environment* The AUP:OP places emphasis on the protection and enhancement of existing watercourses such as the Mahurangi River, wetlands and areas of natural value, such as riparian vegetation. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Mature trees associated with roadside and shelterbelt are expected to be removed in the future environment as vegetation clearance (excluding within riparian areas, notable trees and certain street trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario.
Topography and landscape context	*Existing Environment* SH1 currently transitions from a rural road in the south to the urban fringes of Warkworth in the north, becoming the southern 'gateway' of Warkworth at the northern extent of the designation. At the northern extent of the designation, there is an existing residential area which flanks the current SH1. There is an existing large-format retail area at the northern extent of the designation too with a number of retail stores, a petrol station, fast food restaurants and a building materials store. The southern area of the

Features	Description
	designation is rural in nature. Aspects which contribute to the amenity of the setting include residential planting, roadside planting (which largely consists of exotic species), and tree species typical of farms (such as eucalyptus, poplar and willow trees). These farmland trees are often planted in regimented stands as shelterbelts, providing a linear landscape pattern. *Likely Future Environment* The existing rural landscape either side of SH1 is zoned FUZ in the AUP:OP and is expected to become urbanised in the future. Other AUP:OP zoning includes Residential Single House at the northern extent of the designation, as well as a Business Local Centre. When the Ara Tūhono (Puhoi to Warkworth) motorway opens in 2023 the classification of the existing SH1 will change to operate as a local urban arterial road.

9.6 NOR 4 – Matakana Road

9.6.1 Project overview

A new designation will provide for an upgrade of the existing Matakana Road between the Hill Street intersection to the edge of the FUZ to provide for an urban arterial cross-section with active mode facilities. The portion of the corridor between Hill Street and Melwood Drive will have a bidirectional facility for cyclists, rather than separated cycle lanes on both sides of the corridor. The project will tie in with the intersection at Sandspit Road in the south and will tie into the intersection with Te Honohono ki Tai (Matakana Link Road). The intersection upgrade with Sandspit Road forms part of the Hill Street intersection improvements which is a separate project led by AT.

Matakana Road currently provides an important north-south connection between Warkworth and the towns of Matakana and Omaha. The upgrade, with the provision of walking and cycling facilities will support mode choice and improve active mode safety from Matakana Road to Warkworth. Close integration with the Hill Street improvements will create a well-connected active mode network.

The designation footprint in Figure 9.9 shows the envelope required to construct, operate and maintain the Matakana Road upgrade project. The designation footprint includes sufficient space for the intersections with Clayden Road, Melwood Drive and Sandspit Road, and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

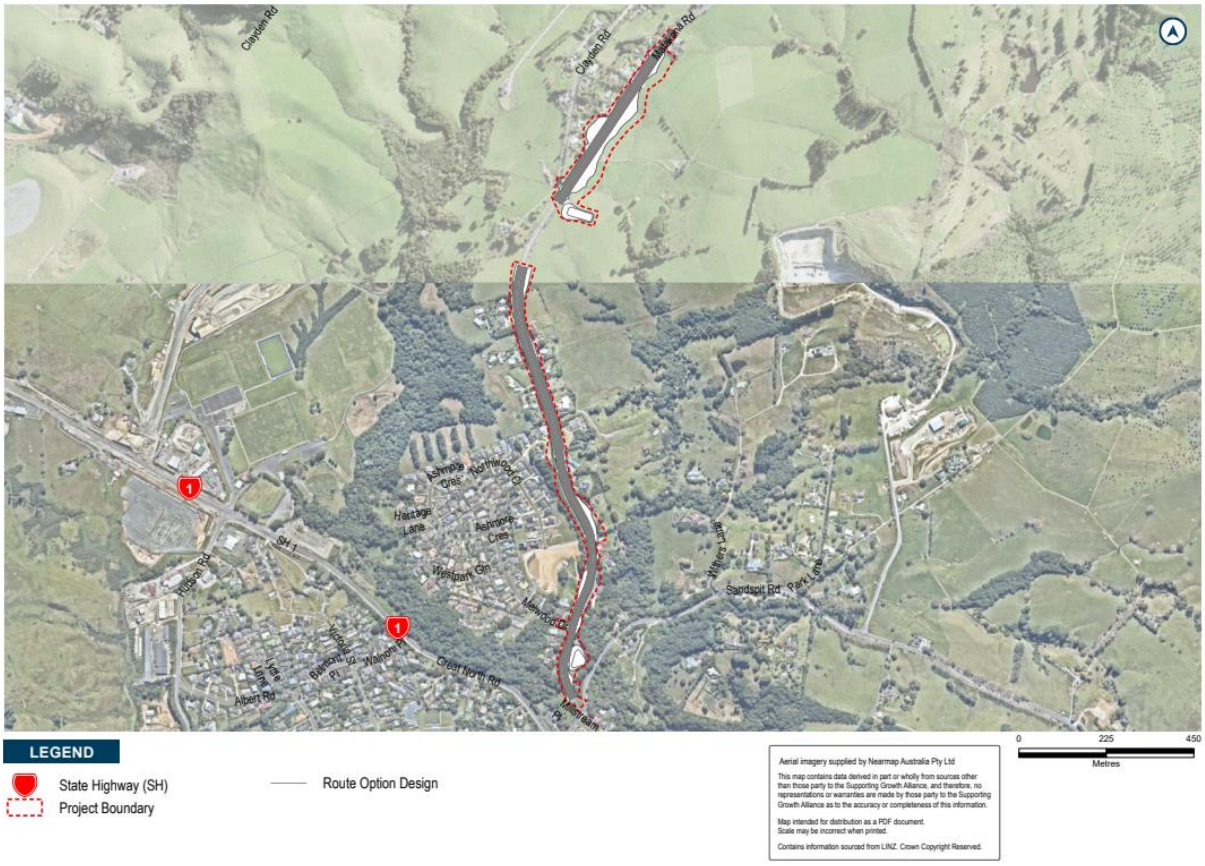


Figure 9.9: NOR 4 – Matakana Road indicative designation footprint

The key features of the Matakana Road project include:

Widening of the existing road corridor to an urban arterial cross section, including cycle lanes and footpaths

A bidirectional shared path which will integrate with the Hill Street intersection walking and cycling infrastructure

Tie-ins with existing roads, localised widening around the existing intersections with Clayden Road, Melwood Drive and Sandspit Road to accommodate new intersection forms

New or upgraded stormwater ponds, bridges and culverts

Batter slopes to enable widening of the corridor, and associated cut and fill earthworks

Vegetation removal along the existing road corridor

Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.10 shows the indicative cross section for the Matakana Road project.

Figure 9.10: NOR 4 – Indicative cross section for the Matakana Road project

9.6.2 Receiving environment for NOR 4

Table 9.4 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.4: Summary of relevant receiving environment features for NOR 4

Features	Description
Planning context and land use	
Current land use and urban form	The northern extent of the project area is currently semi-rural in nature with some residential properties to the west. The southern extent of the project area is features more established residential land use than the northern extent.
Current zoning	Future Urban Zone Residential – Mixed Housing Urban Zone Residential – Single House Zone Open Space – Conservation Zone.
Likely future zoning – Warkworth Structure Plan	Residential – Mixed Housing Urban Zone Residential – Mixed Housing Suburban Zone.
Overlays	High-Use Stream Management Areas Overlay High-Use Aquifer Management Areas Overlay Significant Ecological Areas Overlay (Terrestrial).
Controls	Arterial Roads Macroinvertebrate Community Index – Native Macroinvertebrate Community Index – Rural Macroinvertebrate Community Index – Urban Stormwater Management Area Control, Flow 1 (to the west of Matakana Road).
Existing designations	Designations - 1478, Matakana Link Road, Designations, Auckland Transport
Human environment	

Features	Description
Transport	*Existing Environment* Matakana Road is a semi-rural road with two vehicle lanes (one in each direction) with a 50km/h speed limit between Hill Street and Melwood Drive before changing to 80km/h through to the edge of the FUZ. Much of the corridor has no existing walking or cycling facilities. One bus service (997) operates along this route with a frequency of every 2 hours on weekdays. The bus route connects Warkworth to the towns of Matakana and Omaha. ADT data shows a count of 10,000 vehicles. There are three intersections along the corridor as follows: Matakana Road / Sandspit Road - priority controlled intersection Matakana Road / Melwood Drive – priority-controlled intersection Matakana Road / Clayden Road - priority controlled intersection. *Likely Future Environment* The forecasted ADT in 2048 is 10,000 vehicles with an increased public transport capacity of four buses during the peak hour. Land use is expected to intensify in the surrounding areas to residential and urban land uses. It is expected that the upgraded road will have an urban character with two general traffic lanes (one in each direction) and a central median with a posted speed limit of 50km/h. There will be a consistent corridor form with kerbs and channels on both sides and cycle lanes and footpaths. Along the southern portion of the corridor there will be a bidirectional facility along one side of the corridor. There will be four intersections along the corridor as follows: Matakana Road / Sandspit Road - priority controlled intersection Matakana Road / Melwood Drive – priority-controlled intersection Matakana Road / Clayden Road - priority controlled intersection Matakana Road / Te Honohono ki tai (Matakana Link Road) / Sandspit Link.
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage sites within the designation footprint that will be impacted by the upgraded transport corridor, however the following archaeological feature is present within the designation footprint: Archaeological site: R09/2253 – Timber Cottage. 190 Sandspit Road was constructed for family members by George Young in the mid-1870s, though it is unclear if they resided there. The dwelling was refurbished in the 1970s, adding a wrap-around verandah, a lean to and dormer windows. The five oak trees on the property also date to the 19th century, as does the outhouse and barn, though the barn has been relocated. The grounds of the property have been fossicked, though the structure itself remained in good condition at a 2018 site visit. *Likely Future Environment* There is some potential for archaeological or historic material and features from R09/2253 (190 Sandspit Road) to be affected by the road upgrade works. Aside from this, the existing environment as it relates to historic heritage and archaeological values is likely to remain the same in the future.
Community and recreational facilities	*Existing Environment* There are no community or recreational facilities along the Matakana Road upgrade corridor. There is a retirement home (Totara Park Village) located approximately

Features	Description
	500 m away on Melwood Drive. The Warkworth Town Centre is located south of the Hill Street intersection approximately 300m away from the southern extent of Matakana Road. Kōwhai Park is located at the corridor's southern extent. Warkworth Primary school is located 400m from the corridor's southern extent on the opposite side of SH1, and Mahurangi College is located 1.5km south of Matakana Road. *Likely Future Environment* The Warkworth Structure Plan indicates the area adjacent to the Matakana Road Upgrade corridor to be zoned residential in the future. It is likely additional community facilities will be provided in the wider surrounding area as the population increases. Recreational opportunities are also likely to increase as the area develops. Schools in the area are expected to remain and could grow as the population in the area increases.
Noise and vibration	*Existing Environment* The Matakana Road corridor runs through mostly residential environments. There are some dwellings located close to the road corridor. The noise environment is dominated by road traffic noise from vehicles using Matakana Road and the surrounding road network. *Likely Future Environment* The FUZ to the east of the corridor is likely to be zoned residential in future, which would likely result in an increase of ambient noise as the area urbanises.
Natural and physical environment	
Geology	Mahurangi Limestone (Northland Allochthon) is mapped in the subject site area. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* Matakana Road does not directly impact on any flood plains or overland flow paths – apart from the southern extent of the corridor near the intersection with Sandspit Road. Matakana Road does not cross any existing rivers or streams. *Likely Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. Two wetlands are proposed near the floodplain at the intersection of Matakana Road and Sandspit Road in order to manage and treat runoff from the upgraded road.
Terrestrial ecology	*Existing Environment* <u>Habitat</u> Matakana Road follows a north-south alignment and runs along a watershed of several small catchments draining into the Mahurangi River. In the northern section of Matakana Road, there are several headwater seep wetlands and intermittent streams in a pasture setting. The central and southern parts of Matakana Road are associated with a peri-urban landscape, characterised by roadside planting and treelands (exotic and native). The southernmost section is flanked by two SEAs; T

Features	Description
	5440 to the east and T 2260 to the west. The Matakana Road upgrade section is associated with three unnamed tributaries of the Mahurangi River. Three wetlands as defined by the NES-F are associated with Matakana Road, they are: Wetland WW4-W1 is a natural inland wetland assessed as having a moderate ecological value. It is a known foraging habitat for Australasian bittern, and a foraging and nesting area for spotless crake Wetland WW4-W2 is a natural inland wetland assessed as having a moderate ecological value. It is a known foraging area for Australasian bittern and spotless crake Wetland WW4-W3 is a natural inland wetland assessed as having a low ecological value. It is a known foraging area for Australasian bittern and spotless crake. <u>Species</u> Long-tailed bats have been recorded within a 4.3km radius of the project. A number of avifauna have been observed or are likely to appear in the project area including Australasian bittern / Matuku-hūrepo, Long-tailed cuckoo, pipit, Spotless crake and North Island kākā have been observed or are likely to appear in the project area. There are records of a range of herpetofauna inhabiting the project area including – copper skink, elegant gecko, forest gecko, ornate skink, Hochstetter's frog, and pacific gecko. It is likely that invertebrate species such as flax snails, large land snails and Auckland tree wētā inhabit the project area too. *Likely Future Environment* The AUP:OP places emphasis on the protection and enhancement of existing watercourses such as the Mahurangi River, wetlands and areas of natural value, such as riparian vegetation. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Mature trees associated with roadside and shelterbelt are expected to be removed in the Future Environment, as vegetation clearance (excluding within riparian areas, notable trees and certain street trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario.
Topography and landscape context	*Existing Environment* Matakana Road is currently an urban road to the south, transitioning to a rural road in the north. There is an existing residential area to the southwest of the road. Scattered residential housing extends northwards up both sides of the road. At the southern extent of the designation, there is mature native vegetation in the adjacent Kōwhai Park. This connects with the bush along the Mahurangi River escarpment, providing a natural contrast to the busy roads in the area. On the eastern side of Matakana Road, a section of this vegetation is protected with a QEII covenant. Heading north the existing road is sandwiched between established residential plantings, which are a mix of native and exotic species. The AUP:OP identifies two Notable Trees on the western side of the designation, near Melwood Drive. The roadside in the northern section of the designation is predominately covered with pastural grass.

Features	Description
	Within the southern extent of the designation, sections of land drop to the west and rise away from the road to the east. Towards the northern end of the designation the landscape becomes more open and views of the rolling hill country to the east are attainable. However, it is anticipated that these views may become somewhat obscured by future urbanisation separate to the Warkworth Package. *Likely Future Environment* Under the zoning in the AUP:OP, it anticipated that the transport corridor and surrounding area will become fully urbanised in the future. The area is primarily zoned as residential (including single house, mixed housing suburban and mixed housing urban) or FUZ. There is also a small section of existing open space conservation land southeast and southwest of the designation.

9.7 NOR 5 – Sandspit Road

9.7.1 Project overview

A new designation will provide for an upgrade of Sandspit Road between the Hill Street intersection to the edge of the FUZ to provide for an urban arterial cross-section with active mode facilities. A shared offline boardwalk path will be installed from the Vipond Culvert to Matakana Road which will integrate with facilities at the Hill Street intersection. The project will tie in with the future intersection at the western extent of Sandspit Road at the intersection with SH1, Elizabeth Street, Millstream Place, Matakana Road. This intersection upgrade forms part of the Hill Street intersection improvements which is a separate project led by AT.

Sandspit Road currently provides an important connection between Warkworth and rural settlements Snells Beach, Algies Bay and the Sandspit area. The upgrade, with the provision of walking and cycling facilities will support mode choice and improve active mode safety from residential properties in the Sandspit Road area to Warkworth. Close integration with the Hill Street intersection improvements will create a well-connected active mode network.

The designation footprint in Figure 9.11 shows the envelope required to construct, operate and maintain the Sandspit Road project. The designation footprint includes sufficient space for the intersections with Withers Lane, Park Lane and the future Sandspit Link (NOR 7), and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

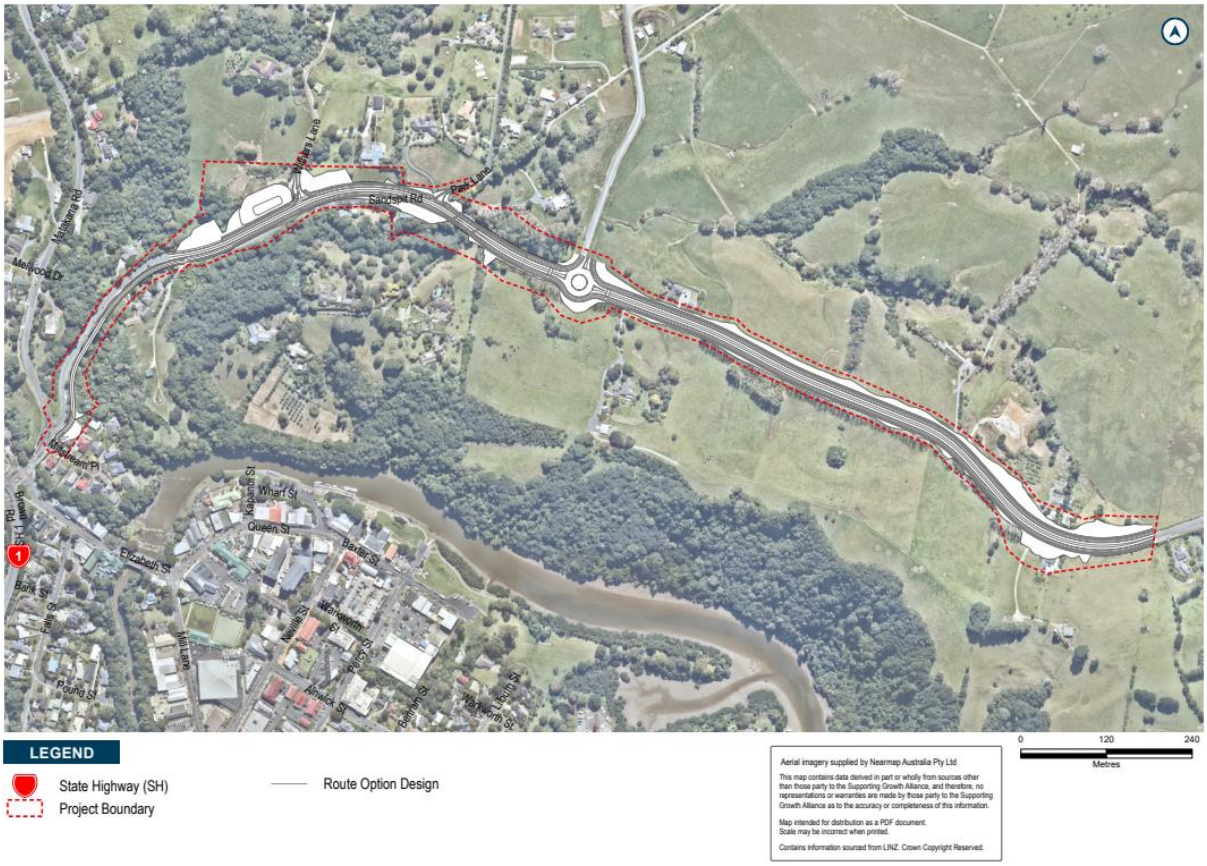


Figure 9.11: NOR 5 – Sandspit Road indicative designation footprint

The key features of the Sandspit Road project include:

Widening of the existing Sandspit Road to an urban arterial cross section, including cycle lanes and footpaths

A shared offline boardwalk path to Sandspit Road from the Vipond Culvert to Matakana Road

Tie-ins with existing roads, localised widening around the existing intersections with Withers Lane, Park Lane and the future Sandspit Link to accommodate intersection forms and roundabouts

New or upgraded stormwater ponds, bridges and culverts (where applicable)

Upgrade of the Sandspit Road Bridge

Batter slopes to enable widening of the corridor, and associated cut and fill earthworks

Vegetation removal along the existing road corridor

Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.12 shows the indicative cross section for the Sandspit Road project.

Figure 9.12: NOR 5 – Indicative cross section of the Sandspit Road project

9.7.2 Receiving environment for NOR 5

Table 9.5 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.5: Summary of relevant receiving environment features for NOR 5

Features	Description
Planning context and land use	
Current land use and urban form	Sandspit Road is currently rural in nature with a number of large lot and single house rural properties on either side of the corridor in the eastern extent. A number of these have agricultural land use. The western extent of the corridor is more densely populated with residential dwellings. There is a large area of SEA to the south of the area, alongside the Mahurangi River.
Current zoning	Future Urban Zone Open Space – Conservation Zone.
Likely future zoning – Warkworth Structure Plan	Residential – Single House Zone Residential – Large Lot Zone.
Overlays	Significant Ecological Areas Overlay (Terrestrial) Outstanding Natural Landscapes Overlay High Natural Character Area Overlay High-Use Aquifer Management Areas Overlay Quarry Buffer Area.
Controls	Macroinvertebrate Community Index – Exotic Macroinvertebrate Community Index – Native Macroinvertebrate Community Index – Rural Arterial Roads Coastal Inundation 1 per cent AEP Plus 1m Control – 1m sea level rise.

Features	Description
Existing designations	Designations - 6763, State Highway 1 - Puhoi to Kaipara District Boundary and Silverdale Interchange improvements, Designations, New Zealand Transport Agency
Human environment	
Transport	*Existing Environment* Sandspit Road is a rural road with two vehicle lanes (one in each direction) with a 50km/h speed limit on approach to the Hill Street intersection, 80km/h to the access road to the quarry and becomes unrestricted further east toward the edge of the FUZ. The corridor form is consistent, with no kerb and channel on either side of the corridor and no footpaths. The road connects to SH1 at its western extent via the Hill Street intersection. Much of the corridor has no existing walking and cycling facilities. One bus service (996) operates along this route at a frequency of every 2 hours during the weekdays. The bus route connects Warkworth with Snells Beach and Algies Bay. ADT data shows a count of 8,215 vehicles. There are six intersections along the corridor as follows: Sandspit Road / SH1 – signalised intersection Sandspit Road / Elizabeth Street – priority-controlled intersection Sandspit Road / Millstream Place – priority-controlled intersection Sandspit Road / Matakana Road - priority controlled intersection Sandspit Road / Withers Lane – no control Sandspit Road / Park Lane – no control. *Future Environment* The forecasted ADT for 2048 is 12,000 vehicles with an increased public transport capacity of four buses an hour during peak hour. Planned land use is expected to intensify to urban and residential use. It is expected that the upgraded road will be urban in character with two general traffic lanes (one in each direction) and a central median with a posted speed limit of 50km/h. There will be a consistent corridor form along most of the corridor with cycle lanes and footpaths, with an offline cycle and walking facility between Vipond Culvert and Matakana Road. There will be seven intersections along the corridor as follows: Sandspit Road / SH1 – single-lane roundabout (Hill Street Improvements – AT) Sandspit Road / Elizabeth Street – single-lane roundabout (Hill Street Improvements – AT) Sandspit Road / Millstream Place – priority-controlled intersection Sandspit Road / Matakana Road – single-lane roundabout (Hill Street Improvements – AT) Sandspit Road / Withers Lane – priority-controlled intersection Sandspit Road / Park Lane – priority-controlled intersection Sandspit Road / Sandspit Link – single-lane roundabout.
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage sites within the designation footprint that will be impacted by the upgraded transport corridor, however the following archaeological feature is present within the designation footprint: Archaeological site: R09/2263 - Reinforced concrete gravity-arch dam. The current dam was built in 1913 and is associated with the Warkworth Cement Works. It was built on

Features	Description
	the site of an older, 1879 structure which supplied water to steamers. The extant structure is in excellent condition, but the earlier dam is no longer visible. *Future Environment* There is some potential for archaeological or historic material and features from R09/2263 (1913 Gravity-arch dam) to be affected by the road upgrade works. Aside from this, the environment as it relates to historic heritage and archaeological values is otherwise likely to remain the same in the future.
Community and recreational facilities	*Existing Environment* There is a waste transfer station located at 183 Sandspit Road which services the Warkworth area. The western extent of the corridor connects with SH1 is in close proximity to Warkworth Town Centre. The nearest schools are Warkworth Primary School which is located 300m from the western extent of Sandspit Road, and Mahurangi College located 1.2km south. *Future Environment* As the majority of the surrounding land use is likely to be urban in nature in the future, it is likely that further community and recreational facilities will be provided as the population increases. Schools in the area are expected to remain and could grow as the population in the area increases.
Noise and vibration	*Existing Environment* Sandspit Road runs through both urban and rural environments. In the rural area there are relatively few dwellings near the road. The noise environment is dominated by road traffic noise from vehicles using Sandspit Road and the surrounding network. *Likely Future Environment* The land on both sides of Sandspit Road is zoned as FUZ. There is a high likelihood of urban development in the FUZ to the north of the corridor. An increase in ambient noise levels is expected as the area urbanises.
Natural and physical environment	
Geology	Mahurangi Limestone (Northland Allochthon) is mapped in the subject site area. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* Sandspit Road crosses six tributaries of the Mahurangi River. Existing flood prone areas have been identified by Auckland Council GeoMaps along the northern and southern edges of Sandspit Road. *Likely Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. A raised bridge is proposed over the existing stream near Park Lane to mitigate flood impacts in this area. Two wetlands are proposed near the floodplain at the intersection of Matakana Road and Sandspit Road in order to manage and treat runoff from the upgraded roads.

Features	Description
Terrestrial ecology	*Existing Environment* Habitat Sandspit Road generally follows an east-west alignment. The western section crosses over two relatively large Mahurangi River tributaries. The riparian areas associated of both streams are SEAs (the western most stream, north of Sandspit Road and the second tributary to the south of Sandspit Road). Ecological features to the east of the quarry road include exotic shelterbelt, mature roadside planting and exotic grass within a pasture setting. Several relatively larger (exotic) seep wetlands are located to the south of Sandspit Road. Six streams are located in the Sandspit Road upgrade area, each are tributaries of the Mahurangi River. Three existing wetlands as defined by the NES-F are associated with the Sandspit Road upgrade area as follows: WW5-W1 is a natural inland wetland (classified – exotic) that is assessed as being unlikely habitat for TAR species and has a low ecological value WW5-W2 is a natural inland wetland (classified – exotic) that is a known foraging habitat for Australasian bittern. It is also a nesting and foraging habitat for spotless crake. It is assessed as having low ecological value WW5-W3 is a natural inland wetland (classified – exotic) that is a known foraging habitat for Australasian bittern. It is also a nesting and foraging habitat for spotless crake. It is assessed to have low ecological value. Species Long tailed bats have been recorded within a 4.3km radius of the project. A number of avifauna have been observed or are likely to appear in the project area including species such as Australasian bittern, Long-tailed cuckoo, New Zealand pipit, Spotless crake and North Island kākā. There are records of a range of herpetofauna inhabiting the project area including – Copper skink, Elegant gecko, Forest gecko, Ornate skink, Pacific gecko and Hochstetter's frog. *Likely Future Environment* The AUP:OP places emphasis on the protection and enhancement of existing watercourses such as the Mahurangi River, wetlands and areas of natural value, such as riparian vegetation. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Mature trees associated with roadside and shelterbelt are expected to be removed in the future environment as vegetation clearance, (excluding within riparian areas, notable trees and certain street trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario.
Topography and landscape context	*Existing Environment* Sandspit Road is currently a rural road which provides a transit route west into Warkworth Town Centre. Tributaries to the north of Sandspit Road feed down to the Mahurangi River on the south side of the road. Sandspit Road is characterised by roadside planting which is a mix of native and exotic trees and shrubs, as well as open vistas over paddocks, which in places afford views of the vegetated ridgeline to the north. The topography either side of Sandspit Road is steep, with rolling hill country

Features	Description
	characterising the landform north of the road. To the south of road, the land typically rises before sharply descending to the Mahurangi River. The escarpment on the northern side of the Mahurangi River is a significant feature in Warkworth. *Likely Future Environment* In the AUP:OP, the area along Sandspit Road is primarily FUZ, so the area is likely to become urbanised in nature. There is also an area of open space conservation zone to the south of Sandspit Road, adjacent the Mahurangi River, as well as along a tributary at the northwest extent of the designation. Much of the vegetation located in the FUZ is expected to be removed as part of the urbanisation process.

9.8 NOR 6 – Western Link – South

9.8.1 Project overview

A new designation will provide for a new urban arterial corridor with active mode facilities between the intersection of SH1 and McKinney Road and Evelyn Street.

The new Western Link – South will enable development in south Warkworth by providing access for all modes to the southern growth area of Warkworth. The corridor completes the Western Link active mode network contributing to mode shift from private vehicle to active modes for short trips. The corridor will provide efficient east-west access across SH1 for all modes, connecting proposed high-density residential land use to schools and employment. The corridor will provide an alternative north-south route to SH1, reducing the pressure on Woodcocks Road between Mansel Drive and SH1 and improving resilience.

The designation footprint in Figure 9.13 shows the envelope required to construct, operate and maintain the Western Link – South project. The designation footprint includes sufficient space for the intersection with Evelyn Street and SH1, and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

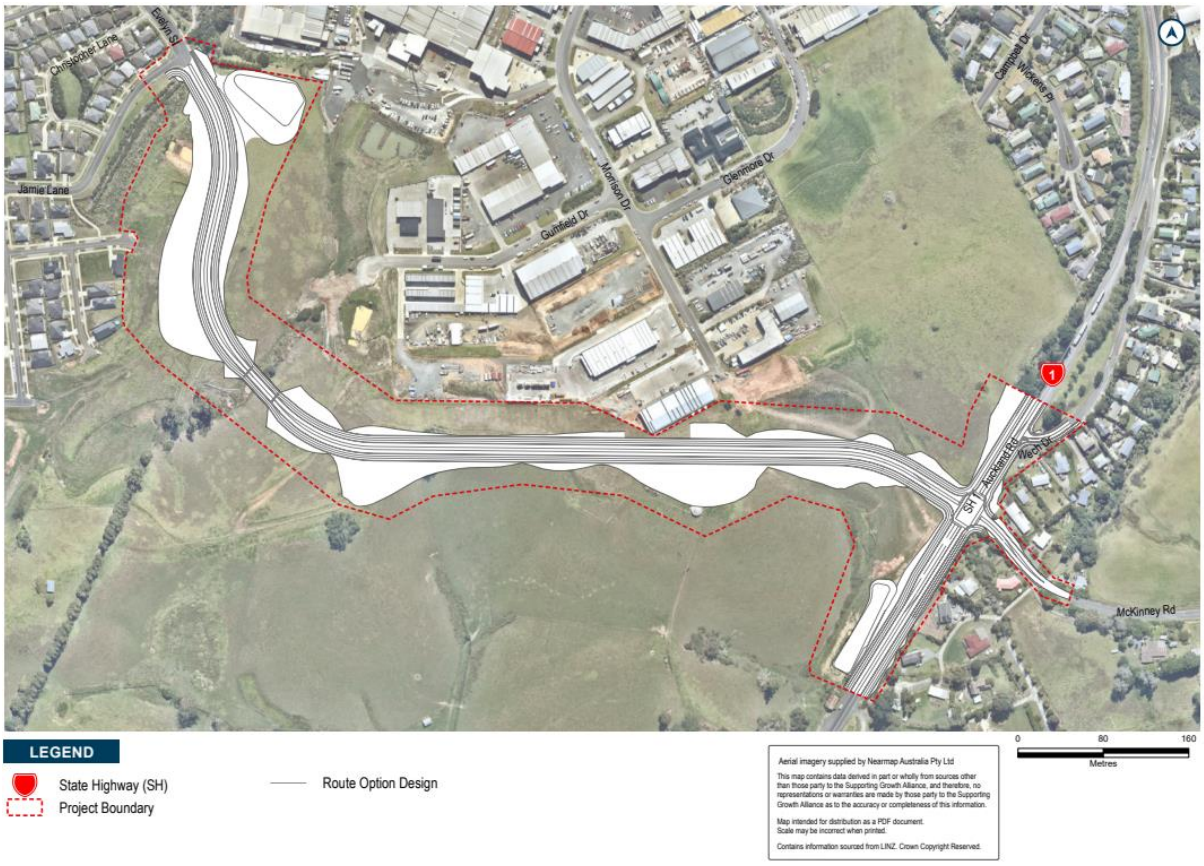


Figure 9.13: NOR 6 – Western Link – South indicative designation footprint

The key features of the Western Link – South project include:

A new urban arterial cross-section with active mode facilities between SH1 and Evelyn Street
Tie-ins with existing roads, and a new intersection at the connection to SH1 and Evelyn Street
New or upgraded, stormwater ponds, bridges and culverts
Batter slopes, and associated cut and fill earthworks
Vegetation removal
Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.14 shows the indicative cross sections for the Western Link – South project.

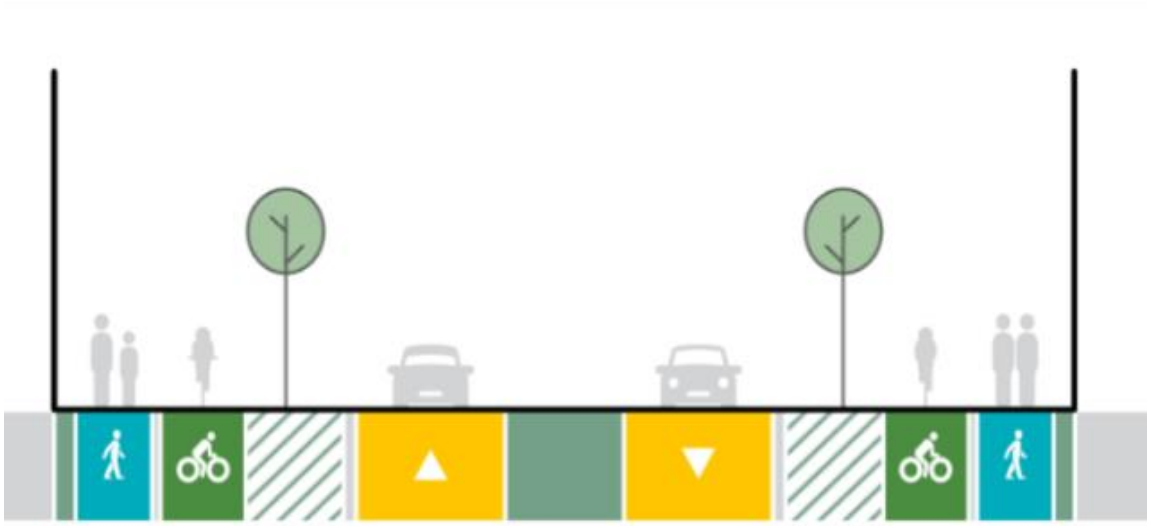


Figure 9.14: NOR 6 – Indicative cross section for the Western Link - South project

9.8.2 Receiving environment for NOR 6

Table 9.6 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.6: Summary of relevant receiving environment features for NOR 6

Features	Description
Planning context and land use	
Current land use and urban form	The alignment is through mostly undeveloped greenfield sites. Surrounding land use is currently rural in nature with large lot residential dwellings. The area to the north-west of the corridor is characterised by medium density residential dwellings, and to the north-east a light industrial area.
Current zoning	Future Urban Zone Business – Light Industrial Zone Residential – Mixed Housing Suburban Zone.
Likely future zoning – Warkworth Structure Plan	Residential – Mixed Housing Suburban Zone Protection Areas / Open Space.
Overlays	High-Use Aquifer Management Areas High-Use Stream Management Areas.
Controls	Macroinvertebrate Community Index – Rural Macroinvertebrate Community Index – Urban Stormwater Management Control Area.
Existing designations	Designations - 6763, State Highway 1 - Puhoi to Kaipara District Boundary and Silverdale Interchange improvements, Designations, New Zealand Transport Agency.
Human environment	

Features	Description
Transport	*Existing Environment* There is no existing road corridor between Woodcocks Road / Evelyn Street and the existing SH1, the existing environment is semi-rural with the existing SH1 running east to west in the south. *Future Environment* The new road corridor will have an urban character with two general traffic lanes (one in each direction) and a central median, with a posted speed limit of 50km/h. There will be consistent corridor form with kerbs and channels on both sides and continuous footpaths and cycle facilities. There will be connections to Woodcocks Road in the north via Evelyn Street, and to SH1 in the south. The indicative 2048 AT bus network forecasts 4 buses during peak hour along the road. The forecast ADT in 2048 is 9,000 vehicles. There will likely be two intersections as follows: Western Link – South / Jamie Lane – priority-controlled intersection Western Link – South / SH1 / McKinney Road – signalised intersection.
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage or archaeological sites on the subject site. Any unrecorded archaeological sites are protected under provisions of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) but will not be uncovered until works commence (if present). *Future Environment* The existing environment as it relates to historic heritage and archaeological values is likely to remain the same in the future.
Community and recreational facilities	*Existing Environment* There are no community or recreational facilities in the immediate corridor area. Mahurangi College is located on Woodcocks Road, less than 1km away from the northern extent of the corridor. Warkworth Primary School is located less than 2km north of the corridor. Rodney Surgical Centre is located on Morrison Drive, adjacent to the corridor. *Future Environment* The Warkworth Structure Plan indicates the location for a possible new school on Woodcocks Road, west of Mahurangi college. As the surrounding greenfield area urbanises, it is likely that more recreational and community facilities will be constructed. The Warkworth Structure Plan also indicates potential areas of open space adjacent to the corridor.
Noise and vibration	*Existing Environment* Western Link – South is not an existing corridor. The corridor area is predominantly greenfield. The noise environment is dominated by road traffic noise from vehicles on the nearby roading network, including SH1 to the south. *Future Environment* The new corridor will travel through area currently zoned as FUZ. The Warkworth Structure Plan indicates the area will be predominantly residential, with Business – Light Industry remaining in the north. This will likely result in an increase in ambient

Features	Description
	noise, and an increase in road traffic noise as a consequence of the new road.
Natural and physical environment	
Geology	Pakiri Formation of Warkworth Subgroup (Waitemata Group) is mapped in the subject site area. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* The greenfield area currently has some small stream tributaries which feed into the Mahurangi River downstream. Some existing flood prone areas have been identified by Auckland Council GeoMaps, mainly associated with these streams. *Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. The new Western Link - South alignment crosses a small stream near the centre of the alignment. Two wetlands are proposed at either end of the road alignment.
Terrestrial ecology	*Existing Environment* <u>Habitat</u> The western portion of the corridor crosses an unnamed stream / wetland complex (tributary of the Mahurangi River), while the central and eastern sections aligning near the hilltop and avoids direct effects to several downslope headwater wetland systems. Two streams are associated with the Western link – South, both of which are tributaries of the Mahurangi River. Two wetlands are associated with the Western Link – South as follows: WW6-O1 is an artificial wetland (classified – open water) and is assessed as having a low ecological value WW6-W1 is classified as a Raupō reedland (WL19). It is a natural inland wetland that is known to support foraging of Australasian bittern. It is also a knowing nesting a foraging area for spotless crake. It has been assessed as having a moderate ecological value. <u>Species</u> Long-tailed bats have been recorded within a 2.7km radius of the project area. A number of avifauna have been observed or are likely to appear in the project area including Australasian bittern, New Zealand pipit and Spotless crake. There are records of Copper skinks inhabiting the project area. *Likely Future Environment* The AUP:OP places emphasis on the protection and enhancement of existing watercourses such as the Mahurangi River, wetlands and areas of natural value, such as riparian vegetation. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Mature trees associated with roadside and shelterbelt are expected to be removed in the future environment, as

Features	Description
	vegetation clearance (excluding within riparian areas, notable trees and certain street trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario.
Topography and landscape context	*Existing Environment* The designation and surrounding area are currently predominately a rural landscape. There are residential and light industrial areas to the north of the corridor. The area is home to a distinctive knoll. The north of which slopes steeply down towards the adjacent industrial buildings, with existing buildings cut into the hillside. *Likely Future Environment* According to the zoning in the AUP:OP, it is anticipated that the industrial area will extend through part of the designation. The remaining area is primarily FUZ meaning the area will likely be urbanised in nature. There is also a proposed area of informal recreation space existing at the northern edge of the designation.

9.9 NOR 7 – Sandspit Link

9.9.1 Project overview

A new designation will provide for a new urban arterial cross-section with active mode facilities between the intersection of Matakana Road and Te Honohono ki Tai (Matakana Link Road) and Sandspit Road.

The new Sandspit Link will enable development in north-east Warkworth by providing multi-modal access to the north-east growth area of Warkworth. This direct connection will also provide an alternative route between Ara Tūhono (Pūhoi to Warkworth) motorway and the wider coastal settlements such as Sandspit and Snells Beach, avoiding the Hill Street intersection and increasing resilience. The new dedicated walking and cycling facilities will support mode shift for the north-eastern growth area and will improve active mode access to the Warkworth Town Centre.

The designation footprint in Figure 9.15 shows the envelope required to construct, operate and maintain the Sandspit Link project. The designation footprint includes sufficient space for the intersections with Sandspit Road, and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

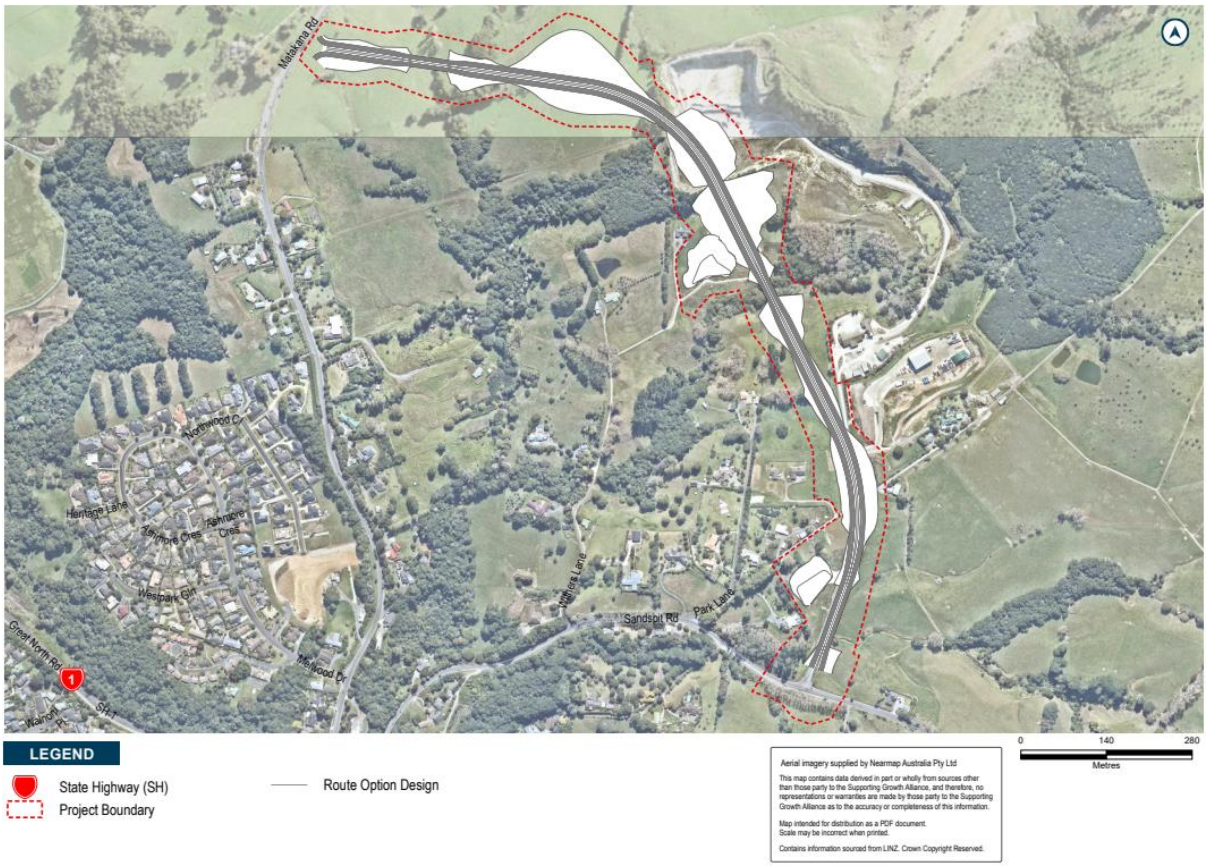


Figure 9.15: NOR 7 – Sandspit Link indicative designation footprint

The key features of the Sandspit Link project include:

A new urban arterial cross-section with active mode facilities between the Matakana Road and Te Honohono ki Tai intersection and Sandspit Road

Tie ins with existing roads and new intersections at the connection with Sandspit Road and Matakana Road

New or upgraded stormwater ponds, bridges and culverts (where required)

Batter slopes, and associated cut and fill earthworks

Vegetation removal

Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.16 shows the indicative cross sections for the Sandspit Link project.

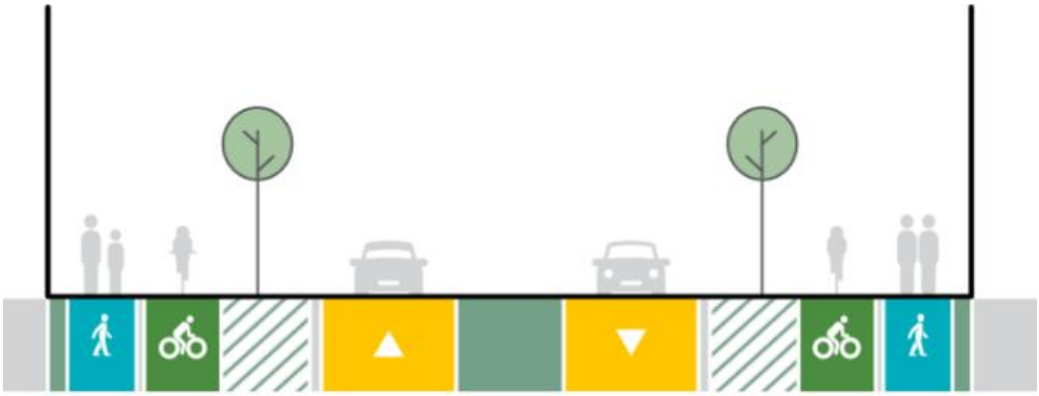


Figure 9.16: NOR 7 – Indicative cross section for the Sandspit Link project

9.9.2 Receiving environment for NOR 7

Table 9.7 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.7: Summary of relevant receiving environment features for NOR 7

Features	Description
Planning context and land use	
Current land use and urban form	Current land uses surrounding the Sandspit Link are rural in nature with large lot residential dwellings set back from the southwestern extent. A recycling plant is situated to the southeast of the site and an operational limestone quarry is located to the northeast of the site. There are construction activities associated to the new Te Honohono ki Tai along the northern edge of the site.
Current zoning	Future Urban Zone Open Space – Conservation Zone Special Purpose Zone – Quarry.
Likely future zoning – Warkworth Structure Plan	Residential – Large Lot Zone Residential – Mixed Housing Urban Zone Residential – Mixed Housing Suburban Zone Residential – Single House Zone.
Overlays	High-Use Aquifer Management Areas Overlay Quarry Buffer Area Overlay.
Controls	Macroinvertebrate Community Index.
Existing designations	Designation 1478 - Matakana Road Link – State Highway 1 to Matakana Road, Warkworth, Auckland Transport.
Human environment	
Transport	*Existing Environment* There is no existing road corridor in the area. The existing environment is undeveloped greenfield with Matakana Road running east to west in the north and Sandspit Road

Features	Description
	running east to west in the south. A road associated with the limestone quarry (Quarry Road) intersects with Sandspit Road in the south and currently services access to residential dwellings, the quarry, and the recycling plant. *Likely Future Environment* It is expected that the corridor will have an urban character with two general traffic lanes, cycle lanes and footpaths on both sides of the corridor, with a posted speed limit of 50kph. It will facilitate access to the planned growth within this area as well as improve connectivity between Matakana and Kōwhai Coasts. The forecast ADT in 2048 is 4,000 vehicles, whilst there are no bus routes proposed under the indicative 2048 AT bus network along the Sandspit Link, the corridor cross-section will provide adequate spacing to facilitate public transport and associated bus stops if bus services are proposed in the future. The corridor will merge with the current Quarry Road and become the southern section of Sandspit Link as it forms an intersection with Sandspit Road in the south. The corridor will also form an intersection with Matakana Road and Te Honohono ki Tai in the north. Details of these intersections are as follows: Sandspit Link / Matakana Road / Te Honohono ki Tai – single-lane roundabout Sandspit Link / Sandspit Road – single-lane roundabout.
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage or archaeological sites along the designation corridor. Any unrecorded archaeological sites are protected under provisions of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) but will not be uncovered until works commence (if present). *Likely Future Environment* The existing environment as it relates to historic heritage and archaeological values is likely to remain the same in the future.
Community and recreational facilities	*Existing Environment* There are no community and recreational facilities near the designation corridor. The Warkworth Town Centre is located approximately 2 km from the site and the Warkworth Showgrounds is approximately 2.9 km west of the site. *Likely Future Environment* The subject site and surrounding land uses are expected to be zoned for residential land uses, as a result it is likely community and recreational activities will be provided in close proximity to the area as the population increases.
Noise and vibration	*Existing Environment* The Sandspit Link runs through a rural environment with few dwellings. Currently, the noise environment is encompassed of road traffic noise from Matakana Road as well as noise associated to the nearby limestone quarry. *Likely Future Environment* The subject site and surrounding land uses are expected to be zoned for residential land uses which would result in an increase in ambient noise levels as the area urbanises.
Natural and physical environment	

Features	Description
Geology	Mahurangi Limestone (Northland Allochthon) is mapped in the subject site area. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* The corridor crosses six existing streams varying in upstream catchment size. There are predicted flood plains along the three major streams, with minor flooding mapped along the three other streams. *Likely Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. The road slopes from Sandspit Road intersection at approx. 42m RL to approx. 65m RL at the Matakana Road intersection. There are deep cuttings at the Matakana Road end of the alignment where flow will need to be conveyed through them and drains at the top of the cuttings to divert water away from the cutting faces. There are two proposed wetlands with one near the centre of the alignment and the second by Sandspit Road.
Terrestrial ecology	*Existing Environment* <u>Habitat</u> The northern portion of the Sandspit Link area is rural in nature with two patches of mature native forest (largely modified podocarp broadleaved forest dominated by Totara canopy) assessed as having high value, mature exotic treeland assessed as having moderate value and exotic grass. The southern portion of the corridor area is mostly associated with existing planting, shelterbelt, and exotic grass having low value. Eleven streams are within the designation footprint, seven are classed as intermittent and four as permanent. Eight natural wetlands as defined under NES-F are associated with the Sandspit Link, they are: WW7-W1, WW7-W2, WW7-W4, WW7-W5, WW7-W6, WW7-W7, WW7-W8 are all natural inland wetlands. They have been assessed as having low ecological value and are not likely supportive habitats for TAR species. WW7-W3 is a natural inland wetland known as a foraging habitat for Australasian bittern. It is also a known foraging and nesting area for spotless crake. It has been assessed as having a moderate ecological value. <u>Species</u> Mature trees associated to the native forest in the northern portion of the corridor area could provide suitable habit for bats. Therefore, bat use of the area cannot be excluded from consideration. Incidental observations of bird species were noted. The most commonly noted birds were introduced species including Blackbird, Chaffinch, Common Pheasant, Eastern Rosella, House Sparrow, Skylark, as well as not threatened native species including Tūi, Welcome Swallow, Spur Winged Plover, Swamp Harrier, Pūkeko, Kingfisher, and Paradise Shelduck. Six indigenous lizards are likely to be present within and adjacent to the corridor. This includes Hochsetter's Frog, Ornate Skink, Forest Gecko, Elegant Gecko, Copper Skink and Pacific Gecko

Features	Description
	Due to the presence of native forest and dense leaf litter within the corridor area it is likely that flax snails, large land snails, and Auckland tree wēta are present. *Likely Future Environment* The AUP:OP places emphasis on the protection of and enhancement of existing watercourses, wetlands and areas of natural value. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Shelterbelts are expected to be removed in the future environment (as vegetation clearance, excluding within riparian areas, notable trees and certain street trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario.
Topography and landscape context	*Existing Environment* The transport corridor is set within a currently rural landscape. This character is contributed to by extensive areas of pasture, fence lines, farm infrastructure (such as water tanks), and linear patterns of farm trees and shelterbelts. There are residential properties scattered towards the southern extent of the designation and quarrying activity is present to the northeast. The area is located near a notable hill (below the prominent ridgeline) to the north of Warkworth Town Centre. There are several streams within the area that have dense riparian vegetation. *Likely Future Environment* It is expected that the future area of the designation and surrounding landscape will be largely urbanised in the future (FUZ), with a small area of open space conservation land along the lower extent of some tributaries.

9.10 NOR 8 – Wider Western Link – North

9.10.1 Project overview

A new designation will provide for a new urban arterial cross-section with active mode facilities between Woodcocks Road and the Mahurangi River, known as the Wider Western Link – North.

The new Wider Western Link – North will provide a new north-south connection between Woodcocks Road and SH1. It will connect to the Southern Interchange on Ara Tūhono (Pūhoi to Warkworth) motorway via a new arterial connection. The multimodal corridor will provide direct access for all modes to the south-western growth area of Warkworth and in particular will connect the proposed high density residential land use to the proposed local centre and provide access to key future heavy industrial land which will provide local employment.

The corridor will also provide a continuous active mode facility to connect into the wider Warkworth active mode network. It will also serve as a key public transport route connecting South Warkworth to the rest of the public transport network, as well as supporting access to the proposed Southern Public Transport Interchange, enabling regional bus services within Warkworth as well interregional bus trips via the Southern Interchange.

The southern section of the Wider Western Link corridor from the Mahurangi River through to the intersection with SH1 is not being designated as part of the Warkworth Package. It is anticipated that this section will be delivered by the landowner who intends to develop the area via a plan change –

refer to previous commentary on Waimanawa (Warkworth South) proposed plan change in section 9.1.2. However, to ensure the continuity of the link and to provide for the completion of the southern section of the corridor, the corridor's intersection with the existing SH1 and the crossing of the Mahurangi River will be included as 'anchor points' in the designation for this NOR. The intersection will not be constructed during the construction of the Wider Western Link – North but will remain as a fixed tie in point for the southern section of the Wider Western Link as it is provided.

The designation footprint in Figure 9.17 shows the envelope required to construct, operate, and maintain the Wider Western Link – North project. The designation footprint includes sufficient space for its intersection with Woodcocks Road, and all ancillary components including construction areas, stormwater infrastructure, batter slopes and retaining walls.

Figure 9.17: NOR 8 – Wider Western Link – North indicative designation footprint

The key features of the Wider Western Link – North project include:

A new urban arterial cross-section with active mode facilities from Woodcocks Road to the Mahurangi River
Tie ins with existing roads and upgrades of existing intersections
New or upgraded stormwater ponds, bridges and culverts (where relevant)
Batter slopes, and associated cut and fill earthworks
Vegetation removal
Other construction related activities required outside the permanent corridor including the re-grade of driveways, construction traffic manoeuvring and construction laydown areas.

Figure 9.18 shows the indicative cross section for the Wider Western Link – North project.

Figure 9.18: NOR 8 – Indicative cross section for the Wider Western Link – North project

9.10.2 Receiving environment for NOR 8

Table 9.8 provides a summary of the relevant receiving environment features within which the project will be constructed, operated, and maintained.

Table 9.8: Summary of relevant receiving environment features for NOR 8

Features	Description
Planning context and land use	
Current land use and urban form	Land uses surrounding the Wider Western Link – North are comprised of generally rural activities with a limited number of large lot residential dwellings along its north and southeast extent. The Ara Tūhono (Pūhoi to Warkworth) motorway currently under construction runs along the western extent the corridor.
Current zoning	Future Urban Zone Open Space Conservation Zone.
Likely future zoning – Warkworth Structure Plan	Business - Heavy Industry Zone Open Space Conservation Zone. The southern portion of the corridor that is not the subject of this NOR is anticipated to have the following future zoning: Residential – Large Lot Zone Residential – Mixed Housing Suburban Zone Residential – Mixed Housing Urban Zone Business – Local Town Centre.
Overlays	High-Use Stream Management Areas High-Use Aquifer Management Areas Natural Stream Management Areas Significant Ecological Areas (Terrestrial).
Controls	Macroinvertebrate Community Index.

Features	Description
Existing designations	Designation 6769 - State Highway 1 – Puhoi to Warkworth, New Zealand Transport Agency (to the west of the alignment)
Human environment	
Transport	*Existing Environment* There is no existing road corridor between Woodcocks Road and the existing SH1, the existing environment is rural with the existing SH1 running east to west in the south. Wyllie Road is an existing road corridor which has been reformed as a cul-de sac due to the provision of Ara Tūhono (Puhoi to Warkworth) motorway, and which has an intersection with Woodcocks Road. *Likely Future Environment* The Wider Western Link will be a new arterial corridor on the Warkworth transport network. The corridor is expected to have an urban character with two general traffic lanes and cycle lanes and footpaths on both sides of the corridor, and a posted speed of 50kph. The Wider Western Link – North will merge with the northern portion of the existing Wyllie Road to connect to Woodcocks Road at the location of the existing intersection. By utilising the existing Wyllie Road connection, the corridor will reduce the number of intersections on Woodcocks Road, improving safety and efficiency on the Woodcocks Road corridor. The corridor will connect Woodcocks Road with the existing SH1. In addition, the corridor will provide a strategic connection to the motorway network (Ara Tūhono (Puhoi - Warkworth) motorway) via the Southern Interchange. The indicative 2048 AT bus network forecasts one core frequent bus service which will use the northern portion of the Wider Western Link. This service is forecast to operate every 15 minutes in the peak commute hours, and every 30 minutes outside of the peak. The forecast ADT in 2048 is 10,000 vehicles. There will be two intersections along the road including: Wider Western Link / Woodcocks Road – single-lane roundabout Wider Western Link / Link to Southern Interchange – single-lane roundabout.
Historic heritage and archaeological values	*Existing Environment* There are no recorded historic heritage sites within the designation footprint, however the following heritage feature is within proximity to the designation footprint: Auckland Council CHI site: 17004 (WWII Campsite). This site was recorded in 2007, a field assessment completed for the purpose of this project found no visible evidence related to the campsite. *Likely Future Environment* The existing environment as it relates to historic heritage and archaeological values is likely to remain the same in the future. CHI – 17006 is likely to remain unchanged (if present).
Community and recreational facilities	*Existing Environment* There are no community or recreational facilities within the Wider Western Link designation. There are existing community facilities to the east of the corridor including Mahurangi College (approximately 2.2 km), Mitre 10 Mega (approximately 1.7km) and Summerset Falls Rest Home (approximately 1.4 km). *Likely Future Environment*

Features	Description
	It is likely that additional community and recreational facilities will be provided within the subject site as development occurs and the population in the surrounding area grows. This includes a proposed school on Woodcocks Road, and high-density residential land use and a Local Town Centre to the south of the corridor as identified in the Warkworth Structure Plan.
Noise and vibration	*Existing Environment* The Wider Western Link – North runs through a predominantly rural area with some residential dwellings located close to the road corridor (Woodcocks Road). The noise environment is dominated by road traffic noise from vehicles on Woodcocks Road. *Likely Future Environment* The Wider Western Link – North is located on land which is zoned as FUZ. There is a high likelihood of urban development within this area signalled by the Warkworth Structure Plan which identifies a future change to Business – Heavy Industrial Zone in the northern section of the alignment and residential land uses in the southern section of the alignment. This zoning would likely result in an increase in ambient noise levels as the area urbanises compared to the current rural nature.
Natural and physical environment	
Geology	The transport corridor is identified as being within the Tauranga Group Alluvium and the Pakiri Formation which is part of the Waitematā Group after the Mahurangi River crossing. The geological conditions are not anticipated to vary in the future.
Hydrology and natural hazards, including watercourses	*Existing Environment* The Mahurangi River runs east-west along the southern portion of the Wider Western Link – North. The river has a large catchment upstream with flood plains surrounding the river alignment. *Likely Future Environment* Although urban development is anticipated to change the hydrological environment through increases to impervious surface and associated runoff, the natural hazard conditions are not expected to significantly vary in the future, provided new urban development manages its flooding effects. The new road will cross the Mahurangi River using appropriately sized bridges and / or culverts. There are two proposed wetlands along the alignment, one beside the intersection with Woodcocks Road and one near the southern end of the road.
Terrestrial ecology	*Existing Environment* <u>Habitat</u> The northern section of the corridor area is a section of the existing Wyllie Road, while the rest of the area consists of pasture and a native planted wetland. The central portion is associated with exotic pasture while the south-eastern portion crosses a first order stream and floodplain wetlands of the Mahurangi River (Right Branch). The riparian vegetation associated with the Mahurangi River is generally consistent with semi-mature regenerative forest (Kanuka / manuka). The Mahurangi River (Right Branch) classed as high value is within the designation footprint and three of its tributaries, two which are intermittent and one which is permanent are within the project area. Four natural wetlands as defined under NES-F are within the Wider Western Link – North area, they are:

Features	Description
	WW8-W1 is a natural inland wetland that is a known nesting and foraging habitat for dabchick and spotless crake. It is also a foraging habitat for Australasian bittern. It has been assessed as having a moderate ecological value WW8-W2 is a natural inland wetland assessed as having a low ecological value. It is not likely to support TAR birds WW8-W3 is a natural inland wetland assessed as having a low ecological value. It is not likely to support TAR birds WW8-W4 is a natural inland wetland and is a known nesting and foraging area for spotless crake. It is also a foraging habitat for Australasian bittern. It has been assessed as having a moderate ecological value. <u>Species</u> Existing desktop records confirm there are long-tailed bat records within 1.6km to the south the Wider Western Link – North area, within SEA_T_2367 adjacent to Wyllie Road. Incidental observations of bird species were noted. The most commonly noted birds were introduced species including Chaffinch, Common Pheasant, Goldfinch, Starling, as well as not threatened native species including Tūi, Grey Warbler, and Fantail. Five indigenous lizards are likely to be present within and adjacent to the corridor. This includes Ornate Skink, Forest Gecko, Elegant Gecko, Copper Skink and Pacific Gecko. *Likely Future Environment* The AUP:OP places emphasis on the protection of and enhancement of existing watercourses, wetlands and areas of natural value. If these features are retained, in a future scenario, these features of ecological value could be similar or in some cases enhanced. It is also assumed that stormwater management will be provided, and sediment and pollutants will be controlled through development applications. Shelterbelts are expected to be removed in the future environment, as vegetation clearance (excluding within riparian areas, and notable trees) is permitted under the AUP:OP and unlikely to remain in an urbanised scenario. It is additionally assumed that impact management will be provided to ensure the protection of wildlife species.
Topography and landscape context	*Existing Environment* The transport corridor is set within a currently rural landscape. This character is contributed by extensive areas of pasture, fence lines, farm infrastructure (such as water tanks), and linear patterns of farm trees and shelterbelts. There is low density residential property in the southwestern area near Valerie Close. The Mahurangi River crosses the area with dense riparian vegetation flanking it. *Likely Future Environment* The Ara Tūhono (Puhoi to Warkworth) motorway and associated Warkworth interchange currently under construction will flank the western side of the area. As part of the AUO:OP zoning, it is expected that the future area of the designation and surrounding landscape will be largely urbanised in the future (FUZ). Much of the vegetation in the area will be removed to account for this urbanisation.

9.11 Overview of NORs

Table 9.9 provides an overview of the purpose, objectives, lapse period and affected properties for each NOR in the Warkworth Package.

Table 9.9: Overview of the Warkworth Package – purpose, objectives, lapse period and affected properties.

Notice	Project	Purpose	Objectives	Lapse period	Overview of affected properties
NOR 1	Northern Public Transport Hub and Western Link – North	Construction, operation and maintenance of a transport facility and transport corridor.	Provide for a transport interchange with associated facilities and park and ride, and a new transport corridor between the existing State Highway 1 and the Western Link North (Northern Section) that: a) Improves connectivity b) Is safe c) Improves access to the public transport network d) Is efficient, resilient, and reliable e) Integrates with and supports planned urban growth f) Integrates with and supports the existing and future transport network.	20 years	Total: 4
NOR 2	Woodcocks Road (Western Section)	Construction, operation, and maintenance of a transport corridor	Provide for an upgrade to Woodcocks Road between Mansel Drive and Ara Tūhono (Puhoi to Warkworth) that: a) Improves connectivity Improves safety b) Is efficient, resilient and reliable c) Integrates with and supports planned urban growth d) Integrates with and supports the existing and future transport network e) Improves travel choice and contributes to mode shift.	15 years	Total: 25
NOR 3	State Highway 1 – South	Construction, operation and maintenance of a transport corridor	Provide for an upgrade to the existing State Highway 1 corridor between the intersection with Fairwater Road and the southern Rural Urban Boundary that:	15 years	Total: 74

Notice	Project	Purpose	Objectives	Lapse period	Overview of affected properties
			a) Improves connectivity b) Improves safety c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.		
NOR 4	Matakana Road	Construction, operation and maintenance of a transport corridor	Provide for an upgrade to Matakana Road between the Hill Street intersection and the northern Rural Urban Boundary that: a) Improves connectivity b) Improves safety c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	15 years	Total: 36
NOR 5	Sandspit Road	Construction, operation and maintenance of a transport corridor	Provide for an upgrade to Sandspit Road between the Hill Street intersection and the eastern Rural Urban Boundary that: a) Improves connectivity b) Improves safety c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	25 years	Total: 29
NOR 6	Western Link – South	Construction, operation, and maintenance of a	Provide for a new transport corridor between Evelyn Street and the intersection with the existing State Highway 1 and McKinney Road that:	20 years	Total: 18

Notice	Project	Purpose	Objectives	Lapse period	Overview of affected properties
		transport corridor	a) Improves connectivity b) Is safe c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift		
NOR 7	Sandspit Link	Construction, operation, and maintenance of a transport corridor	Provide for a new transport corridor between Matakana Road and Sandspit Road that: a) Improves connectivity b) Is safe c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift	25 years	Total: 20
NOR 8	Wider Western Link – North	Construction, operation, and maintenance of a transport corridor	Provide for a new transport corridor between Woodcocks Road and the Wider Western Link (Southern Section), and the intersection with the existing State Highway 1 that: a) Improves connectivity b) Is safe c) Is efficient, resilient and reliable d) Integrates with and supports planned urban growth e) Integrates with and supports the existing and future transport network f) Improves travel choice and contributes to mode shift.	20 years	Total: 13

10 Positive effects of the network

The Warkworth Package will play a vital role in the success of new neighbourhoods in Warkworth by providing safe, accessible and sustainable travel choices that connect communities and encourage a transformational shift from private vehicles to public transport, walking and cycling.

The early protection of the Warkworth Package will provide for the following outcomes:

Supporting and enabling growth: Protecting improved and new transport corridors will support Auckland Council's growth aspirations for the growth areas of Auckland, including intensification or density of growth, resulting in more efficient urban land development.

Improved access to economic and social opportunities and resilience of the strategic transport network: Protecting improved and new transport corridors will:

Improve travel choices and access to the critical economic and social needs of the existing and future communities;
Reduce an over-reliance on existing strategic transport corridors;
Better align the form and function of existing transport corridors with the planned urban form; and
Support freight service operations for business in the industrial and commercial areas of Warkworth, particularly in the southern growth area adjacent to Ara Tūhono (Puhoi to Warkworth) motorway.

Transformational mode shift: The Warkworth Package supports a shift from private vehicles to public transport, walking and cycling which will provide for greater people moving capacity and travel choice for all people as the city grows, and will support lower carbon travel choices.

Land use and transport integration: Integrating future transport outcomes with Auckland Council's aspirations for land use and urban form can provide for growth in a way that delivers high quality urban outcomes, place making and enhanced liveability including the desire for a quality, connected urban environment.

Improved safety: Protecting improved and new transport corridors will help to address existing and increasing safety risks on transport corridors as growth areas urbanise, including:

Provision of dedicated space for cyclists and pedestrians to safely accommodate these modes
Specific safety improvement projects, such as improvements to existing transport corridors.

Sustainable outcomes: Protecting improved and new transport corridors will support the Government's policy shift towards more sustainable outcomes through effective land use and transport integration and supporting mode shift towards more sustainable travel choices such as public transport and walking and cycling.

Infrastructure integration: Integrating the transport response with the needs and opportunities of network utility providers to provide a better whole of system outcome as Te Tupu Ngātahi will provide space for utility provision within its conceptual design.

11 Māori culture, values and aspirations

This section draws on engagement that has been undertaken with Manawhenua and inputs provided by Manawhenua representatives during the preliminary design of each corridor. In developing the transport corridors, recognition has been given to both the relationship of Tangata Whenua to their lands, culture and traditions in the Warkworth area and the commitment to partnership between Manawhenua and AT (as a representative of the Crown) founded through Te Tiriti o Waitangi.

A Cultural Impact Assessment (CIA) has been provided by Ngāti Manuhiri.

11.1 Methodology

Only Manawhenua can speak to the impact that a project may have on their cultural values, heritage and aspirations. The methodology for assessing effects has been to engage with Manawhenua representatives and seek input on the potential impacts of each corridor.

Te Tupu Ngātahi maintains a Manawhenua forum (for operational and kaitiaki level discussions), with specific discussion on the future network proposed by Te Tupu Ngātahi for Warkworth. This has involved presenting to Manawhenua on a regular basis, seeking input on the corridor development and potential effects on cultural values. This has informed the corridor alignments and the mitigation measures proposed.

At the beginning of the Te Tupu Ngātahi Supporting Growth Programme, all iwi representatives were invited. As specific projects developed, iwi interests became more focused. Iwi with specific interests in the Warkworth area and who regularly attended project hui include Ngāti Manuhiri, Ngāti Maru, Ngāti Tamatera, Ngāti Whanaunga, Te Ākitai Waiohua, Ngai Tai Ki Tamaki; Ngāti Whātua o Kaipara, Ngāti Paoa Trust Board, Te Kawerau a Maki, Te Runanga o Ngāti Whātua, Te Patu Kirikiri and Ngāti Paoa Iwi Trust.

11.2 Manawhenua feedback

The project team engaged with Manawhenua on the Warkworth programme prior to and during wider community engagement, primarily through the Te Tupu Ngātahi Manawhenua forum, with Manawhenua also attending Project workshops. Ngāti Manuhiri also facilitated a cultural induction for Te Tupu Ngātahi Warkworth project team members.

We heard from Manawhenua that they were generally supportive of the proposed long-term transport network. Manawhenua highlighted to the project team a number of considerations, including:

1. Preference to avoid locating infrastructure within floodplains
2. Minimising environmental impacts, particularly those on streams, wetlands, and the Mahurangi River, as well as flooding impacts
3. Avoiding areas of cultural significance to Manawhenua
4. Retaining and enhancing connectivity to communities.

The project team broadly heard about the areas of interest to Manawhenua (as noted above), as well as any complexities and features to consider. We also heard about the importance of the Mahurangi River, as well as the proximity of floodplain areas to some projects, notably the new Wider Western

Link corridor. We also heard that there are ecologically sensitive areas around the new Sandspit Link study area.

11.3 Cultural Impact Assessment

The project team invited all Manawhenua groups to prepare to prepare CIAs for the project in December 2021. The team received the below responses following on from the invitation:

Ngāti Manuhiri – accepted the invitation and have provided a CIA to the project team.

11.4 Manawhenua Treaty areas and sites of significance

The upgraded and new transport corridors do not directly affect any identified properties or land currently being negotiated under Treaty settlements, land returned under a Treaty settlement, marae, Māori freehold lands, Tupuna Maunga Affected Areas, Tangata Whenua Management Areas, or Sites of Significance under the AUP:OP. The sites are also not within the coastal environment under the Marine and Coastal Area (Takutai Moana) Act 2011, therefore there are no customary marine title areas / groups or protected customary rights that need to be considered in relation to these corridors.

The transport corridors do not fall within or are not in proximity to Ngāti Manuhiri statutory acknowledgement areas (recorded in Appendix 21.3 of the AUP:OP).

11.5 Recommended measures to avoid, remedy or mitigate potential adverse effects

The following measures are proposed to avoid, remedy or mitigate potential adverse effects from the projects:

General: Manawhenua groups will be invited to prepare a Cultural Advisory Report in advance of the detailed design. This will assist in understanding and identifying treasures which may be affected by the project and inform their management and protection

Cultural design and expression: Manawhenua will be invited to participate in the development of the ULDMP to input into relevant cultural landscape and design matters on each corridor. This includes the management of potential effects on cultural sites, landscapes, and values, how corridor features will integrate with the corridor as a whole, including any proposed mitigation, and how the transport corridors can contribute to or reduce effects on the relevant cultural landscape. The ULDMP is provided for via a condition on each NOR

Risk of archaeological discovery: A Cultural Monitoring Plan will be prepared prior to the start of construction works or enabling works. These plans will be prepared in collaboration with Manawhenua so that the effects are managed appropriately, including where features discovered by accident. Archaeological mitigation will be in line with the recommendations of the Assessment of Archaeological Effects (Volume 4) and Section 18 of this AEE

Construction environmental controls: Construction works and the associated potential impacts of sediment on streams and wetlands will be considered through the CEMP, and future regional consents. The construction methodology and environmental controls are discussed in Section 8 of this AEE report. Detailed design will provide the opportunity to reduce earthwork extents, where practicable

Impacts on biota: Construction and operational impacts on fish, lizards, birds and bats have been considered through the Assessment of Ecological Effects (Volume 4) and Section 15 of this AEE report. An Ecological Management Plan (EMP) which includes Bat Management Plans (BMP) and Avifauna Management Plans (AMP) are proposed where potential adverse effects have been identified for these species

Riparian vegetation: Effects and mitigation for impacts on riparian vegetation will be considered at the detailed design stage, for those corridors that have impacts on streams. Where there is known impact on riparian vegetation due to a crossing or culvert design, suitable space for future mitigation planting has been included in the designation footprint, however mitigation will be confirmed under regional consents

Engagement: A Stakeholder and Communications Engagement Management Plan (SCEMP) will be prepared prior to the start of construction works or enabling works. This plan will include details of the specific methods for engaging with manawhenua, with these methods to be developed in consultation with manawhenua.

11.6 Summary of effects on Māori culture, values and aspirations

Te Tupu Ngātahi has engaged with Manawhenua from the commencement of the Te Tupu Ngātahi programme, through corridor identification, development and NOR preparation. The upgraded and new transport corridors do not directly impact on AUP:OP mapped sites of significance, however there is the potential for impacts on cultural values to the natural environment and cultural landscape context, identified through direct engagement with Manawhenua. It is considered that the recommendation above is appropriate to adequately manage these impacts.

12 Traffic and transportation

The potential effects of the Warkworth Package on traffic and transportation have been assessed in the Assessment of Transport Effects report in Volume 4. The summary below should be read in conjunction with the specialist report.

12.1 Methodology

Given the long-term nature of the transport corridors, the interim staging of individual transport corridors over the next three decades has not been assessed but instead the effects assessment has been undertaken on the likely future environment, based on the full build out of future urban areas. There are several transportation projects being developed separately in Warkworth including: Ara Tūhono (Puhoi to Warkworth) motorway, Te Honohono ki tai – Matakana Link Road, Hill Street intersection upgrades, and Ara Tūhono (Warkworth to Wellsford) motorway which will integrate with the Warkworth Package. These wider transport infrastructure upgrades have also been taken into account when assessing the transport related effects of the Warkworth Package.

The assessment has two elements: operational effects on the transport network and construction effects on the transport network. The methodology for the operational and construction related transport effects are applicable for each transport corridor.

The assessment is focussed on route protection, rather than imminent implementation. As such, it:

Makes greater use of generic cross-sections and design standards
Focuses more on desired outcomes and footprints
Takes a longer-term view, with its inherent uncertainties
Assumes more use of recommended management plans and planning processes rather than specific design details to manage potential effects.

A key element of the assessment is the definition of the ‘existing / likely future environment’, against which the effects are assessed. This is a complex issue as the works are planned to support urban development and will be unlikely to occur without such development. Additionally, the source of the potential effects (such as people and vehicle movements), is generally from urban development itself, rather than from the planned infrastructure.

To isolate the effects of the planned works, the existing environment includes the likely future urban development but does not include the planned projects for which designations are sought. The effects of the projects are then assessed using the same land use assumptions. Given the long-term perspective of the assessment, the analysis is based on the estimated ‘full build out’ for the future urban area. This is based on development yield estimates provided by Auckland Council through the Warkworth Structure Plan and the Auckland Forecast Centre.

12.2 Assessment of operational traffic and transport effects

The purpose of the Warkworth Package is to enable the provision of transport corridors that improve connectivity, contribute to mode shift by providing active mode and public transport facilities, are safe for users and improve network resilience. Therefore, all of the transport corridors have been assessed to have positive operational effects on the transport network. Specific outcomes are identified below.

12.2.1 Walking and cycling

Each transport corridor includes active mode facilities and includes sufficient space to provide dedicated pedestrian and cycle crossing facilities. The majority of the projects indicatively show separated walking and cycling facilities on both sides of the corridor, which connect with expected future adjacent facilities. However, there are some corridors that indicatively propose to have alternative facilities for walking and cycling due to environmental and engineering constraints. These are:

NOR 3 – State Highway 1 – South – a bidirectional cycling facility from Woodcocks Road to McKinney Road, which will integrate with the SH1 facilities and intersection improvements at Woodcocks Road (not within scope of NOR 3)

NOR 4 – Matakana Road – a bidirectional cycle facility to integrate with the Hill Street intersection walking and cycling infrastructure (not within scope of NOR 4)

NOR 5 – Sandspit Road – a shared offline boardwalk path adjacent to Sandspit Road from Vipond Culvert to Matakana Road integrating with facilities at the Hill Street intersection (not within scope of NOR 5).

The walking and cycling facilities (including the variations listed above) have been designed in accordance with relevant AT standards and policies including the AT Vision Zero Strategy and the AT Transport Design Manual. As the interim design of each transport corridor is aligned with the transport safety principles from AT no adverse walking and cycling effects have been identified.

Overall, the transport corridors will have a number of significant positive effects on walking and cycling as they will:

Significantly reduce the likelihood and exposure to potential crashes as it will enable safe movement for vulnerable road users along and across the corridor

Improve integration with the future walking and cycling network, resulting in improved east-west and north-south walking and cycling connectivity

Lead to environmental and health benefits as a result of increased active mode trips and reduced reliance on vehicle trips

Support growth adjacent to the corridor and significantly improve safety and access to employment and social amenities.

12.2.2 Public transport

It is anticipated that the expected growth in Warkworth will be supported by incremental improvements in public transport services. This includes the provision of new public transport routes, and increased frequency on existing routes. This improved public transport offering is necessary to support a shift to alternative modes and increase the attractiveness of public transport as a mode choice.

The NOR 1 designation boundary includes sufficient area to provide for public transport priority lanes and for the Public Transport Hub itself. The establishment of the Public Transport Hub will support a more resilient public transport system and transition to a low carbon network. The Public Transport Hub will support regional and interregional public transport access for Northern Warkworth. The facility will support the wider rural catchment of the Kōwhai Coast to use public transport for longer interregional trips. The Public Transport Hub will also include cycle storage, electric charging facilities and bus layover spaces to support Warkworth Town Centre services.

For NOR 2 - 8, there are no specific components of the designation to enable infrastructure based measures in the carriageway such as bus lanes or bus priority measures at intersections. Sufficient capacity is expected to be available within the intersections and vehicle lanes of these projects, and as such dedicated facilities are not warranted. Sufficient berm space has also been allocated along the corridors to facilitate bus shelters and bus stops. Once greater certainty is available on the location of key land use activities, such as urban centres, areas of higher intensification, schools etc., more certainty on high demand locations for bus stops can be determined.

The design of each corridor is intended to support public transport and, as such, no adverse public transport effects have been identified. The positive operational effects on public transport for the Warkworth Package are:

Specific provision of a Public Transport Hub (NOR 1) to facilitate access to public transport for northern Warkworth
Improved accessibility for future frequent public transport network
Improved integration with the future public transport network and improved east-west connectivity, as well as improved access to employment and social amenities
Increased attractiveness and uptake of public transport trips which will reduce reliance on vehicle trips, resulting in positive environmental and health benefits.

12.2.3 Corridor safety

The design of all projects has been undertaken with consideration of the latest safety guidance. This includes AT's Vision Zero and Waka Kotahi's Road to Zero. The new corridors are expected to result in positive effects on safety due to the:

New, walking and cycling facilities (including separation), resulting in improved protection for vulnerable road users
New, walking and cycling crossing facilities (crossing the arterial) and at key intersections, resulting in a significantly safer environment for all road users
Appropriate urban speeds on the upgraded and new arterials and consequential reductions in the risk of death or serious injuries.

It is anticipated walking and cycling demands will increase significantly as the Warkworth area urbanises. Given the expected traffic volumes along the corridors, there will be a safety risk for active mode users travelling along the corridor without appropriate facilities. Therefore, the projects have been designed to have 50km/h posted speed limits and largely provide segregated walking and cycling facilities to reduce the likelihood and severity of a potential crash.

The indicative designs are well aligned with the transport safety principles from AT and Waka Kotahi. It will provide a safe transport corridor and reduce the risk of deaths and serious injuries occurring, and, as such, no adverse road safety effects have been identified.

12.2.4 Access

All corridors for the Warkworth Package are expected to be limited access corridors in the future. As the areas develop, it is expected that future vehicle access to the network will be facilitated by collector road networks within the urbanised area adjacent to each road. Walking and cycling access will be provided to the corridors where practicable.

The collector network for Warkworth has been indicatively identified by the Warkworth Structure Plan; however, it is expected that these will be subject to change as developers progress these connections through plan change processes. These will be assessed by standard planning and approval processes through Council.

In terms of existing properties, the overarching design philosophy for the project has been to maintain driveway access where practicable and minimise impacting land for access purposes other than where necessary to re-instate driveways. In some instances, vehicle access has not been able to be maintained and the dwelling is included in the designation. These instances and opportunities for enhanced accessed are described in Table 12.1. Some NORs do not have access constraints and are therefore not included in the table.

Two conditions are expected to manage any potential vehicle access impacts:

the proposed Urban Landscape Design Management Plan (ULDMP) condition that requires that the ULDMP shall include landscape and urban design details that cover reinstatement of construction and site compound areas, driveways, accessways and fences, including alternative access where appropriate

the proposed Construction Traffic Management Plan (CTMP) condition that requires that the CTMP shall include methods to maintain vehicle access to property and / or private roads where practicable, or to provide alternative access arrangements when it will not be and methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services).

Table 12.1: Specific access considerations for the Warkworth Package

NOR	Comment
NOR 1	An opportunity exists to improve access to a cemetery site located to the west of the Public Transport Hub. Access to this cemetery is currently via SH1 and turning movements are compromised by high traffic volumes and multiple lanes. This will be considered at the detailed design stage.
NOR 2	In the case of property at 101 Woodcocks Road a driveway reinstatement is not considered possible, and as such these properties are included within the designation boundary.
NOR 5	Two existing properties at 34 and 36 Sandspit Road have been identified where access will not be able to be reinstated to the existing smaller parcels following the project due to retaining work required, as such these have been included within the designation. For the avoidance of doubt, access can be retained to the adjacent larger parcel of 36 Sandspit Road via the existing access in the north-east corner. As noted previously these properties, and the adjacent larger parcel are currently the subject of a proposed development, with a lodged resource consent and proposed private plan change ('The Kilns'). It is anticipated that should development of this site proceed as proposed, or similar, that integration of the frontage of the site(s) with the proposed Sandspit Road upgrades will occur. Specifically, if these parcels are to be developed (either the whole site or just the two front lots), there are opportunities for the developer to tie back onto Sandspit Rd across the proposed footpath, provided they undertake earthworks to provide a safe / compliant tie in. Access to 325 Sandspit Road will likely need to be relocated following detailed design and can be accommodated within the designation boundary.
NOR 7	In terms of existing access, vehicle access to the dwelling at 195 Sandspit Road is not able to be retained and as such the dwelling has been included within the designation. The alignment of the Sandspit Link follows an existing driveway / access that currently services residential properties, a quarry, and a recycling plant. Should these properties still require access at

NOR	Comment
	time of implementation there are several options to provide access, including construction from the northern extent of the corridor or provision of an access route adjacent to the corridor within the designation. The designation is considered sufficiently wide enough to provide for this. Notwithstanding this, the implementation of the ULDMP and CTMP will manage potential vehicle access impacts appropriately.
NOR 8	The alignment of the Wider Western Link connects with Wyllie Road, replacing an existing cul de sac (resulting from Ara Tūhono (Puhoi to Warkworth) motorway). A small cul de sac will need to be formed to connect the residual Wyllie Road corridor with the new arterial. Sufficient space has been provided within the designation to enable this connection.

Overall, adverse effects on access have been avoided by including impacted driveways within the designation where practicable and safe, or by designating the entire properties where access cannot be maintained.

In terms of wider access, it is considered that any adverse access effects are minimal. This is due to the ability of future collector roads to integrate with the transport corridors, and with existing collector roads having been considered as part of the design of each corridor.

12.3 Assessment of construction traffic and transport effects

The main construction works required for the Warkworth Package will likely be adjacent to or in the live carriageway, which means that temporary traffic management will be required. The scale of temporary traffic management to delineate live traffic away from the construction zones is largely dependent on the various stages and requirements of the construction activities being undertaken. It is expected that short term temporary road closures for nights or weekends may be required for some specific activities, such as road surfacing, traffic switches and gas relocation. Other activities may require stop / go or contraflow traffic management, such as drainage works, utility relocation, survey and investigation work.

The effect of temporary road closure or other traffic management methods to existing traffic on the specific corridor and adjacent road network will be confirmed in the future as part of the CTMP for each project on the basis of the current traffic environment. This will take into account the level of growth and activities that have occurred in Warkworth, the availability of the alternative routes, and any additional sensitive land use activities that may need to be managed.

The construction of the projects will each likely require significant earthworks. Final cut and fill volumes will be confirmed following detailed design prior to construction. The construction traffic movements to accommodate the earthworks will likely result in the increase of traffic volumes on construction routes used during the construction period of each of the projects.

Given the construction timing and staging of the package has yet to be determined, there is a degree of uncertainty associated with any predicted construction methodology and associated traffic routes. This means:

The routes that will be used by construction vehicles will depend on the location of quarries and disposal sites which are not yet certain

The exact location and extent of compound sites / lay down areas has yet to be determined

The timing of construction of other projects could impact on likely construction vehicle routes, for example, if the Wider Western Link is constructed prior to or after the upgrade of Woodcocks Road.

Notwithstanding this, it is considered that with available connectivity to the strategic network and available capacity in the network, construction traffic will be able to be readily accommodated. It is noted that the access to compound sites / laydown areas and construction zones for construction vehicles, plant and materials will be via site access points identified as part of future CTMPs.

Details of the routes and time restrictions will need to be updated and refined as part of the CTMP process. It is anticipated that the routes for construction traffic will likely be limited to arterial corridors and intersections with the provision of adequate vehicle tracking.

12.3.1 Speed limits

In order to maintain the safety of all road users, safe and appropriate temporary speed limits will be implemented during the construction period on the network within the extent of works, and along the construction routes if needed. This will be in accordance with the latest traffic management standards at the time of construction. These recommended measures and other measures highlighted in the CTMP are expected to reduce the potential safety risks that may be associated with construction traffic.

12.3.2 Pedestrians and cyclists

The existing provision for pedestrian and cyclists is variable across the network. It is likely that the demand for these modes will increase if urbanisation occurs prior to construction, but future parallel collectors could also be used as alternative routes. Therefore, effects should be assessed again when a greater level of detail is available about surrounding facilities and land use activities prior to construction. However, residents and stakeholders will be kept informed of construction times and progress, and general observations of pedestrian and cyclist activity will be used to inform appropriate traffic management measures in the CTMP.

12.3.3 Property access for residents and businesses

During the time of construction, there will be temporary traffic management controls such as temporary concrete or steel barriers. Existing driveways that remain during construction will be required to have temporary access provision. It is anticipated that the contractor will undertake a property specific assessment of any affected driveways and provide temporary access arrangements if required. The temporary access should enable the ability for residents to safely access and exit the property. These requirements will be captured in the CTMP.

12.3.4 Construction movements - timing

Warkworth is located in proximity to the state highway network and also in proximity to very popular recreational and holiday areas for the wider Auckland area. The area currently experiences significant congestion in peak periods such as public holiday weekends and over the Christmas / New Year period. As such, the development of the CTMP prior to construction of any of the projects will need to consider the implications on construction movements through the Hill Street intersection in particular.

The CTMP will need to consider if the Hill Street intersection has been upgraded as planned, the performance of the intersection post opening of Ara Tūhono (Puhoi to Warkworth) motorway and Tūhonohono ki Tai (Warkworth to Wellsford) motorway and construction movement timings in peak periods including holiday periods.

The proposed CTMP condition in Volume 1 states that the CTMP will be required to include methods to manage the effects of temporary traffic management activities on traffic and the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion. This will include consideration of the Hill Street intersection as a key intersection in Warkworth.

12.3.5 Land use activities that will need further consideration in the CTMP

Some key land uses or activities located adjacent to the corridors will need consideration during the development of the CTMP. This could include restricted truck movements during school pick up and drop off, or additional controls at key access locations. Key land uses that will need specific consideration include Mahurangi College and a new proposed school at 100 Woodcocks Road for the Woodcocks Road upgrade (NOR 2) and a quarry site located near the Sandspit Road Upgrade (NOR 5) and Sandspit Link (NOR 7). The CTMP will also consider other land uses that have been established at the time of development of the CTMP.

12.4 Recommended measures to avoid, remedy or mitigate potential adverse traffic and transport effects

12.4.1 Operational traffic and transport effects

Based on the Assessment of Transport Effects, and summarised above, the Warkworth Package will have significant positive effects on the wider transport network in Warkworth. There are no anticipated adverse effects that require mitigation.

12.4.2 Construction traffic and transport effects

It is considered that the potential construction traffic effects can be accommodated and managed appropriately through the implementation of a CTMP which will be developed as part of the outline plan process prior to construction, as outlined in the condition set in Volume 1. Any potential construction traffic effects will be confirmed prior to construction taking into account the specific construction methodology and traffic environment at the time of construction. As set out in the proposed condition, the objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects. This will include methods to manage the effects of temporary traffic management activities on traffic, safety measures, site access and detour routes, and methods to communicate traffic management measures to affected road users.

12.5 Summary of traffic and transport effects

Based on the assessment of effects, as summarised above, the Warkworth Package will have considerable positive effects on the operation of the transport system, in particular improved safety, connectivity, resilience and contribution to mode shift. There are no anticipated adverse operational effects that require mitigation.

In terms of construction traffic effects, it is considered that there is sufficient network capacity to enable construction traffic. To address the potential construction effects identified, a CTMP will be prepared prior to the start of construction. Proposed condition wording is provided in Section 12.4.2 and in the condition set in Volume 1.

13 Noise and vibration

This section provides an assessment of the potential noise and vibration effects from the construction and operation (traffic noise) of the project. The potential construction and operational noise and vibration effects of the Warkworth Package have been assessed in the Assessment of Construction Noise and Vibration Effects (Volume 4) and the Assessment of Traffic Noise and Vibration Effects (Volume 4). The summary below should be read in conjunction with the specialist reports.

13.1 Methodology

The Assessment of Construction Noise and Vibration Effects, included in Volume 4 contains predictions for construction noise and vibration levels carried out using the method recommended in the NZS 6803 in accordance with the AUP:OP. The assessment methodology included:

Reviewing noise and vibration emission data for each construction task based on equipment data previously measured for similar activities;
Predicting the noise and vibration levels from construction based on relevant standards and guidelines; and
Determining setback distances where compliance with the relevant standards can be achieved.

The Assessment of Traffic Noise and Vibration Effects, included in Volume 4, sets out predictions of road traffic noise carried out using the method in NZS 6806 in accordance with rule E25.6.33 in the AUP:OP. The assessment of effects was twofold and considered NZS 6806 noise criteria categories as well as the anticipated noise level change with and without the Project.

13.2 Construction noise effects

Construction noise is generally higher than that of ongoing continuous activities. Therefore, while effects are based on how people are likely to react to equivalent internal noise levels, construction is a temporary activity with a finite duration. Most people are more likely to accept increased noise (or vibration) levels if durations and magnitudes are well communicated prior to works occurring.

Overall, predicted noise levels for most of the works will be able to comply with the relevant daytime standards of 70 Db LAeq, which means that effects are generally acceptable inside neighbouring buildings. Where high noise activities are likely (e.g. demolition of close by buildings, piling of bridges or retaining walls, and earthworks), these activities would occur for short periods only close to any one building, generally extending over a few days at most, before moving along the alignment or being completed. Night-time and weekend works will be limited and only occur for critical activities. Construction activities can be managed through the implementation of a Construction Noise and Vibration Management Plan (CNVMP) as outlined in Section 13.5.1 below.

13.3 Construction vibration effects

Vibration levels could exceed the Category B criteria at some existing dwellings for all corridors except NOR 1 prior to mitigation being implemented, if high vibration generating equipment such as the roller compactor is used on the construction boundary at the closest position to the receiver. Without mitigation, at these receivers (listed in Appendix B of the Assessment of Construction Noise

and Vibration Effects) there is potential for cosmetic damage to buildings (such as cracking) and annoyance from perception of vibration.

Mitigation such as the use of non-vibratory compaction equipment within 8 m of buildings is recommended to avoid potential cosmetic damage. Vibration can typically be tolerated inside buildings if it occurs intermittently during the day, is of limited duration and where there is effective prior engagement. Where an exceedance is predicted at any receiver that exists at the time of construction, the effects will be mitigated and managed through the CNVMP and Schedules.

13.4 Operational traffic noise effects

In accordance with NZS 6806, the Warkworth Package consists of “altered roads” and “new roads” and roads that do not meet either definition. Existing Protected Premises and Facilities (PPFs) within 100 m from the proposed altered and new road edges were assessed based on NZS 6806. NZS 6806 is not applicable to new and altered roads predicted to carry less than an Annual Average Daily Traffic (ADT) of 2000 vehicles at the design year, or where the change in noise level due to a project (i.e. the horizontal or vertical realignment of a road) does not reach certain thresholds of effects (e.g. a change of at least 3 dB for at least one PPF). NORs 1, 2, and 5 did not meet the definition of ‘altered road’ and therefore mitigation measures were not considered for those corridors.

The number of PPFs for each NOR is shown in Table 13.1 below:

Table 13.1: Number of PPFs for each NOR

NOR	Number of PPFs
NOR 1 – Northern Public Transport Hub and Western Link – North	0
NOR 2 – Woodcocks Road (Western Section)	53
NOR 3 – State Highway 1 – South	97
NOR 4 – Matakana Road	68
NOR 5 – Sandspit Road	16
NOR 6 – Western Link – South	27
NOR 7 – Sandspit Link	2
NOR 8 – Wider Western Link - North	2

The individual traffic noise level predictions were compared with the noise criteria categories A, B and C of NZS6806, and the anticipated noise level change due to the Project was calculated.

Overall, the change in noise level was predicted to be minimal due to the actual degree of traffic generation itself. The removal of the first row of houses in some locations will result in noise level changes to PPFs behind the dwellings that will be removed.

Mostly, those PPFs would still receive noise levels within Category A (the desired noise criteria category), however, there is a small number of PPFs where noise levels are predicted to be in Category B. These PPFs are located in NORs 3 and 4. One PPF located in NOR 3 is predicted to be in Category C. With the installation of an AC-14 low noise road surface as recommended in the Assessment of Traffic Noise and Vibration Effects, all PPFs in these NORs fall into Category A. For the vast majority of PPFs, the noise level changes due to the projects will be insignificant.

Traffic from new or upgraded roading projects is not generally expected to create any vibration issues. The smooth and even surface typical of urban roads would likely generate no more than negligible traffic vibration impacts. Therefore, traffic vibration has not been assessed for the Projects.

13.5 Recommended measures to avoid, remedy or mitigate noise and vibration effects

The following sections outline the proposed measures to manage the effects of construction noise and vibration and operational traffic noise.

13.5.1 Construction noise and vibration mitigation

An CNVMP will be prepared as part of the outline plan process prior to construction, as outlined in the condition set in Volume 1. The CNVMP will determine and implement the BPO management of construction noise and vibration, and reduce, as far as practicable, any exceedance of the noise of vibration standards. The Assessment of Construction Noise and Vibration Effects sets out the minimum level of information that must be provided in the CNVMP. The information required to be submitted as part of the CNVMP is included in the condition set in Volume 1 and includes: the identification of receivers where noise and vibration standards apply, management and mitigation options, methods for noise and vibration monitoring, and procedures for maintaining contact with stakeholders.

13.5.2 Operational traffic noise mitigation

There are broadly three mitigation options that can be applied to manage road traffic noise that are discussed in NZS6806:

The choice of road surface material, a mitigation option that reduces noise at the source (especially for roads with speeds above 40-50 km/h where the road-tyre interaction is the controlling noise source rather than engine noise)
The installation of noise barriers either on the roadside or on the property boundary
The inclusion (for new builds) or retrofitting (for existing buildings) of Building Modification Mitigation (e.g., alternative ventilation to enable windows and doors to remain closed, improved joinery and / or glazing, or, in rare cases, the installation of additional wall and ceiling lining).

A number of conditions are proposed in the Condition set in Volume 1 so that operational traffic noise effects are considered appropriately prior to detailed design and construction of the projects. Application of AC-14 or equivalent low noise road surface has been recommended for NOR 3 and 4 in order to mitigate traffic noise effects. This mitigation is considered to be the most effective noise mitigation measure for existing PPFs but will also benefit any future PPFs.

For NORs 1, 2, 5, 6, 7 and 8 it is noted that AT adheres to road resealing guidelines which sets out the requirements where asphaltic concrete (low noise road surface) must be used. The requirements include minimum traffic volumes and consideration of adjoining land use.

13.6 Summary of noise and vibration effects

Construction noise levels are expected to be within the permitted levels for the majority of the construction works. Some minor exceedances associated with high noise generating activities or night-time works may breach the permitted levels.

Construction vibration may result in some cosmetic damage to neighbouring buildings; however, this is expected to be able to be avoided with mitigation measures in place. Construction noise and vibration will be managed through the implementation of a CNVMP as outlined above. With the CNVMP in place, it is considered that effects will generally be reasonable for the majority of activities for the construction of all corridors.

Operational traffic noise for all NORs is expected to be reasonable, with the implementation of low noise road surfaces for NORs 3 and 4 proposed as specific noise mitigation for these corridors.

14 Terrestrial ecology

The Assessment of Ecological Effects provided in Volume 4 assesses the potential ecological effects which are the subject of district plan controls under the AUP:OP, for each of the proposed transport corridors. The summary below should be read in conjunction with this report.

For ecological effects that relate to regional plan and / or NES matters, these will be assessed and resource consents sought through a future consenting process. Any required mitigation will be identified as part of that future consenting process. While these matters are not required to be assessed as part of this AEE, potential ecological effects relating to future regional resource consents and / or wildlife permits have been considered to the extent they are relevant to inform the alignment and the designation footprint for each proposed transport corridor.

14.1 Methodology

The Assessment of Ecological Effects follows the Ecological Impact Assessment Guidelines (EIANZ, 2018). These guidelines were used to assess the ecological value of identified ecological features for each NOR and evaluate the magnitude and level of potential effects that the proposed transport corridors could have on these features as summarised in the sections below. The key EIANZ assessment stages are outlined in Figure 14.1.

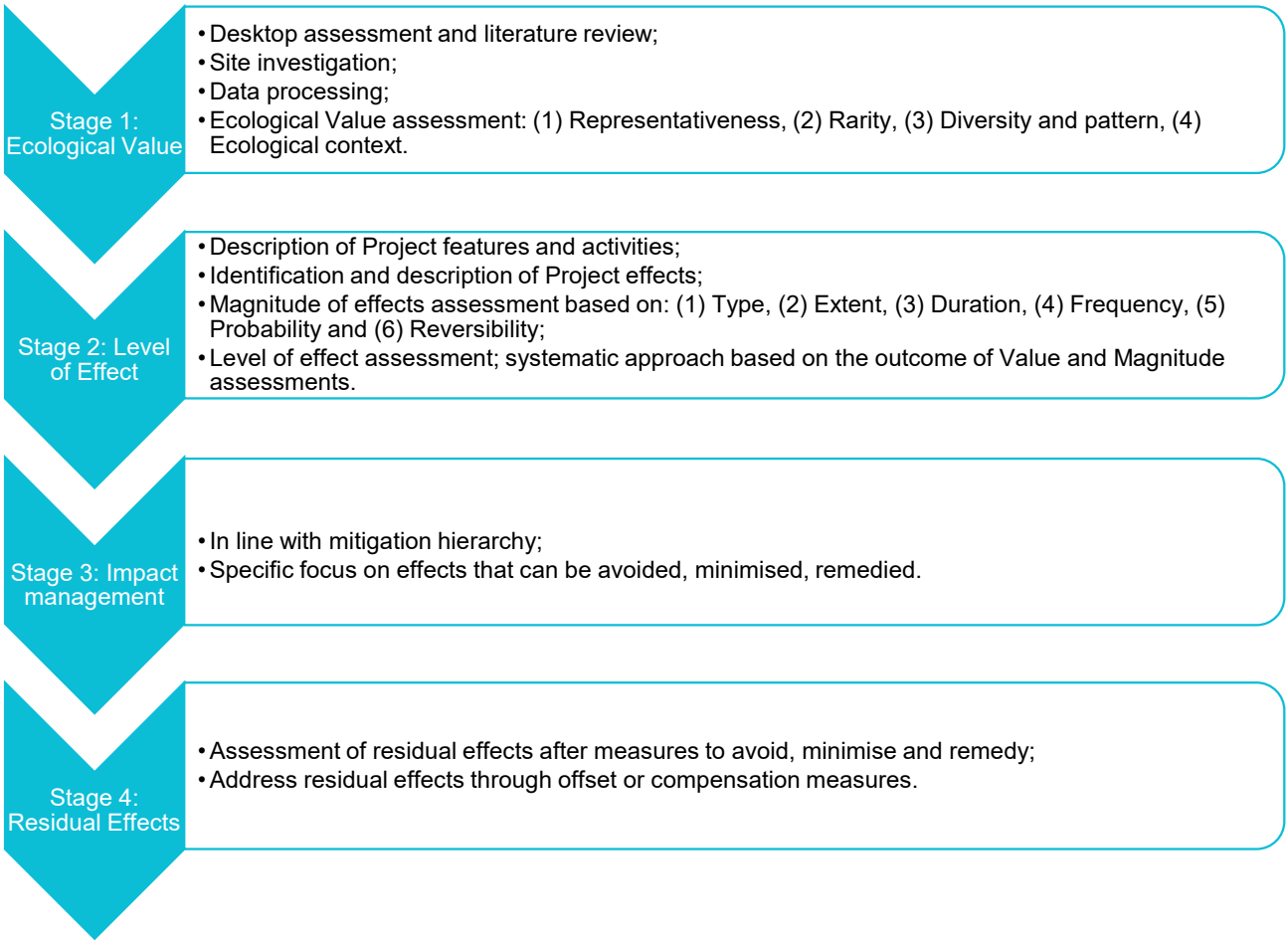


Figure 14.1: Assessment of ecological effects process

The EIANZ Guidelines provide guidance to assist with the assessment of the likely future ecological environment in this report. The assessment states:

"The ecologist needs to consider the permitted baseline in order to describe the potential "future ecological environment and to assess effects at that time, and should discuss this with the project planner or legal advisor if in any doubt".

In line with the above, the Assessment of Ecological Effects has assessed the existing environment as well as the likely future environment at the time of construction of the corridors. Desktop and site investigations were undertaken for ecological features within all eight NORs. Ecological features within the designation boundary and a distance of approximately 100 m radius of the designation have been mapped and included in the Assessment of Ecological Effects. Terrestrial, stream, and wetland features were investigated and mapped to provide context for potential adjustments to the designation boundary.

14.2 Assessment of effects on terrestrial ecology across the Warkworth Package

14.2.1 Assessment of positive effects on terrestrial ecology

The following positive effects were identified for the Warkworth Package projects:

Improved blue / green infrastructure (stormwater wetlands, swales, raingardens) and associated landscaping (which will be indigenous species)

Revegetation of sloping berms, batters and embankments to connect with retained forest remnant / mature trees

The proposed bat mitigation in association with the revegetation and stormwater wetlands will have positive ecological outcomes for all native fauna. The proposed bat mitigation associated with Mahurangi River (and associated tributaries) are likely to improve ecological connectivity through the FUZ for other native fauna.

Specific positive effects for specific transport corridors are summarised in Table 14.1.

Table 14.1: Summary of positive effects for specific transport corridors

NOR	Ecological Feature	Positive Effect
NOR 2	Mahurangi River (WW2-S3), Mahurangi Tributary (WW2-S2)	The Project landscape planting will tie into stream and riparian corridors. Riparian vegetation will be retained (where practicable) and enhanced (weeds control and indigenous vegetation planted).
NOR 3	Mahurangi Tributary (WW3-S1, WW3, S2, WW3-S4)	
NOR 5	Mahurangi Tributary (WW5-S1, WW5-2S)	
NOR 6	Mahurangi Tributary (WW6-S2) and raupo wetland (WL19)	
NOR 8	Mahurangi Tributary (WW8-S2)	

NOR	Ecological Feature	Positive Effect
NOR 2	Mahurangi River (WW2-S3), Mahurangi Tributary (WW2-S2)	Existing infrastructure upgrades will include new bridge structures, culvert upgrades and additional / improvements to stormwater infrastructure. Upgrading undersized structures and improvements in culvert design such as embedding culverts with natural substrate / increased design capacity will improve habitat connectivity for freshwater and terrestrial species. This will include improved fish passage and improved riparian habitat connectivity.
NOR 3	Mahurangi Tributary (WW3-S1)	
NOR 5	Mahurangi Tributary (WW5-S1, WW5-2S)	
NOR 7	Mahurangi Tributary (WW5-S2), and stream (WW7-S2)	

14.2.2 Assessment of construction effects on terrestrial ecology

The construction activities associated with each new or upgraded transport corridor have the potential to cause adverse effects on ecological features within or adjacent to the designation footprint if they are not mitigated. Potential construction effects that relate to the activities authorised by the designation include the disturbance and displacement of roosts / nests and individual (existing) long-tailed bats, avifauna and herpetofauna due to construction activities (noise, light, dust etc.). It is assumed that this effect will occur after vegetation clearance (subject to regional consent controls) has been implemented and is therefore likely to happen in habitats adjacent to the project footprint / designation or underneath structures such as bridges.

The following sections detail the potential magnitude of effect and subsequent level of effect on ecological features. Impact management and residual effects are also presented where the level of effect is assessed to be Moderate or higher.

14.2.2.1 Vegetation

Effects on district plan vegetation have been considered in the Assessment of Arboricultural Effects Report and Section 20. A total of 5 individual trees and 2 groups of trees, identified as protected under the AUP:OP provisions, were noted as being affected by the NOR alignments, across all the NORs. The effects relating to the removal of these trees is considered negligible from an ecological perspective, and as such these have not been considered any further in this section or in the Assessment of Ecological Effects.

Additionally, there are three locations (NOR 2, 4 and 5) where there is an Open Space zone (subject to district plan rules) with an SEA overlay (subject to regional plan rules). The ecological effects of the removal of these areas of SEA vegetation are considered to be a regional consenting matter and as such have not been considered further as part of this assessment. The exact extent of any potential impacts on SEAs will be confirmed through the detailed design phase and will be the subject of a separate regional resource consent application process, including consideration given at this time as to any potential mitigation which may be required.

14.2.2.2 Long-tailed bats

The ecological value of bats is assessed to be very high. Bats may utilise the land surrounding each of the projects for roosting, foraging or commuting. During construction, night works may be required and site compounds are likely to be lit overnight. Lighting at night has the potential to affect the behaviour of bats if foraging within this area or roosting nearby.

Noise and vibration during construction can be an issue if bats are roosting in the immediate vicinity of construction works. While bat foraging has been confirmed in the Warkworth area, surveys at the corridor scale cannot confirm roost occupation within or adjacent to transport corridors. However, it can be assumed that bats will utilise roost sites within the designation footprints based on:

Confirmed habitat suitability (numerous trees with moderate to high bat roost potential, connected to linear stream corridors and wetlands) (some NORs have more suitable habitat than others)
Confirmed foraging presence
Frequent utilisation of numerous roosting sites throughout their home range.

During construction the overall level of effect due to the potential disturbance and displacement to roosts and individual bats for each project is presented in Table 14.2 below. Where effects are assessed as Moderate or higher, mitigation is proposed. Details on the proposed mitigation is provided in Section 14.4 below. With mitigation in place, the overall level of effect reduces to Low or Very Low for all corridors.

Table 14.2: Overall level of effect on bats from construction for each NOR

NOR	Disturbance and displacement to roosts and individual bats (existing)	Mitigation required?	Level of effect post-mitigation
NOR 1	Low	No	n/a
NOR 2	Moderate	Yes	Very Low
NOR 3	Low	No	n/a
NOR 4	Moderate	Yes	Very Low
NOR 5	Moderate	Yes	Very Low
NOR 6	Low	No	n/a
NOR 7	Moderate	Yes	Very Low
NOR 8	Moderate	Yes	Very Low

14.2.2.3 Birds

There are a number of TAR bird species and non-TAR bird species likely to be present within the project areas. The key species likely to be present in each NOR area are outlined in Table 14.3.

Noise, vibration and lighting disturbance caused by construction activities could potentially displace native birds from suitable nesting and foraging habitat within and adjacent to construction works for all

NORs. During construction the overall level of effect on birds for each NOR is presented in Table 14.3.

Effects are limited where birds are unlikely to be nesting in or adjacent to construction areas or where birds are likely to naturally relocate to alternative habitats during construction. Where effects are considered to be Moderate or higher, mitigation is proposed. The overall level of effect with mitigation is also presented in the table below. Details on the proposed mitigation is provided in Section 14.4. With mitigation in place, the overall level of effect on birds reduces to Low or Very Low for all corridors.

Table 14.3: Overall level of effect on birds from construction for each NOR

NOR	Species	Disturbance and displacement to nests and individual birds during construction	Mitigation required?	Level of effect post-mitigation
NOR 1	Non-TAR birds	Very Low	No	n/a
	New Zealand pipit	High Very Low*	Yes No*	Low n/a*
	Australasian bittern	Low	No	n/a
	Spotless crake	Moderate	Yes	Very Low
NOR 2	Non-TAR birds, North Island kākā, Black shag, Little black shag, Little shag, Pied shag	Very Low	No	n/a
	New Zealand pipit	High Very Low*	Yes No*	Low n/a*
	Long-tailed cuckoo	Low	No	n/a
NOR 3	Non-TAR birds	Very Low	No	n/a
	New Zealand pipit	High Very Low*	Yes No*	Low n/a*
	Australasian bittern	Low	No	n/a
	Spotless crake	Moderate	Yes	Very Low
NOR 4	Non-TAR birds and North Island kākā	Very Low	No	n/a
	New Zealand pipit	High Very Low*	Yes No*	Low n/a*
	Long-tailed cuckoo and Australasian bittern	Low	No	n/a

NOR	Species	Disturbance and displacement to nests and individual birds during construction	Mitigation required?	Level of effect post-mitigation
	Spotless crake	Moderate	Yes	Very Low
NOR 5	Non-TAR birds and North Island kākā	Very Low	No	n/a
	New Zealand pipit	High Very Low*	Yes No	Low n/a*
	Long-tailed cuckoo and Australasian bittern	Low	No	n/a
	Spotless crake	Moderate	Yes	Very Low
NOR 6	Non-TAR birds	Very Low	No	n/a
	New Zealand pipit	High	Yes	Low
	Australasian bittern	Low	No	n/a
	Spotless crake	Moderate	Yes	Very Low
NOR 7	Non-TAR birds, North Island kākā, Black shag, Little black shag, Little shag, Pied shag	Very Low	No	n/a
	New Zealand pipit	High Very Low*	Yes No*	Low n/a*
	Long-tailed cuckoo and Australasian bittern	Low	No	n/a
	Spotless crake	Moderate	Yes	Very Low
NOR 8	Non-TAR birds and North Island kākā	Very Low	No	n/a
	New Zealand pipit	High Very Low*	Yes No*	Low n/a*
	Long-tailed cuckoo	Low	No	n/a
	Australasian bittern	Low	No	n/a
	Spotless crake	Moderate	Yes	Very Low
	Dabchick	Moderate	Yes	Low

*Indicates a level of effect associated with the future ecological environment that is different from the baseline level of effects.

14.2.2.4 Herpetofauna

There are a number of herpetofauna species likely to be present within the project areas. The key species identified in the Assessment of Ecological Effects for each NOR is outlined in Table 14.4. During construction activities associated with the upgrade of existing transport corridors, lizards are likely to be habituated to noise and vibration from the existing road. For new corridors, lizards will not be habituated to noise and vibration due to the construction taking place in greenfield areas which increases the likelihood of adverse effects occurring.

The overall level of effect due to the disturbance and displacement of individuals adjacent to construction activities for each NOR on herpetofauna species is presented in Table 14.4 below. As outlined below, the overall level of effect on herpetofauna species is expected to be Low to Very Low for all NORs. Therefore, no mitigation is proposed.

Table 14.4: Overall level of effect on herpetofauna species from construction for each NOR

NOR	Species	Disturbance and displacement of individuals adjacent to construction activities	Mitigation required?
NOR 1	Copper skink	Low	No
NOR 2	Copper skink and ornate skink	Very Low	No
	Elegant gecko, forest gecko, pacific gecko	Low	No
NOR 3	Copper skink	Very Low	No
NOR 4	Copper skink and ornate skink	Very Low	No
	Elegant gecko, forest gecko, pacific gecko	Low	No
	Hochstetter's frog	Very Low	No
NOR 5	Copper skink and ornate skink	Very Low	No
	Elegant gecko, forest gecko, pacific gecko	Low	No
	Hochstetter's frog	Low	No
NOR 6	Copper skink	Very Low	No
NOR 7	Copper skink and ornate skink, elegant gecko, forest gecko, pacific gecko	Low	No
	Hochstetter's frog	Low	No
NOR 8	Copper skink and ornate skink, elegant gecko, forest gecko, pacific gecko	Low	No
	Hochstetter's frog	Low	No

14.3 Assessment of operational effects on terrestrial ecology

The operational activities associated with each of the transport corridors have the potential to cause adverse effects on ecological features within or adjacent to the designation footprints. The potential operational effects are:

Loss in connectivity for indigenous fauna, in particular bats, birds, lizards, associated with light, noise and vibration effects from the operation of the road, leading to fragmentation of habitat; and

Disturbance and displacement of indigenous fauna and their nests / roosts, in particular bats, birds, herpetofauna, associated with light, noise and vibration effects from the operation of the road.

For corridors or the section of corridors that are being upgraded, it should be noted that many of the operational effects are likely to be pre-existing. Bats, birds and particularly lizards may therefore be habituated to noise, light, and vibration from the existing road operations. The following sections detail the level of effect on ecological features (habitat and species), as relating to district plan matters only.

14.3.1 Long-tailed bats

The ecological value of bats is assessed to be very high. The loss of connectivity through permanent habitat loss and disturbance such as operational noise, vibration and light from the operation of each transport corridor can lead to an overall reduction in size and quality of bat foraging habitat and can impact on bat movement in the broader landscape. Lighting spillage from street lighting could disturb commuting and foraging bats at night and adversely affect insect prey populations.

The overall level of effect from the operation of each corridor is presented in Table 14.5 below. For NORs 1 and 6, the overall level of operational effect on bats is assessed as low due to the low probability of disturbance and the expected negligible loss in connectivity as a result of the projects. As such impact management (mitigation) is not required for these corridors. For all other transport corridors, the overall level of effect is assessed as Moderate to Very High without mitigation. With mitigation in place, the level of effect reduces from Low to Very Low for all corridors. Details on the proposed mitigation is provided in Section 14.4 below.

Table 14.5: Overall level of effect on bat species from operation for each NOR

NOR	Disturbance and displacement of roosts and individual bats due to lighting and noise / vibration	Loss in connectivity due to permanent habitat loss, light, and noise effects from the road	Mitigation required?	Overall level of effect with mitigation
NOR 1	Low	Low	No	n/a
NOR 2	Moderate	High	Yes	Low
NOR 3	Very Low	Moderate	Yes	Very Low
NOR 4	Low	Moderate	Yes	Very Low
NOR 5	Low	Moderate	Yes	Very Low

NOR	Disturbance and displacement of roosts and individual bats due to lighting and noise / vibration	Loss in connectivity due to permanent habitat loss, light, and noise effects from the road	Mitigation required?	Overall level of effect with mitigation
NOR 6	Low	Low	No	n/a
NOR 7	Moderate	Moderate	Yes	Very Low
NOR 8	Moderate	Very High High*	Yes	Low

*Indicates a level of effect associated with the future ecological environment that is different from the baseline level of effects.

14.3.2 Birds

Noise, vibration, and lighting disturbance caused by the presence of the road corridors, could potentially disturb and displace native birds from suitable nesting and foraging habitat within and adjacent to the NORs. Additionally, permanent habitat loss and operational noise, vibration, and light may also affect connectivity in the broader landscape.

The overall level of effect from the operation of each corridor is presented in Table 14.6 below. For NOR 2 the overall level of operational effect on birds is assessed as very low, as such, no mitigation is required for the operation of this corridor. For the remaining NORs, mitigation will be required due to the presence of spotless crake (and Dabchick for NOR 8). These birds will need to be managed so that nesting sites can be avoided or provided for within the corridor. With mitigation in place, the level of effect reduces from Low to Very Low for all corridors. Details on the proposed mitigation is provided in Section 14.4 below.

Table 14.6: Overall level of effect on bird species from operation for each NOR

NOR	Species	Disturbance and displacement to nests and individual birds due to road	Loss in connectivity due to habitat loss, light and noise from road	Mitigation required?	Overall level of effect with mitigation
NOR 1	Non-TAR birds, New Zealand pipit	Very Low	Very Low	No	N/A
	Australasian bittern	Low	Low	No	N/A
	Spotless crake	Moderate	Very Low	Yes	Very Low
NOR 2	Non-TAR birds, New Zealand pipit, North Island kākā, Black shag, Little	Very Low	Very Low	No	N/A

NOR	Species	Disturbance and displacement to nests and individual birds due to road	Loss in connectivity due to habitat loss, light and noise from road	Mitigation required?	Overall level of effect with mitigation
	black shag, Little shag, Pied shag				
	Long-tailed cuckoo	Low	Low	No	
NOR 3	Non-TAR birds, New Zealand pipit	Very Low	Very Low	No	N/A
	Australasian bittern	Low	Low	No	N/A
	Spotless crake	Moderate	Very Low	Yes	Very Low
NOR 4	Non-TAR birds, New Zealand pipit, North Island kākā	Very Low	Very Low	No	N/A
	Long-tailed cuckoo, Australasian bittern	Low	Low	No	N/A
	Spotless crake	Moderate	Very Low	Yes	Very Low
NOR 5	Non-TAR birds, New Zealand pipit, North Island kākā	Very Low	Very Low	No	N/A
	Long-tailed cuckoo, Australasian bittern	Low	Low	No	N/A
	Spotless crake	Moderate	Very Low	Yes	Very Low
NOR 6	Non-TAR birds, New Zealand pipit	Low Very Low*	Very Low	No	N/A
	Australasian bittern	Low	Low	No	N/A
	Spotless crake	Moderate	Very Low	Yes	Very Low
NOR 7	Non-TAR birds,	Low Very Low*	Low Very Low*	No	N/A
	New Zealand pipit, North	Very Low	Very Low	No	N/A

NOR	Species	Disturbance and displacement to nests and individual birds due to road	Loss in connectivity due to habitat loss, light and noise from road	Mitigation required?	Overall level of effect with mitigation
	Island kākā, Black shag, Little black shag, Little shag, Pied shag				
	Long-tailed cuckoo, Australasian bittern	Low	Low	No	N/A
	Spotless crake	Moderate	Very Low	Yes	Very Low
NOR 8	Non-TAR birds	Low Very Low*	Very Low	No	N/A
	New Zealand pipit, North Island kākā	Very Low	Very Low	No	N/A
	Long-tailed cuckoo, Australasian bittern	Low	Low	No	N/A
	Spotless crake	Moderate	Low	Yes	Very Low
	Dabchick	Moderate	Low	Yes	Low

*Indicates a level of effect associated with the future ecological environment that is different from the baseline level of effects.

14.3.3 Herpetofauna

Suitable habitat (exotic scrub, exotic treeland edge and rank grassland) has been identified within the designation footprint for each corridor which could potentially support native herpetofauna species. These species require vegetated corridors to facilitate natural dispersal, although they are considered to be relatively resident species and do not require migration or large-scale movement to support reproduction, refuge and feeding. The overall level of effect from the operation of each NOR is presented in Table 14.7. Overall, effects on herpetofauna species from the operation of the projects are expected to be Low to Very Low without mitigation. As such, no mitigation measures are proposed for herpetofauna.

Table 14.7: Overall level of effect on herpetofauna species from operation for each NOR

NOR	Species	Disturbance and displacement of individuals adjacent to construction activities	Loss in connectivity due to permanent habitat loss	Mitigation required?
NOR 1	Copper skink	Very Low	Very Low	No
NOR 2	Copper skink and ornate skink	Very Low	Very Low	No
	Elegant gecko, forest gecko and pacific gecko	Low Very Low*	Very Low	No
NOR 3	Copper skink	Very Low	Very Low	No
NOR 4	Copper skink and ornate skink	Very Low	Very Low	No
	Elegant gecko, forest gecko, pacific gecko	Very Low	Very Low	No
	Hochstetter's frog	Very Low	Very Low	No
NOR 5	Copper skink and ornate skink	Very Low	Very Low	No
	Elegant gecko, forest gecko, pacific gecko	Very Low	Very Low	No
	Hochstetter's frog	Very Low	Low Very Low*	No
NOR 6	Copper skink	Very Low	Very Low	No
NOR 7	Copper skink and ornate skink, elegant gecko, forest gecko, pacific gecko	Low Very Low*	Low	No
	Hochstetter's frog	Low Very Low*	Low	No
NOR 8	Copper skink and ornate skink, elegant gecko, forest gecko, pacific gecko	Low Very Low*	Low Very Low*	No

*Indicates a level of effect associated with the future ecological environment that is different from the baseline level of effects.

14.4 Recommended measures to avoid, remedy or mitigate potential adverse effects on terrestrial ecology

14.4.1 Construction effect mitigation

Pre-construction ecological surveys and Ecological Management Plans (EMP) will be prepared for each project prior to construction. The pre-construction ecological surveys will inform the detailed design of the EMP by confirming whether the identified species of value are still present in the project areas, and confirming whether the project will or may have a moderate or greater level of ecological effect on the ecological species of value prior to the implementation of management measures. Where moderate or higher effects are identified, EMPs will be developed which will include the following specific measures:

Implementation of a Bat Management Plan (BMP) for NORs 2, 4, 5, 7 and 8. The BMP will include the following:

Surveys prior to construction to confirm presence / likely absence. Surveys to confirm bat roost locations if activity is confirmed
Confirmation of maternity roosts may require a seasonal restriction on construction activity (no or restricted construction during Dec-Mar)
Siting of compounds and laydown areas to avoid bat habitat
Lighting design to reduce light levels and spill from construction areas
Restriction of nightworks around bat habitat.

Bat management will also be incorporated with any regional consent conditions that may be required for regional compliance.

An Avifauna Management Plan (AMP) for all NORs will be developed to include consideration of:

Pre-construction nesting bird surveys in suitable habitats (including wetland habitat)
Timing consideration for construction works (avoiding breeding season, where practicable)
Methods to minimise disturbance if the breeding season cannot be avoided
Methods to protect and buffer nesting birds (if present).

14.4.2 Operational effect mitigation

Operational effect mitigation measures will include:

Implementation of a Bat Management Plan (BMP) for NORs 2, 3, 4, 5, 7, and 8. The BMP will include the following:

Indicative early-stage / mature buffer planting, late-stage buffer planting, and retention of existing mature trees between the road alignment and features with potential for bat roosts
Light and noise management through design
Future presence of roosts within the alignment (placement of flaps on features with high roost potential)
Assumptions in the efficacy of the proposed mitigation will be addressed through an adaptive management framework that will outline bat activity thresholds, robust monitoring, and potential corrective action.

An Avifauna Management Plan (AMP) for all NORs should be developed to include consideration of:

Retention of vegetation near wetland habitat, where practicable
Buffer planting between the road alignment and suitable habitat adjacent to the road
Mitigation required to address any potential operational disturbance.

14.5 Summary of effects on terrestrial ecology

Following the implementation of the identified mitigation measures the residual level of construction and operation effects on terrestrial ecology associated with the construction and operation of all upgraded or new transport corridors is assessed as low to very low. Potential effects are therefore able to be appropriately managed, as outlined above.

15 Landscape, natural character and visual

The Assessment of Landscape, Natural Character and Visual (LNCVA) effects provided in Volume 4 provides an assessment of the potential effects on landscape character, natural character and visual effects associated with the construction and operation of the Warkworth Package and recommends ways of mitigating potential adverse effects. The summary below should be read in conjunction with the LNCVA.

15.1 Methodology

The LNCVA was undertaken using best practice guidance for landscape assessment as provided by 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022 (Te Tangi a te Manu).

The methodology used is best aligned with an area-based landscape assessment, which is typically a policy-driven assessment as opposed to a proposal-driven assessment. Area-based assessments are higher level assessments which assess the potential effects of generic activities, where specific project details are absent.

The New Zealand Institute of Landscape Architects seven-point scale of effects has been used in this report when assessing the potential landscape effects arising from the Warkworth Package. The effects scale ranges between" 'Very Low' to 'Low' to 'Low-Moderate' to 'Moderate' to 'Moderate-High' to 'High' to 'Very High' (Table 15.1).

Table 15.1: New Zealand Institute of Landscape Architects effects rating table

Very Low	Low	Low-Moderate	Moderate	Moderate-High	High	Very High

15.2 Assessment of landscape, natural character and visual effects consistent across the Warkworth Package

15.2.1 Assessment of positive landscape, natural character and visual effects

Positive effects in relation to landscape and visual elements are primarily associated with the provision or improvement of urban design and landscape amenity associated with the transport corridors and / or specific mitigation measures.

The positive effects of each of the new and / or upgraded transport corridors are summarised below:

Enhanced connectivity for Warkworth as a whole by integrating with the existing local street network and improving road user safety. It will also improve transport network connectivity to the adjacent landscape outside of Warkworth

Potential for stormwater wetlands to become attractive focal points through considered planting and wetland construction, and for stormwater wetlands to be integrated with active transport routes

Amenity planting has the potential to create attractive environments, which can enhance the built character of their surroundings and positively contribute to the visual quality of the streets and the area's sense of place

Potential opportunity for the transport corridors to provide elevated views towards the rural landscape outside the Rural Urban Boundary (RUB) and views of vegetated areas within the RUB

Opportunity to highlight heritage and cultural narratives in the landscape

There is the opportunity for further positive effects to be achieved by integrating active travel routes and recreational paths with Warkworth's 'green network' of bush and vegetated riparian margins.

15.2.2 Assessment of landscape, natural character and visual effects associated with construction

The following section discusses the temporary potential landscape and natural character and visual effects which could arise during construction of the Warkworth Package. It is noted that bulk earthworks and works within waterbodies will be the subject of a future regional resource consent process where the effects of these works will be considered and assessed in detail, and mitigation measures will be confirmed. It is acknowledged that there is overlap in the consideration of the landscape and visual effects of these activities between the district and regional plan provisions of the AUP:OP.

Construction footprint: Potential adverse construction effects are expected to result from the construction works footprint, with the footprint expected to be somewhat wider than the finished road. Construction machinery will also be present (including heavy vehicles), which may require access tracks. The additional width of works required during construction may cause vegetation outside of the permanent corridor to be removed and for work to occur within the drip line of existing trees. If riparian vegetation is removed this will likely have implications for natural character

Waterbodies: It is anticipated that work will be undertaken near waterways and wetlands potentially resulting in effects on natural character. Potential effects on waterbodies are applicable to landscape character but relate predominately to natural character

Exposed earthworks: Exposed earthworks can result in visual landscape effects during construction

Reduced amenity: During the construction phase of the transport corridors, adjacent residents are likely to experience reduced amenity, including from noise, dust, and lighting, as well as from visual effects caused by the presence of construction activities

Temporary effects: It is anticipated that activities during construction of the upgraded or new transport corridors will be generally consistent in nature and scale to road works and infrastructure activities commonly anticipated by public transient viewing audiences within an arterial corridor. Another important consideration is that landscape change by way of vegetation removal and land modification forms part of the expected backdrop of the existing environment as the area urbanises. Notwithstanding this, some public and private vantage points within transport corridors are likely to witness heightened adverse visual effects through the construction phase. Adverse effects of this nature are common to infrastructure projects and are mitigated by the short-term duration of the works and subsequent remediation.

Without mitigation in place, construction effects on landscape and natural character are assessed as 'moderate'.

15.2.3 Assessment of operational landscape, natural character and visual effects

The following sections discuss the anticipated operational landscape and natural character and visual effects of the Warkworth Package. Without mitigation in place, operational effects on landscape and natural character are assessed as 'moderate'.

15.2.3.1 Landscape character effects and amenity

For corridors or sections of corridors located in existing residential zones it is anticipated that in a number of circumstances greater urban intensification compared to what presently exists will occur. Where existing residential properties and houses are directly adjacent to the designation boundaries, it is possible that there will be amenity effects, including loss of privacy, compromised views, reduced buffers between houses and transport corridors, reduced section size, and increased traffic noise and light disturbance (e.g. from car headlights and streetlights).

For the corridors or sections of corridors located in currently greenfield and / or rural FUZ locations it is anticipated that the built outcomes of the land adjacent to the corridors will be in character with the planned urban intensification of the area, with roads being an essential element of urban areas. As such, amenity effects on future planned residential areas and dwellings will be limited.

The ULDMP condition directs the integration of the transport corridors with future surrounding land uses. At the completion of the projects, the upgraded and new transport corridors will resemble that of urban arterial roads on account of the active modes of transport, structured planting, integrated stormwater management and engineered roading elements that have an inherently urban aesthetic.

15.2.3.2 Changes to landform

The 'basin' formation of Warkworth's landscape means that the visual effects of the transport corridors will be restricted to the Warkworth area. Within Warkworth there are also a series of distinctive spaces created by knolls, hills, and ridges. These will further limit the visual effects of the transport corridors, likely resulting in relatively localised effects. There is the potential for cut and fill required as part of the construction for the transport corridors to result in visual effects for the Warkworth community due to loss of vegetation, visibility of new transport corridors on elevated landforms, and changes in the topography of the landform.

While the designation alignments generally avoid prominent spurs and ridgelines, some alignments travel across elevated landforms (particularly NOR 6 and NOR 7). It is noted however that landform modification is expected to occur as part of the urbanisation of Warkworth. It is expected that the transport corridors will be absorbed into the adjacent land through contouring of cut and fills and planting. The integration of the transport corridors with future landform and development will be enabled through the proposed Warkworth Package conditions.

15.2.3.3 Effects on vegetation

The Warkworth Package will result in the removal of some vegetation, which may potentially include mature indigenous species. It is anticipated that the designations may also cross several small sections of SEA. Where riparian vegetation is affected, it is likely that there will be effects on the natural character of these areas. There is scope within the designation to include new areas of vegetation and street trees as part of the ULDMP.

15.2.3.4 Effects on waterbodies and wetlands

Works near waterbodies are anticipated which may result in effects on the natural character of the affected areas. These effects are most likely to occur where the modification of natural overland flow paths is required, bridge piers are required in waterways or wetland beds, and where the removal of riparian vegetation is required.

15.3 Recommended measures to avoid, remedy or mitigate potential adverse landscape and visual effects

The following sections outline the proposed measures to manage the construction and operational landscape, natural character and visual effects.

15.3.1 Construction

The mitigation measures for all activities and built elements are outlined below and will be incorporated into the ULDMP, Construction Environmental Management Plan (CEMP), and Construction Traffic Management Plan (CTMP) which are proposed as conditions of each NOR, as outlined in Volume 1. Construction management measures will include:

Consider how the project can appropriately integrate with existing landscape features and the wider landscape

Consider opportunities for topsoil stripping and stockpiling for re-use, ensuring that topsoil is suitable for landscape purposes

Where appropriate, select visually discrete locations for the placement of construction yards and material storage. Consider screening of construction yards as mitigation for temporary visual effects

Reinstate construction yards in a manner appropriate for the anticipated future use of the land

Take into account the potential visual impacts of structures and look to adopt appropriate architectural and landscape treatment to manage these effects

Consider how the project can enable the integration of street trees into the transport corridor designs

Where practicable, avoid piers in the beds of waterways and wetlands, minimise piers on riverbanks, and minimise fill over waterbodies. It is noted that detailed responses to waterway and natural wetland treatment will be detailed in the future regional resource consenting stages of the Warkworth Package.

As required, NOR specific recommendations build on the recommendations for the overall network by providing more detail which is specific to individual transport corridors. With mitigation in place, landscape and natural character effects are anticipated to be ‘low-moderate’ in scale.

15.3.2 Operational

The operational landscape, natural character and visual effects of the Warkworth Package will be mitigated through the implementation of best practice urban design principles. These considerations are outlined in the UDE provided in Volume 4 and summarised in Section 8.2 and will be implemented through a ULDMP, which is provided as a condition in Volume 1. Key considerations of the ULDMP will be:

How the project can appropriately integrate with existing landscape features (including natural wetlands) and the wider natural landscape

How the project (including roadside elements such as lighting, signage and the landscape treatment of structures) can:

- Enable integration of the Project's permanent works into the surrounding landscape and urban context; and
- Ensure that the Project manages potential adverse landscape and visual effects and contributes to a quality urban environment.

Consider further refinement of stormwater treatment wetland design to appear 'natural' with a variety of habitats, e.g. irregular shape with curved boundaries, varying depths and islands

Consider water sensitive urban design principles. Recommendation to prioritise the use of soft engineering strategies for stormwater management

Take into account the potential visual impacts of structures and look to adopt appropriate architectural and landscape treatment to manage these effects

Re-validate the landscape and natural character values identified in the LNCVA prior to the commencement of conceptual design.

It is noted that detailed responses to waterway and natural wetland treatment will be detailed in the future regional resource consenting stages of the Warkworth Package.

As relevant, NOR specific recommendations build on the recommendations for the overall network by providing more detail which is specific to individual transport corridors. These are outlined in Table 15.2. With mitigation in place, landscape and natural character effects are anticipated to be 'Low' in scale for the Warkworth Package.

Table 15.2: NOR specific recommendations to mitigate operational landscape and visual effects

NOR	Specific mitigation measures
NOR 2	Minimise visual effects on adjacent residential dwellings with appropriate buffering and screening Integration of the transport corridor where the corridor intersects waterways and areas of vegetation Opportunity to provide cultural markers and interpretation panels for historical and culturally significant areas.
NOR 3	Provide detailed plans at the future regional resource consent stage for the enhancement of Warkworth's southern 'gateway' Large area of cut at the southern end of the designation is well integrated with the adjoining SH1 corridor in a way that is sensitive to the landform and reduces the extent of cut Provide suitable separation between natural and artificial wetlands Where practicable, avoid impacts on Morrison's Heritage Orchard. Avoid adverse effects to orchard trees where intrusion into the property boundaries is unavoidable Provide detailed plans at the future regional resource consent stage illustrating how the location of Morrison's Heritage Orchard will be positively enhanced through the transport corridor design

NOR	Specific mitigation measures
	It is noted that detailed responses to waterway and natural wetland treatment will be detailed in the future regional resource consenting stages of the Warkworth Package.
NOR 4	To the north of the Te Honohono ki Tai tie-in, consider opportunities to frame key rural views for northbound transport corridor users.
NOR 5	Where feasible, and appropriate, enable opportunities for cultural expression in the design of the Mahurangi River boardwalk Investigate opportunities to frame key rural views to the north of Sandspit Road, for transport corridor users.
NOR 6	Consider opportunities to frame key rural views in the surrounding landscape outside the RUB for transport corridor users.
NOR 7	Through planting design frame key views, as appropriate, of vegetated areas and the wider rural landscape outside the RUB for transport corridor users.
NOR 8	Through planting design frame key views, as appropriate, of vegetated areas and the wider rural landscape outside the RUB for transport corridor users.

15.4 Summary of landscape and visual effects

Overall adverse landscape and visual effects are able to be appropriately managed and reduced over time in relation to the urbanisation of the surrounding landscape. The surrounding landscape context has a lower level of sensitivity to change due to the existing context of the transport network. There are a number of positive landscape and visual effects that will result from the new and / or upgraded transport corridors including the opportunity to formalise the streetscape and amenity provide consistent amenity throughout transport corridors.

16 Natural hazards - flooding

The Assessment of Flooding and Stormwater Effects provided in Volume 4, assesses the potential effects of the transport corridors during construction and operational phases on flood extents and levels in the surrounding area. The summary below should be read in conjunction with this report.

Stormwater quantity, quality and effects on streams will be considered as part of a future regional consent process. This assessment focusses on flood hazard effects which is a district plan matter under the AUP:OP.

16.1 Methodology

The Assessment of Flooding and Stormwater Effects involved the following steps:

Desktop assessment to identify potential flooding locations from Auckland Council GeoMaps
Modelling of the pre-development and post-development terrain with Maximum Probable Development (MPD) and 100 year (ARI) plus climate change rainfall
Two climate scenarios were modelled, one allowing for 2.1°C of temperature increase and one for 3.8°C of temperature increase. The higher climate change scenario has been used to undertake a sensitivity analysis to understand the increased risk of greater climate change impacts
Producing flood level maps for pre-development and post-development scenarios and flood difference maps to show the change in flood levels and extents (greater than 50mm) as a result of the transport corridors
Inspection and review of flood difference maps at key locations such as bridges and where there are noticeable changes in flood extents or flood levels.

While stormwater effects apart from flooding are not assessed, provision is made for the future mitigation of potential stormwater effects (stormwater quantity, stormwater quality and instream structures) by identifying the space required for stormwater management devices (for example drainage channels and ponds) and incorporating land for that purpose into the designation footprint. These devices have been designed to attenuate the 100 year ARI event using 10% of the total roading impervious catchment area (proposed and existing) in accordance with Auckland Council[7] and Waka Kotahi guidance[8]. For existing roads being widened this allows for greater impervious area than the road widening alone.

Flooding effects will be confirmed at the detailed design stage. It is expected that coordination and integration of the corridor design with FUZ development will be undertaken to confirm and address potential future adverse effects.

16.2 Assessment of flood hazards consistent across the Warkworth Package

16.2.1 Assessment of positive effects on flood hazards

The positive effects of each transport corridor on flood hazards are summarised in Table 16.1 below.

[7] Auckland Council's Stormwater Management Devices in the Auckland Region, Guideline Document 2017/001 (December 2017)
[8] Waka Kotahi NZTA's Stormwater Design Philosophy Statement (May 2010)

Table 16.1: Project specific positive effects on flooding

NOR	Effect
NOR 1	The development of the Northern Public Transport Hub and Western Link – North provides an improvement to the flood resilience of SH1 as there is an opportunity for Te Tupu Ngātahi to work with P2W (through Waka Kotahi) to locate the culvert outlet for the benefit for both projects.
NOR 2	The upgrade of the existing single lane Mahurangi Bridge and the existing two-lane bridge (to the west of the Mahurangi River) will reduce the potential for road overtopping and flooding as the upgraded bridges will allow for higher flow volumes during flood events.

NOR 3	The upgrade of two existing culvert crossings to bridges will reduce the potential for road topping flooding. The two existing culvert crossings will have the following future performance issues if not upgraded:
	• Culvert 1 can only cope with:
	  • Approximately 30% of the total approach flow in the 100yr 2.1° temperature increase
	  • Dropping to 23% in the 100yr 3.8° temperature increase
	• Culvert 2 can only cope with:
	  • Approximately 47% of the total approach flow in the 100 yr 2.1° temperature increase
	  • Dropping to 37% in the 100yr 3.8° temperature increase
	The wetland location has been selected to be downstream of the existing SH1 to reduce the flood risk to the wetland
	The wetland associated with NOR 6: Western Link – South will provide treatment and attenuation opportunities for the existing SH1 upgrade
	Treatment and attenuating all the road surfaces will improve water quality and provide attenuation for 10 and 100yr flood flows associated with the added impervious road area.

NOR 4	Corridor does not impact on any flood plains or overland flow paths and the two proposed wetlands will improve water quality treatment and retention.
NOR 5	Two new proposed wetlands will provide treatment and attenuation. The wetland associated with NOR 7 Sandspit Link will also provide treatment and attenuation Upgrade of the bridge over the existing stream (downstream of NOR 7 intersection) and associated road formation will provide improvement to flood resilience.
NOR 6	There are minor potential flooding and stormwater issues associated with NOR 6 The proposed wetlands will provide water quality improvements and flood attenuation associated with the new road carriageway The second NOR 6 wetland located in proximity to NOR 3 can be used to provide improved stormwater quality and attenuation effects for NOR 3, in particular McKinney Road, and the NOR 3 and NOR 6 intersection.
NOR 7	The corridor alignment allows for the road surface to be well above any predicted flood plains and treatment wetlands to treat and attenuate flows.
NOR 8	No impacts are predicted to flood plains if bridge and culverts are appropriately sized and meet the proposed NOR conditions New impervious area from road carriageway will be diverted to the proposed wetlands for treatment and attenuation as required.

16.2.2 Assessment of construction flood hazard effects

The following construction works can result in flooding effects if not managed appropriately:

Construction of new culvert crossings or upgrading of existing culvert crossings or bridges
Installation of diversion drains or realignment of existing overland flow paths or natural streams (to be undertaken only as a last resort)
Construction of new attenuation wetlands or upgrading of existing attenuation wetlands
Temporary use of lay down and construction areas
The location and number of wetlands.

The potential effects of these works are:

Bulk earthworks to complete the contouring for new landscape features (e.g. attenuation wetlands and new or upgraded culverts) require a dry works area and can alter overland flow paths or generate erosion and sediment effects on surrounding waterbodies
The siting of attenuation wetlands within an existing overland flow path can obstruct runoff and result in flows being diverted towards existing properties due to the need for embankments.

There is potential for the above effects to occur during the construction on all of the transport corridors, however effects may vary based on the location of works (e.g. whether there are overland flow paths or known floodplains or flood prone areas in the vicinity).

In order to address these potential risks, the indicative construction lay down areas for each transport corridor have located outside floodplains and major overland flow paths and therefore will not result in an increased flood hazard risk. Appropriate areas for construction works such as construction lay down areas will be considered and included in the Construction Environmental Management Plan (CEMP) to avoid an increase in flood hazard risk.

16.2.3 Assessment of operational flood hazard effects

There are a range of potential operational effects particularly from road crossings (formations, bridges and culverts). The model used in the Assessment of Flooding and Stormwater Effects is based on an indicative design which will be the subject to further refinement, and it may be that some of these structures are modified in the future. A separate detailed flood assessment will be undertaken at the detailed design stage in order to inform the design and to confirm the final corridor design will comply with the NOR conditions.

The assessment of operational flooding and stormwater effects considered:

New culverts (≥ 600 mm diameter) and bridge crossings
Areas where the new road embankment encroaches onto predicted flood plains and flood prone land
Potential bridge and culvert sizing to convey flows and not increase flood levels upstream and downstream of the bridge or culvert in the future 100yr 2.1° temperature increase scenario
Land requirements for wetlands
The potential of flooding on existing properties due to the new project corridor.

The potential effects of these activities are:

Increasing impervious areas resulting in increased runoff and potentially increased flood levels at adjacent sites
Altering existing overland flow paths resulting in flows being redirected on a different alignment

Obstructing an existing overland flow path resulting in ponding at existing low points or newly created depressions along the corridor
Improving flows under the road reducing upstream flood levels and increasing flood levels at properties further downstream
Increased impervious area to treat for attenuation, treatment (or both) and pond locations.

The proposed mitigation measures set out in Section 16.3 have been developed to enable flood effects to be adequately addressed during the detailed design. With the implementation of mitigation measures during the detailed design and construction phases there is unlikely to be any adverse flood effects from the operation of each of the transport corridors.

16.3 Recommended measures to avoid, remedy or mitigate potential adverse effects on flood hazards

The following sections outline the proposed measures to manage the construction and operational flood hazard effects.

16.3.1 Construction

Flood hazard risks for the construction phase will be addressed through the Flood Hazard Condition and in a Construction Environmental Management Plan (CEMP) proposed as a condition on the designations and alteration to designation (as outlined in Volume 1 for all projects). In preparing the CEMP, key issues to consider include:

Siting construction yards and stockpiles outside the predicted flood plains
Maintaining overland flow paths around / through areas of work
Minimising the physical obstruction to flood flows at the road sag points
Staging and programming to provide new drainage prior to raising road design levels and carry out work when there is less risk of extreme flood events
Actions to take in response to heavy rain warnings which may include reducing the conveyance of materials and plant that are considered necessary to be stored or sited within the predicted flood plain or significant overland flow path.

The proposed Flood Hazard condition will require the detailed design of the transport corridors to achieve the following flood risk outcomes during the construction phase:

No increase in flood levels for existing authorised habitable floors that are already subject to flooding
No more than a 10% reduction in freeboard for existing authorised habitable floors
No increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling
No new flood prone areas
No more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted.

16.3.2 Operational

During detailed design, additional flood modelling will be carried out and measures implemented to achieve the following outcomes (proposed as a designation condition for all projects as outlined in Volume 1):

No increase in flood levels for existing authorised habitable floors that are already subject to flooding
No more than a 10% reduction in freeboard for existing authorised habitable floors
No increase of more than 50 mm in flood level on land zoned for urban or future urban development where there is no existing dwelling
No new flood prone areas
No more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at the time the Outline Plan is submitted.

Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls and overland flow paths, this may be agreed with the affected property owner and Auckland Council.

16.4 Summary of effects on flood hazards

The Assessment of Flooding and Stormwater Effects for the transport corridors was based on an indicative design of the new transport network. A number of positive effects have been identified associated with the development particularly where new bridges are proposed. These bridges will raise the existing road levels reducing the potential for flood levels to overtop the road and reducing flood hazard. Additional positive effects can be realised through upgrades to existing culverts or new culvert crossings to improve overland and stream flow under the roads.

The assessment found that there was unlikely to be additional risk of flood effects during construction as all indicative laydown areas are outside of the floodplain and overland flow path. For those areas where there is an increased risk mitigation measures such as carrying out construction works during dry weather and using diversion drains will be adequate to manage this risk.

Potential operational effects include increased flood levels downstream of crossings and bridges. Design considerations and management measures have been incorporated to ensure adverse effects are addressed. Based on the findings and recommendations of the Assessment of Flooding and Stormwater Effects, adverse effects of the new and / or upgraded transport corridors associated with flood hazards are able to be appropriately managed.

17 Archaeology and built heritage

The Assessment of Heritage Effects provided in Volume 4 assesses the potential effects on historic heritage and archaeological sites as a result of the construction and operation of the Warkworth Package. The report assesses the potential effects on any identified recorded historic heritage and archaeological sites and unidentified subsurface archaeological remains that might be exposed during future construction. The summary below should be read in conjunction with this report.

17.1 Methodology

17.1.1 Archaeology

The Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) and the RMA control work affecting heritage and archaeological sites. Both the HNZPTA and the RMA have been considered in the assessment of effects. The assessment criteria used in the Assessment of Archaeological Effects first provides an assessment of the archaeological values within the site context (condition, rarity /

uniqueness and information potential), and second the archaeological values between sites (archaeological landscape / contextual value, amenity value, cultural association).

17.1.2 Built heritage

This Assessment of Archaeological Effects also addresses built heritage. The assessment based on standard international practices for Environmental Impact Assessment such as those described in the Waka Kotahi 2014: Guide to assessing historic heritage effects for state highway projects (Draft Version 2.4). The methods have been aligned to the regional values assessment criteria for Auckland set out in the AUP:OP Regional Policy Statement (RPS) B5.2.2.1. Identification and evaluation of historic heritage places.

17.2 Assessment of effects on archaeology and built heritage

17.2.1 Assessment of positive effects on archaeology and built heritage

Positive effects on historic heritage and archaeological sites can occur where the disturbance of sites as part of the project works enable research to be undertaken on those sites. This would potentially enable more to be understood about pre-European Warkworth, and also early European settlements.

17.2.2 Assessment of construction effects on archaeology and built heritage

The removal of topsoil for the construction of the new corridors or corridor upgrades has the potential to uncover archaeological features. The Warkworth area is largely rural in nature. Some corridors (NORs 1, 6, 7 and 8) will pass through currently undeveloped rural areas. All of the projects run alongside or cross rivers and streams. Therefore, there is potential for pre-European Māori or colonial sites to be present within any of the transport corridors. Adverse effects from the discovery and subsequent disturbance of these sub-surface sites are possible. Uncovered sub-surface sites have no existing amenity value and their cultural association would be related to the iwi and hapū of the area. The potential adverse effects of accidentally discovering archaeological sites can be managed through the implementation of mitigation measures detailed in Section 17.4 below.

Corridors with identified features or potential features are set out in Table 17.1 below:

Table 17.1: Recorded archaeological and historic heritage sites for each NOR

NOR	Site description
NOR 2	The Woodcocks Road Upgrade (Western Section) is located within 200m of four archaeological sites, and two Auckland Council CHI sites as follows: Cherry's Hut (R09/2243) is located in the general vicinity of the project, although sub-surface remains are unlikely to be within the designation footprint Cherry's bridge (R09/2244) constructed in 1859, rebuilt in 1894 was not visible during a site visit by the project archaeologist and is potentially obscured by vegetation or the tide. However, it is likely that piles or other structures are still present and may be affected by construction works as the site is likely to be near the existing one-way bridge supporting the current road carriageway

NOR	Site description
	There is a known historical track and ford (R09/2246) believed to be remnants of a track to Puhinui Falls likely based on a Māori pathway to the west coast however this site is outside the designation boundary Previous earthworks undertaken for Ara Tūhono (Puhoi to Warkworth) motorway uncovered a number historic items such as kānuka kō (digging sticks) likely to be secondary deposits from stream washout, or potentially a remnant of previous taro horticulture as it is a suitable floodplain for such activity. These artefacts were removed at the time but additional items may be present subsurface in the western extent of the corridor upgrade Two United States WWII Camp (CHI17004, CHI17006) sites are located in the area. Concrete remains from CHI17004 may be encountered during construction works.
NOR 4	There is one recorded archaeological site within 200m of the designation. The site is a timber cottage built in the mid-1870s (R09/2253 – Domestic). The site may contain further subsurface material, but with proposed mitigations during construction, the level of impact on the site is expected to be low.
NOR 5	There is one archaeological site within 200m of the works and designation. The site (R09/2263) was likely the site of a dam built in the 1870s/80s. This dam is no longer visible but a dam built to service the nearby cement works in 1913 is visible. There are several sparse scatters of highly fragmented shells, thought to be related to a possible midden of which some is scattered within the designation extent.
NOR 6	The corridor will traverse a pre-1900s road bench (R09/2284) and will need to be partially destroyed. Earthworks associated with a recent nearby subdivision development have destroyed much of the remaining historical road bench (See Assessment of Archaeological and Heritage Effects in Volume 4). A small portion of the remaining historical road bench is within the NOR 6 designation boundary. The site may have contextual value as a piece of Warkworth's colonial history.
NOR 8	There is one archaeological site within 200m of the designation boundary but the works are unlikely to have any impact on the site. The site is a United States WWII military camp site (CHI17006). Only fragments of concrete remain within the designation footprint.

17.3 Assessment of operational effects on archaeology and built heritage

For NOR 5, upstream works to R09/2263 may affect the flow of water and potentially the abrasion and weathering of the Wilson Portland Cement Dam over time. However, any impacts are expected to be low and damage can be mitigated through monitoring and the provisions in the HHMP.

17.4 Recommended measures to avoid, remedy or mitigate potential adverse effects on archaeology and built heritage

It is recommended that, prior to works starting, an authority to damage or destroy recorded sites (R09/2244, R09/2247, R09/2253, R09/2284) and any unrecorded archaeological sites and any other archaeological features that may be encountered within the identified works areas be applied for from HNZPT under Section 44 of the HNZPTA.

No authority will be applied for without consultation with the appropriate tangata whenua authorities; evidence of consultation and views expressed will be required by HNZPT and will be taken into account when making a decision about the granting of the authority.

The works will be completed under an archaeological authority obtained from HNZPT and should be guided by a Historic Heritage Management Plan (HHMP) which is proposed as a condition for all NORs. Where risk of encountering archaeological sites or post-1900 heritage sites is increased, archaeological monitoring will take place. Any archaeological or heritage material identified during works will be recorded, sampled, and analysed as relevant.

While there is a risk of damage to archaeological / heritage sites, which is an adverse effect, by having an archaeologist on site and available to record and analyse material there will be potential to learn more about the history of Warkworth.

Appropriate tikanga (protocols) will be followed during works and Manawhenua may make recommendations outlining these. In the event of kōiwi (human remains) being uncovered during any future construction, work will cease immediately and the appropriate tangata whenua authorities will be contacted so that suitable arrangements can be made. As archaeological survey cannot always detect sites of traditional significance to Māori, or wāhi tapu, the appropriate tangata whenua authorities will be consulted regarding the possible existence of such sites, and the recommendations in this report.

17.5 Summary of effects on archaeological and built heritage

The nature of historic heritage, especially archaeological features recorded and unrecorded, is that all disturbances including construction have an adverse effect that is unable to be remediated, only mitigated. Nonetheless the discovery or disturbance of these sites (particularly around wetlands and streams) will allow environmental archaeological research to be undertaken.

All transport corridors have potential for adverse effects occurring during construction activities. Heritage and archaeology features have been identified and assessed for each corridor with the key features outlined above. Potential effects are able to be appropriately managed through the implementation of mitigation detailed in a HHMP prepared for a HNZPTA authority for each of the corridors. Operational effects are expected to be limited to NOR 5 - R09/2263 (Wilson Portland Cement Dam), and damage can be managed through the provisions in the HHMP.

18 Social / community

The Warkworth Package will have impacts on the existing and future communities of Warkworth. This section of the AEE assesses the potential effects from changes to the local social and community facilities on existing and future communities. The existing communities in Warkworth will change as urbanisation occurs. Over the next 30 years an extra 17,100 people are expected to live in the area, along with 8,200 new dwellings and 4,600 new jobs.

Section 18 considers effects on the community generally. Specific effects on property and business are considered in Section 19.

18.1 Methodology

To determine the social and community impacts (effects) and an understanding of the existing and future communities, the following steps have been undertaken:

A desk top research which included a review of:

The AUP:OP and the Warkworth Structure Plan
Te Tupu Ngātahi consultation and engagement feedback
Population and other growth statistics within the FULSS
Online mapping.

Additional primary research included:

Site visits to each of the corridors
Engagement with the Local Board
Discussion with landowners, the wider community, and partners and stakeholders at open days, meetings, Hui and public consultation events.

18.2 Assessment of social / community effects consistent across the Warkworth Package

18.2.1 Assessment of positive social / community effects

The Warkworth area is predominantly FUZ with existing urbanisation along the central northeast and northwest section along the existing SH1 and the area around the Hill Street intersection. The following positive effects were identified for the Warkworth Package:

The Warkworth Package will provide certainty regarding the location of required transport infrastructure to support the planned growth in Warkworth, which will avoid build out into the corridor and subsequently reduce future community disruption, which would be greater if the routes were designated later over intensified land use
Ensure that the corridors can be delivered in a way that supports their integration with surrounding land use and supports quality urban design outcomes for future communities
Provide corridors aligned with Safe Systems and Vision Zero which enhances community health and safety, by minimising the likelihood of DSIs to users.
Improved connectivity through the Warkworth area, including by active modes and public transport to access:

- Employment opportunities, retail and services located within existing centres and business areas, and future centres and business areas on FUZ land
- Social and community infrastructure including schools (e.g., Mahurangi College on Woodcocks Road, Mahurangi Primary School on Hill Street), recreational facilities (Warkworth Showgrounds on the existing SH1, Mahurangi Rugby Club on the existing SH1, Warkworth Tennis and Squash Club on Shoesmith Street, Shoesmith Reserve) and future sites within Warkworth.

18.2.2 Assessment of general construction effects

Construction of the transport corridors will not occur simultaneously and is likely to be staged in line with urbanisation demand from growth areas. This means residents will be exposed to construction effects over different time periods and with varying levels of directness. Similar construction effects are anticipated along urbanised corridors. Potential effects include:

Disruption of normal business
Alteration or limitations to existing access for vehicles, pedestrians, or cyclists
Changes to normal traffic flows due to route diversion
Capacity and speed restrictions
Changes to amenity.

In regard to impacts on existing communities, it should be noted that for corridors (or sections of corridors) on FUZ land there is likely to be change in the community once urbanisation occurs. In these areas construction is anticipated to take place before or alongside urbanisation.

Construction will be undertaken in a staged and linear manner, limiting prolonged impacts on any businesses, community facilities and residential properties (excluding areas immediately adjacent to construction laydown areas which will be required for a prolonged period). Engagement with businesses can also limit the extent of impacts, by for instance identifying peak business hours or the timing of deliveries which construction works can be planned around, as far as practicable.

18.2.2.1 Specific project construction effects

The following section outlines the effects of specific projects from the Warkworth Package on the Warkworth community and facilities.

Commercial Facilities

The works will impact on several businesses in Warkworth, however impacts are generally limited to business frontages. Works associated with Sandspit Road and Sandspit Link may disrupt vehicle access to the limestone quarry adjacent to Sandspit Link although this can be managed through the implementation of a CTMP.

Community Facilities

There is potential for disruption to community facilities and social construction from construction works on specific corridors. Key effected community facilities and social infrastructure are identified in Table 18.1 below.

Table 18.1: Key community facilities and infrastructure in Warkworth

Corridor	Asset	Commentary on the potential impact
NOR 2: Woodcocks Road (Western Section)	Mahurangi College (corner of Woodcocks Road and SH1)	Traffic disruption as a result of construction vehicle movement and associated safety controls during period of construction work.
	The Ministry of Education (MOE) is proposing a new school site at 100 Woodcocks Road	The proposed school is yet to be confirmed however the upgrade of Woodcocks Road may impact on the frontage of the proposed school site. It is anticipated that development will integrate with the corridor.

Residential

Existing and future residents will experience temporary disruptions to traffic, access restrictions or diversions due to construction works on each of the corridors. Along Woodcocks Road, Matakana Road, Sandspit Road and SH1 a number of driveway tie-ins are required to be modified to achieve adequate levels between private property and the road corridor. These effects can be managed through the implementation of a CTMP.

There is potential for amenity impacts during the period construction works to occur in proximity to residents. These can be mitigated and / or managed via the CNVMP (which will include measure to minimise the impacts on residents, as far as practicable), complaints processes and ongoing and proactive communication, via the Stakeholder Communication and Engagement Management Plan (SCEMP).

18.2.3 Business and commercial

For existing businesses and commercial properties there is the potential for impacts from construction work along each corridor, these impacts include traffic disruption and impacts on visibility and accessibility, including for services and deliveries, of shops, office and other commercial areas. These impacts can be mitigated and / or managed via a CEMP and ongoing engagement with businesses and wider community, via a SCEMP

Businesses and commercial properties that fall entirely within the designation footprint will be acquired to allow for the upgrade or construction of the new corridor. The landowners of these businesses will have recourse through the Public Works Act (PWA). Communication with the impacted businesses will be required to allow them to plan ahead. In terms of the wider community, while they will no longer have access to the displaced businesses, they will have access to new businesses and centres as the FUZ areas urbanise.

For businesses and commercial properties, where the designation extends along the frontage of the sites, access will be reinstated with temporary access arrangements identified as part of a CTMP (if required). Land required for the construction of the transport corridors will be made good and returned once the road upgrades are complete.

Where a partial acquisition of a site is required, communication with the landowner and occupier will be required to discuss the ongoing operation of the site. Depending whether the partial acquisition will impact on the operation of the business, landowners may have recourse through the PWA.

Disruption can be managed through the CEMP and CTMP, implementation of recommendations from the specialist assessments, including the CNVMP, to manage amenity impacts and communication with stakeholders / operators so that work is undertaken in a way which minimises impacts, e.g., avoiding construction servicing and deliveries during peak school drop off / pick up times.

18.3 Assessment of operational social / community effects

Overall, the projects are anticipated to have positive effects on the future community in which they will operate. The new corridors and upgrades to corridors will improve connectivity within Warkworth. In particular, the provision of safe, separated active mode facilities on each corridor will assist the community in accessing their everyday needs and activities, in addition to providing for exercise and recreation. This will also support mode choice for the community, i.e., shifting from private cars to active modes and public transport.

Where on street parking is impacted, this will be mitigated by the provision of active mode facilities and the provision of facilities to support public transport. This will provide the opportunity for people to access facilities, business, and other areas within the local community, via modes other than driving.

There are no existing requirements for minimum parking to be provided for the transport corridors under the AUP:OP, other than for accessibility parks. Where private parking areas are permanently affected, this is considered a property matter and will be addressed through the PWA process.

18.4 Recommended measures to avoid, remedy or mitigate potential adverse social / community effects

It is anticipated that community effects during the construction of the new and upgraded corridors will be temporary and able to be minimised. A SCEMP will be prepared prior to the start of construction to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be communicated with throughout the construction works. Ongoing community with business community and schools will occur to meet business and education requirements and manage potential impacts.

Access and trip disruption including measures to avoid disruptions at peak travel times or school pickups and drop-offs will be managed by the CTMP and SCEMP proposed as conditions. This will allow the contractors to identify movement and access requirements of residents and businesses along the corridor and enable alternate access or access at peak times and minimise trip disruption where practicable. Access to community resources including schools and parks will be maintained.

Construction effects on amenity values of property can be managed by engagement with corridor residents and stakeholder (identified through the SCEMP), noise management (CNVMP), and the overall CEMP to manage potential effects.

18.5 Summary of social / community effects

The construction of new and upgrades to existing corridors will provide positive effects to the community in which it will operate. The corridors will support planned urban growth and will have significant safety and transport benefits providing a safe and resilient connection which provides for active transport and public transport connections. The projects will also improve community cohesion and access to community resources.

The adverse construction effects can be managed with the development and implementation of the appropriate plans and mitigations measures outlined above and communication with the community and affected landowners and occupiers. Where construction effects cannot be fully mitigated, they can be managed through discussions with the affected parties.

19 Property, land use and business disruption

Construction of the Warkworth Package will have impacts on property, land use and businesses. This section of the AEE assesses the potential effects from these impacts. Section 18 considers effects on the community generally. This section considers specific effects on property and business.

19.1 Methodology

The Warkworth Package has sought to reduce potential adverse effects on existing private properties and businesses through alignment and corridor design, where practicable, while acknowledging the planned urban growth will result in substantial changes to the area over the next 10 - 30 years. The assessment has included specific consideration of the potential property and business impacts in the Assessment of Alternatives report provided in Appendix A. Efforts have been made through engagement with affected stakeholders to refine the corridor design and the designation footprint.

The designation extents for the Warkworth Package provide a sufficient footprint to enable the construction, operation and maintenance of the transport corridors. Private properties directly affected vary across the corridors between primarily rural, rural-residential, open space / reserve and commercial / industrial land use. A detailed description of the existing land use of the land adjacent to the transport corridors is provided in Section 9.

19.2 Positive effects

The corridors will support the intensification of land, in line with the AUP:OP and the Warkworth Structure Plan in the following scenarios:

In FUZ areas impacts on land and existing property can be viewed in the context of a changing environment from greenfield to urban with increased density of development
Redevelopment and intensification may also occur as a result of the NPS-UD, enabling greater density.

19.3 Effects of an extended lapse date

19.3.1 Uncertainty and extended lapse date

Lapse dates of 15 to 25 years are sought for the Warkworth Package designations. The rationale for this is set out in section 7. When considering an extended lapse period, it is appropriate to balance the need for that lapse period against the potential “blighting" effects. The effects associated with an extended lapse period are generally associated with a lack of certainty as to:

When construction will commence;
How long an affected party will be subjected to construction effects and the degree to which they will be affected by those effects; and
The form of the potential effects of the future operation of the designation.

Notwithstanding the influence of any proposed mitigation, the significance of potential effects resulting from this lack of certainty is generally proportional to the length of the lapse period. In other words, a longer lapse period can create uncertainty for a longer period of time than a shorter lapse period.

In the absence of a specific construction commencement date, and other precise information regarding construction duration within any specific area, we consider that the most workable method for managing any outstanding uncertainty associated with the lapse period being sought is ongoing communication, and we discuss the adequacy of proposed conditions (including those relating to ongoing communication) in more detail below.

19.3.2 Future Urban Zone

When considering effects associated with an extended lapse period, it is important to note that the majority of the Warkworth Package is within the FUZ. The FUZ is a land use zoning that is applied to greenfield land that has been identified as suitable for urbanisation. It is located entirely within the boundaries of the RUB so is acknowledged as being potentially suitable for urban development.

The FUZ enables the land to continue to be used for rural purposes until such a time as the zoning is changed to an urban zoning. The AUP:OP identifies the FUZ as being a transitional zone where land can be used for a range of general rural activities but cannot be used for urban activities until the site is rezoned for urban purposes; and while the FUZ anticipates urbanisation, it does not require it, nor does it set a timeframe for when the urbanisation will occur. In this regard, it is considered that:

People who currently live within the FUZ experiencing a rural lifestyle are unlikely to remain within that area as urbanisation of the FUZ is confirmed and implemented. As such, there is likely to be some uncertainty for existing residents about when urbanisation is likely to occur. It is considered that the people who live within the FUZ are likely already experiencing the effects of uncertainty irrespective of an extended designation lapse date

The network is unlikely to be implemented until urbanisation is (at least) confirmed. If urbanisation does not occur, it is likely that the network will not be constructed. Confirmation of urbanisation is therefore considered to be critical to providing certainty on the likely construction of the network

Future communities, i.e. people who move into the area as the FUZ urbanises, will do so with knowledge of where the network will be in the future.

19.3.3 Project delivery timeframe uncertainty

The designations will provide long term certainty regarding the alignment of each corridor and the future transport network as a whole. This will inform directly impacted landowners' and future residents' future investment and operational decisions about how land may be impacted. In order to manage uncertainty of restrictions and project delivery timeframes for individual properties, AT will establish information platforms following confirmation of the designations and before construction starts which will inform owners of project progress.

19.3.4 Land use and the section 176(1)(b) process

The designations will not preclude the continued (unchanged) use of any directly affected properties prior to construction. However, in accordance with section 176(1)(b) of the RMA, anyone (other than a requiring authority with an earlier designation) is restricted from carrying out work on the designated land that would prevent or hinder the designated work without first obtaining the requiring authority's written consent. For properties partially designated, any works in areas outside the designation are not required to obtain written consent.

Where feasible, AT will work with landowners and developers through the section 176(1)(b) process to help them integrate earthworks, road upgrades (or extensions to roads), stormwater solutions and development so that those works will not prevent or hinder the work authorised by the designation, and to enable written consent to be provided. For those properties adjacent or in proximity to the designations, before implementation of the transport corridors, urban development and investment can continue to occur, informed by the designation.

Where landowners contact AT in advance of the property acquisition process, AT will engage with those owners and refer them to public information on the PWA process and AT's timeframes for the corridor delivery.

19.4 Effects during and following construction

19.4.1 Land impacted permanently

Land required for the ongoing operation and maintenance of each corridor will be acquired typically in a period of 2 - 3 years leading up to main construction works for each project. The PWA is the legislative framework under which entitled landowners will receive compensation. This is a non-RMA process.

19.4.2 Land impacted temporarily

The designations include land required for temporary construction and permanent works. These areas are shown as indicative in the NOR plans and will not be confirmed until the detailed design stage. If temporary occupation of the land is required at construction, it will typically be leased. Potential effects from the temporary lease / use of land within the designations include:

Disruption to business access and parking

Disruption to farm activities, temporary loss of grazing pasture, stock-proof fencing (given the proposed urbanisation in the Warkworth growth areas this is most likely to be an issue on the FUZ and RUB boundaries of NOR 4 (Matakana Road) and NOR 5 (Sandspit Road)

Changes to driveways including gradient or alignment, loss of yard vegetation and construction impacts (including noise and vibration, and visual amenity). Where driveways are required to be re-graded the driveways have been included within the designation.

19.4.3 Land no longer required following completion of works

On completion of the works:

Private land not required for on-going operation, maintenance or effects management will be reintegrated in coordination and discussion with directly affected landowners. This may include the reinstatement of private driveways, parking, fences, gardens, and yards, and re-integrating construction areas (e.g., batters, stormwater wetlands) with the surrounding landform

As per section 182 of the RMA, the designation footprint will be reviewed upon completion of the projects and will be uplifted from those areas not required for the on-going operation, maintenance or effects mitigation associated with corridors.

Refer to Volume 3 for the general arrangement plans for each NOR.

19.5 Recommended measures to avoid, remedy or mitigate potential adverse effects

19.5.1 Land use uncertainty and property impacts

Following confirmation of the designations, a project website or other suitable information source with information on the projects within the Warkworth Package such as status and anticipated construction timeframes will be established. Additional measures that are available for landowners include:

The provision of information on the section 176(1)(b) process and AT contact details to support the integration of development within each corridor, where practicable
The provision of information on the PWA to address uncertainty for landowners, noting that the PWA is a non-RMA process.

A SCEMP will be implemented prior to the start of construction to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be communicated with before and during construction works. This will include the following:

Determine adequate notice periods for the commencement of construction activities and works that affect access to properties
Identify appropriate communication channels to support property owners and occupier to understand and plan around works, (such as a project website). The selected communication channels will include:

- Inform parties of the expected timing, duration and staging of works
- Type and nature of effects to be anticipated and regular updating of progress
- Provide avenues for feedback, inquiries, and complaints during the construction process.

At the detailed design stage engagement will be undertaken with affected owners on AT's approach to temporary and permanent land impacted (including any leasing or acquisition processes, as covered under the PWA). For those properties that are fully designated and required permanently they will be purchased and no longer be present at construction. For partially acquired properties management plans will be implemented to manage adverse amenity impacts.

19.5.2 Access

Disruption to traffic and transport patterns will be managed via the implementation of a CTMP. The CTMP will include methods to:

Maintain vehicle access to property and / or private roads where practicable, or to provide alternative access arrangements when it will not be practicable
Communicate traffic management measures to affected parties.

Construction traffic effects are discussed in more detail in Section 11.

19.5.3 Noise and vibration

Reductions in amenity from noise and vibration disturbing normal residential and business use will be managed by implementation of a CNVMP, the CNVMP will include methods to:

Communicate and engage with nearby residents and stakeholders
Minimise construction disruption for affected properties during construction

In addition to a CNVMP, it may be necessary to produce site specific or activity specific Construction Noise and Vibration Management Schedules where noise and / or vibration limits are predicted to be exceeded for a more sustained period or by a large margin.

Noise effects are discussed in more detail in Section 13.

19.5.4 Construction activities

Construction activities can be expected to temporarily reduce amenity, effects will be managed and minimised through implementation of a CEMP. At detailed design stage, affected parties will be engaged on the approach to temporary and permanent land impacted (including leasing or acquisition required, covered under the PWA).

19.5.5 Land re-integration

Where property features are damaged, features will be re-instated, as far as practicable, including private driveways, parking, fences, gardens, and yards, and re-integrating of construction areas with the surrounding landform. This will be discussed at the time with those landowners and follow those provisions under the PWA. Once projects are completed a review of the designation footprints as per section 181 of the RMA will be undertaken to review any areas no longer required for the projects.

19.6 Summary of effects on property, land use and business disruption

The new and / or upgraded transport corridors can be expected to have a range of effects on normal property and land use activity from the time that the designations are confirmed. Potential effects include restrictions imposed on private property due to the designation being on their site, and the uncertainty this can create for landowners. Before and during construction, effects will include changes to the amenity of the surrounding environment, disturbance to enjoyment whilst construction is carried out, as well as direct permanent changes to private property in some cases.

Prior to construction, measures are proposed which will assist in alleviating the associated uncertainty for landowners and enable those activities in the interim, which will not prevent or hinder the projects. Measures have also been proposed to manage effects of the works during construction and suitable RMA management plans are proposed to enable this. Property impacts outside the scope of the RMA will be managed under other legislative processes, as appropriate.

With the proposed mitigation in place, it is considered that effects on property, business and amenity will be appropriately managed.

20 Trees

The Assessment of Arboricultural Effects included in Appendix A of Volume 4 provides an assessment of the actual and potential effects of the future construction and operation of the Warkworth Package on existing trees protected under the district plan provisions and recommends ways of managing these effects. Any trees that trigger regional plan requirements will be assessed and managed through a future regional consenting process.

20.1 Methodology

Trees were recorded singularly, or in groups where logical groupings could be made based on species, configuration and / or size. Sufficient information was gathered to allow an assessment of the existing environment and consideration of the future environment. Tree details are presented in Appendix A of the Assessment of Arboricultural Effects provided in Volume 4.

Given that the Project is to be delivered in 10 – 25 years, a verification assessment at the time of implementation will be undertaken prior to construction to confirm that the current conditions are still relevant. Any future tree removal, tree planting or mass planted vegetation will be assessed at that time, with the current Assessment of Arboricultural Effects intended to provide a baseline survey.

20.2 Assessment of effects on trees consistent across the Warkworth Package

20.2.1 Assessment of positive effects on trees

All of the proposed corridor cross sections include sufficient space for a formal berm on both sides of the corridor for the majority of each route. This will allow for the replanting of new trees in an environment conducive to good tree growth with suitable setbacks provided from future roading infrastructure, although in some cases, such as near intersections, further planting may not be possible. The full extent of replacement planting will be determined at the detailed design stage which will be completed prior to construction, however urban design principles will be followed when determining the type and extent of replanting new and upgraded corridors.

20.2.2 Assessment of construction effects on trees

The removal of district plan protected trees will be required for the construction of NORs 2, 3, 4, 5 and 6 as outlined in Table 20.1 from open space zoned land and in the road reserve. Works may also occur in the root zone of protected trees. NORs 1, 7, and 8 do not traverse areas which have trees protected by district plan provisions. Any vegetation alteration, removal or disturbance for these NORs will be assessed in the future to determine whether regional resource consents are required for vegetation removal.

Table 20.1: Summary of protected trees and groups and vegetation requiring removal for each NOR

NOR	Number of protected trees / requiring removal	Mass planted areas / groups of vegetation requiring removal
NOR 1	0	0
NOR 2	11	12
NOR 3	0	1
NOR 4	5	2
NOR 5	0	3
NOR 6	2	3
NOR 7	0	0
NOR 8	0	0
Total	**18**	**21**

Tree removal has the potential to result in adverse amenity and ecological effects on the surrounding environment. Works near trees may require works within the protected root zone or trimming of trees. These works have the potential to affect the health of trees where tree protection methodologies are not followed. A full tree schedule of specific trees affected by each corridor is provided in Appendix A, of the Assessment of Arboricultural Effects in Volume 4. In order to manage potential adverse effects, a Tree Management Plan is proposed for each NOR, as described in Section 20.3.

20.2.3 Assessment of operational effects on trees

Operational effects of the projects are largely limited to the maintenance of sight lines and the overhead and lateral clearances of general traffic lanes and the walking and cycling facilities. The required clearances will largely be limited to existing retained vegetation and newly planted vegetation within the proposed berm areas which will require management in the medium term.

20.3 Recommended measures to avoid, remedy or mitigate potential adverse effects on trees

Mitigation measures commensurate with the anticipated effects on the environment from impacts on protected trees have been considered, with the aim of avoiding, remedying and mitigating effects on trees. The effects on trees protected by the district plan will be mitigated by replacement planting within the corridor and on adjacent land. To address the potential effects identified, a Tree Management Plan (TMP) will be prepared prior to construction to identify the existing trees protected under the district plan, confirm the construction methods and impacts on each tree and detail methods for all work within the root zone of trees that will be retained. The TMP is proposed as a condition for each designation, as outlined in Volume 1. The TMP will include:

Confirmation that protected trees identified in the Assessment of Arboricultural Effects still exist;
Advice on how the design and location of works can avoid, remedy or mitigate effects on the existing trees;

Recommended planting to replace protected trees that require removal;
Establishing tree protection zones and specifying tree protection measures such as protective fencing, ground protection and physical protection of roots, trunks and branches;
Detailing methods for all work within the root zone of trees that are to be retained in line with appropriate arboricultural standards; and
Where good quality trees in the road reserve are identified for removal, consideration of tree transplanting will be included in the TMP. An assessment of the quality of the trees and the feasibility of transplantation will form part of the plan.

The TMP is limited to trees identified in the Assessment of Arboricultural Effects that are protected under the district plan. Trees protected under regional plan provisions will be addressed as part of a future consenting process.

The effects of tree loss can be mitigated by comprehensive planting within the new berms, and areas identified in the UDE. Replacement planting will be decided through a planting plan for the Project under the proposed ULDMP condition. The ULDMP will also include methodologies to establish new trees within the road reserve, including creation of quality below ground environments, correct planting methods and appropriate maintenance. The replanting to be specified under the ULDMP will provide the appropriate mitigation for the potential effects from the removal of trees protected by the district plan. The long-term outcome of comprehensive street tree planting will be more trees in the public realm and increased amenity value within the public transport corridor.

21 Summary of proposed mitigation

The majority of adverse effects have been avoided and / or mitigated via alignment decisions and design choices. Where potential effects have not been able to be addressed via alignment or design, measures are proposed to avoid, remedy or mitigate the potential adverse effects. The proposed mitigation measures are summarised in Table 21.1 and included in the proposed conditions for each NOR as relevant. The proposed condition set for each NOR is provided in Volume 1.

Table 21.1: Summary of measures to avoid, remedy or mitigate potential adverse effects

Matter	Condition title
Manawhenua partnership	Outline Plan Management Plans Cultural Advisory Report Urban Landscape Design Management Plan (**ULDMP**) Stakeholder and Communications Engagement Management Plan (**SCEMP**) Cultural Monitoring Plan Historic Heritage Management Plan (**HHMP**).
Transport	Construction Environmental Management Plan (**CEMP**) Construction Traffic Management Plan (**CTMP**) Urban Landscape Design Management Plan (**ULDMP**).
Noise and Vibration	Construction Noise and Vibration Management Plan (**CNVMP**) Stakeholder and Communications Engagement Management Plan (**SCEMP**) Complaints Register Construction Noise Standards Construction Vibration Standards Traffic Noise conditions including low road noise surfaces.
Terrestrial ecology	Ecological Management Plan (**EMP**) Pre-Construction Ecological Survey Urban Landscape Design Management Plan (**ULDMP**).
Landscape	Urban Landscape Design Management Plan (**ULDMP**) Construction Environmental Management Plan (**CEMP**).
Flooding	Construction Environmental Management Plan (**CEMP**) Urban Landscape Design Management Plan (**ULDMP**) Flood Hazard condition.
Archaeology and built heritage	Historic Heritage Management Plans (**HHMP**).
Social / Property	Project Information condition Designation Review condition Stakeholder and Communications Engagement Management Plan (**SCEMP**) Construction Noise and Vibration Management Plan (**CNVMP)** Construction Traffic Management Plan (**CTMP**).
Arboriculture	Tree Management Plan (**TMP**) Urban Landscape Design Management Plan (**ULDMP**).

22 Engagement

22.1 Introduction

This section provides an overview of the engagement undertaken for the Warkworth Package. It summarises the engagement approach taken during each phase, focusing on key themes and common issues raised and how this has informed the development of the Warkworth Package.

Where engagement has affected a specific corridor design outcome, such as alternatives consideration or identification and management of environmental effects, this has been considered in either Appendix A: Assessment of Alternatives or the AEE, as relevant.

Prior to detailed design and construction, further engagement will be undertaken by AT, as needed to manage impacts of the projects within the Warkworth Package.

The Warkworth Package has been through various stages of engagement, summarised in Table 22.1 and Figure 22.1.

Table 22.1 – Warkworth Package Engagement Summary

Project stage	Timing	Engagement summary
Indicative Business Case	2018-2019	Receive feedback on the options considered for the business case Information drop-ins, workshops to develop an IBC for the Warkworth future transport network.
Detailed Business Case	2022	Engagement undertaken to inform the preparation of the DBC and options assessment Briefings with key stakeholders, advocacy groups and local boards Landowner engagement took place from 26 April until 7 June 2022. 455 letters were sent to potentially impacted property owners inviting them to contact us to discuss projects further and provide feedback. 20 landowners got in touch with the Project Team, and seven meetings were held Community engagement consisted of an advertising and social media campaign to raise awareness of the engagement with the wider community, which directed people to the online interactive engagement platform to provide feedback. During the engagement period there were 1,388 unique visitors to the project site. 30 comments were added to the social map and 37 responses to the survey.
Pre-lodgement of Notice of Requirement	2023	The project team have engaged with (emailed, called and / or met with) a total of 86 affected properties Briefings and presentations to local board members and other elected representatives 123 letters (and one letter sent to 25 body corporates) sent to potentially affected property owners in March 2023 21 emails and 29 phone calls were received from landowners

Project stage	Timing	Engagement summary
		52 meetings were held with landowners, which have covered a total of 66 affected properties Engagement with directly impacted landowners has help inform the final designation boundaries.

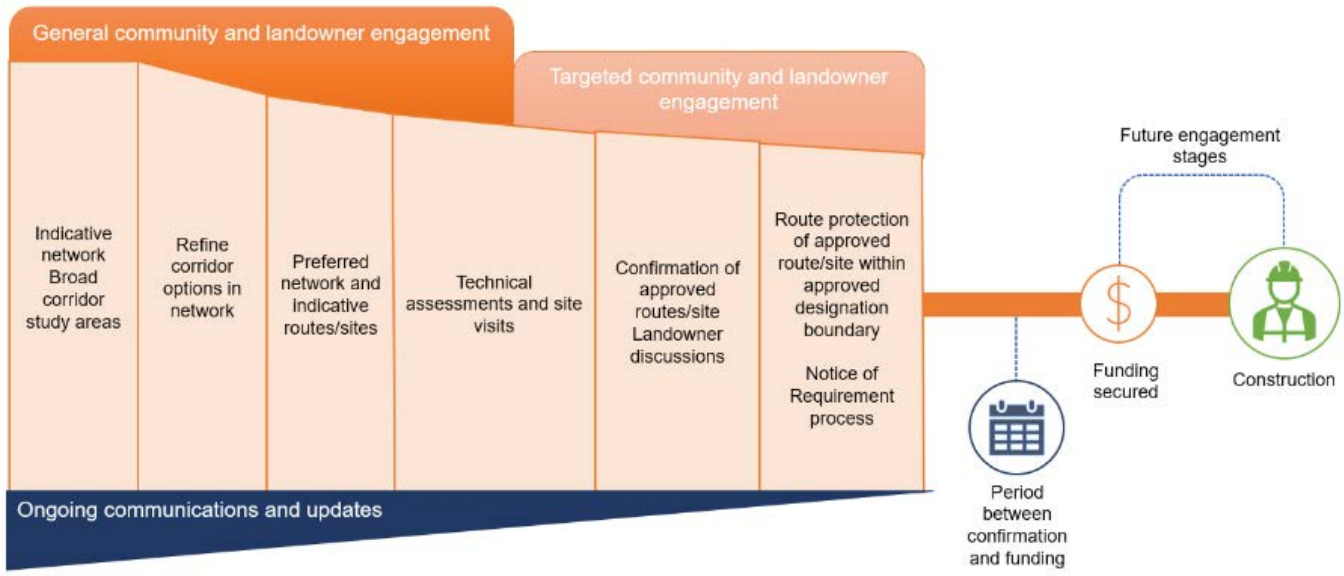


Figure 22.1: Te Tupu Ngātahi Engagement Process

22.2 Previous engagement undertaken for the Warkworth Package

As set out in Table 22.1 above, during the previous business case stages of the Warkworth Package, engagement was undertaken with the partners, stakeholders and the Warkworth community. Engagement with manawhenua has occurred throughout all stages of the project development. Table 22.2 outlines the range of engagement activities undertaken during the preparation of the IBC and the DBC.

Table 22.2: Groups and engagement activities in the IBC / DBC phase

Who we engaged	How we engaged
Partners	**Auckland Council** Partnership Forum – twice monthly meetings to update Council on Te Tupu Ngātahi projects (including Warkworth) **Northern Manawhenua Hui** – monthly hui with Manawhenua partners and Te Tupu Ngātahi project teams from North, Northwest and Warkworth **Auckland Council (Plans and Places)** – regular meetings with Auckland Council (Plans and Places).
Elected Members	**Rodney** Local Board – Presentation on preferred routes in April 2022 prior to wider public engagement, and an update of engagement and next steps in July 2022. Joint memo to Rodney, Upper Harbour, and Hibiscus Coast and Bays Local Boards in May 2022 updating them on Te Tupu Ngātahi North projects, including Warkworth

Who we engaged	How we engaged
	Rodney Ward Councillor Greg Sayers – meeting in March 2022 to seek feedback on approach to engagement.
Stakeholders	**One Mahurangi Business Ass**ociation – two meetings in May 2022, ongoing meetings continued **Matakana Coastal Trail Trust** – Meeting in May 2022, and a written submission was also received **Ministry of Education** – written feedback received. Te Tupu Ngātahi programme overview provided to ministry on a bi-monthly basis **Infrastructure interface meetings** – ongoing meetings with Watercare, Vector and First gas updating them with progress across all Te Tupu Ngātahi projects.
Potentially affected landowners	**Letters** – 455 letters sent to landowners identified as being potentially affected by the proposed routes. The letters invited them to discuss the projects and provide feedback **Landowner interactions** - 20 landowners got in touch with the project team, and seven meetings were held. Regular meetings were held with some landowners, particularly those affected by the Western Link and Wider Western Link.
Wider Community	**Advertising and social media campaign** to promote the consultation to the wider community. Information was shared on Twitter and Facebook by AT, Rodney Local Board and One Mahurangi Business Association. The project also featured in articles in Local Matters, Greater Auckland and Mahurangi Matters **Online interactive engagement platform** - During the engagement period there were 1,388 unique visitors to the project site. 30 comments were added to the social map and 37 responses to the survey.

22.2.1 Summary of key feedback from IBC / DBC phase engagement

The key feedback received during the IBC / DBC phase can be summarised as follows:

Manawhenua were generally supportive of the long-term transport network. A number of suggestions and concerns were raised including avoiding floodplains, minimising environmental impacts, avoiding areas of cultural significance. The importance of protecting and enhancing the culturally significant Mahurangi River was also raised

Auckland Council were generally supportive of the Package, noting the ability for the Western Link - South to provide a buffer between and future residential land uses, potential risks of 'urban creep' outside of the current Rural Urban Boundary (RUB) around Sandspit Link and support for a southern interchange of Ara Tūhono (Puhoi to Warkworth) motorway

The Ministry of Education generally supported the Package but asked for consideration of Mahurangi College and a future planned primary school at 100 Woodcocks Road.

One Mahurangi Business Association were generally supportive of the Package but wanted to see faster progress and raised concerns regarding regional transport model forecasting and considered the modelling assumptions were in need of a review

The wider community were generally supportive of the Warkworth Package and Te Tupu Ngātahi's approach of route protection but were concerned that there are existing issues that need addressing and development is already occurring, so improvements are needed urgently.

22.3 Engagement during NOR phase of the Warkworth Package

A high level of support for the projects was received during engagement at the business case stage. Engagement during the NOR phase has focussed directly on affected landowners and stakeholders. This phase of engagement commenced in late-February 2023.

The sections below summarise the engagement undertaken in the NOR phase of the Project. The sections identify key matters raised through engagement and how these have been addressed by Project teams.

22.3.1 Auckland Council

There is regular engagement between Te Tupu Ngātahi and Auckland Council. Regular meetings occur with the Auckland Council Partnership Forum. These forums are an opportunity to share Project progress and seek feedback from Council.

22.3.2 Local Board

The Project team met with the Rodney Local Board in December 2022. The purpose of this presentation was to update the board on engagement undertaken prior to this point in time, and to update newly elected board members on the Warkworth Package.

Another meeting scheduled for February 2023 was delayed until March as a result of Cyclone Gabrielle and the Auckland flooding events. The meeting outlined the preferred options for the Warkworth Package and the next steps including targeted landowner engagement and preparation of NORs.

The Local Board requested more information regarding the property acquisitions process and Public Works Act following the December meeting, which the project team supplied. There was also general interest regarding flood modelling.

22.3.3 Manawhenua

Regular Hui were held with Northern Manawhenua and the project team. The hui were an opportunity to strengthen the relationship between the project team and Manawhenua and provided an opportunity to share project updates regarding engagement activities and findings of technical reports. The partnership with Manawhenua is detailed in Section 11 of this report.

22.3.4 Local and central politicians

Political memos were sent to the Mayor of Auckland Wayne Brown, the Auckland Council Planning Committee, Local Boards, Councillors including Grey Sayers (Rodney Ward) and members of parliament Hon Mark Mitchell, Marja Lubeck and Hon Kelvin Davis. These memos (sent following local government elections in November 2022, and March 2023) provided updates on progress including the preparation of NORs and engagement being undertaken.

22.3.5 Business associations – One Mahurangi Transport and Infrastructure Forum

One Mahurangi were informed of the plans to engage with impacted landowners in March 2023. A presentation occurred to One Mahurangi on 14 April 2023 for the Project team to update One Mahurangi on progress and engagement feedback.

22.3.6 Landowners

Engagement with landowners potentially affected by the refined options consisted of the following:

123 letters were sent to directly affected landowners on 1 March 2023. The letter included a plan of the affected property, showing the property boundary and the extent of the proposed designation within the property. Directly affected landowners were invited to meet with the Project Team to discuss the impacts to their property

To date, the project team have held 52 landowner meetings. In the meetings, the Project Team assisted landowners by:

- Providing an overview and history of the Warkworth Package;
- Explaining the rationale for the concept design of the Warkworth Package;
- Explaining the NOR process, including lodgement timing, the ability to make a submission and attend a hearing; and
- Providing an information pack on the NOR process, and AT Landowner Guide.

During landowner engagement, questions were raised around property (including the acquisition process, loss of value, and access), timing and likelihood of construction. Specific queries regarding ongoing tenure of property, property subdivision, noise and privacy were also raised.

Specific matters identified through engagement with directly affected landowners were used to make small changes to designation boundaries where possible. The Project Team will continue to meet and engage with directly affected landowners as required, to ensure landowners have adequate information about the Warkworth Package.

23 Assessment of relevant objectives and policies

This section acknowledges the recent changes to the RMA which have come into effect and sets out an assessment of section 171(1)(a) and Section 171(1)(d) RMA matters.

23.1 Section 171(1)(a)

In accordance with section 171(1) of the RMA, an assessment has been undertaken of the relevant statutory provisions. This is set out in full in Appendix B of the AEE. A summary assessment of the key themes identified in the context of the Project is set out in the subsequent sections.

23.1.1 Manawhenua

The objectives and policies of the AUP:OP seek to recognise and provide for the principles of the Treaty of Waitangi in the sustainable management of natural and physical resources including ancestral lands, water, air, coastal sites wāhi tapu and other taonga[9] and protects Manawhenua values while also recognising Manawhenua role, and requiring Manawhenua to be included in resource management processes, particularly in decision making in their role as kaitiaki[10]. Sites and places of significance to Manawhenua are also recognised and provided for in the objectives and policies of the AUP:OP[11].

Manawhenua have been in partnership with the Te Tupu Ngātahi Supporting Growth Programme from the start of the early IBC works. In developing the transport corridors, recognition has been given to both the relationship of Tangata Whenua to their lands, culture and traditions in the Warkworth area and the commitment to partnership between Manawhenua and AT (as a representative of the Crown) founded through Te Tiriti o Waitangi.

Through the Te Tupu Ngātahi Manawhenua forum, and with Manawhenua also attending Project workshops, Manawhenua have been actively involved in the discussions and decision-making process on the future network proposed by Te Tupu Ngātahi for Warkworth. This has included input into the development of the early concepts, through the options / alternatives assessment, identification of the preferred options and recommended network, engagement and the further assessment and documentation of this through the NOR / AEE phase. The feedback received from Manawhenua informed the decisions made by the Project team at each step in the assessment process.

The proposed designation conditions set provides a conditions framework for the ongoing engagement and participation of Manawhenua in the future design and implementation of the transport corridor(s) which make up the Warkworth Package as outlined in Volume 1 and in Section 11.

23.1.2 Enabling infrastructure

The AUP:OP recognises the role that resilient, effective and efficient transport infrastructure has in improving Auckland's social, economic and cultural wellbeing. As part of this, the construction,

[9] AUP:OP B6.2.1(1), (2)
[10] AUP:OP B6.2.2(1)
[11] AUP:OP D21

operation and maintenance of infrastructure is anticipated.[12] In giving effect to this policy direction, Chapter E26 of the AUP:OP acknowledges that:

Infrastructure is critical to the social, economic, and cultural well-being of people and communities and the quality of the environment
Infrastructure can have a range of adverse effects on the environment
When assessing the adverse effects of infrastructure, consider the need and benefit of the infrastructure
Infrastructure and in particular linear infrastructure often have a functional and operational need to traverse or locate within or across different environments, including areas of identified value.

As set out in Section 10 there is a need for the Warkworth Package and the projects provide a range of transport benefits for the community both individually and as part of the wider network, including:

Improving access to and around Warkworth to enable future anticipated development in the area;
Increasing public transport mode share; and
Improving the safety, reliability, and efficiency of the public transport network. The adverse effects of the Warkworth Package have been largely addressed through the implementation of proposed conditions on the designations. Not all effects of the projects can be avoided or mitigated. Chapter E26 also recognises that linear infrastructure may have an operational need to traverse features or areas of value identified in the AUP:OP.[13] The same policy recognises the benefits derived from infrastructure, the adverse effects of not providing the infrastructure[14] and seeks consideration of how the infrastructure contributes to the strategic form or function, or enables the planned growth and intensification, of Auckland.[15] As established, the Warkworth Package will enable intensification and growth of Auckland.

23.1.3 Urban growth, amenity and form

The objectives and policies of the NPS:UD (which the AUP:OP has been updated to reflect) seek that urban environments are well-functioning and that people and communities are enabled to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.

As set out in Section 10 of the AEE, the Warkworth Package will:

Support and enable growth by protecting improved and new transport corridors that will support Auckland Council's growth aspirations for the growth areas of Auckland, including intensification or density of growth resulting in more efficient urban land development;
Improve access to economic and social opportunities and resilience of the strategic transport network in Warkworth; and
Support transformational mode shift from private vehicles to public transport, walking and cycling.

Therefore, the Warkworth Package will contribute to achieving a well-functioning urban environment by providing people and communities with improved public transport access and walking and cycling facilities.

[12] AUP:OP B3.2.1(1), (2), (4), B3.2.2(1), B3.3.1(1), B3.3.2(1), B3.3.2(1), (3)
[13] AUP:OP E26.2.2(6)(b)
[14] AUP:OP E26.2.2(6)(a)
[15] AUP:OP E26.2.2(6)(f)

23.1.4 Ecology

The AUP:OP objectives and policies seek to protect and enhance ecological values across both terrestrial, freshwater and coastal environments16. The objectives and policies place particular emphasis on avoiding or managing effects on SEA as far as is reasonably practicable and where it is not practicable minimising the adverse effects, and then remedying or mitigating these effects17. Specific recognition is also given through the policies that it is not always practicable to locate and design infrastructure to completely avoid SEA. Similarly, other adverse effects on biodiversity and ecosystems should also be avoided, remedied or mitigated.

In line with the above, the Warkworth Package placed emphasis on avoidance of SEA as far as practicable in the first instance. However, for existing corridors (NOR 2, 4 and 5) the presence of SEA both directly adjacent to, and in some case within, the existing road reserve boundaries meant that some areas of SEA are unable to be avoided. In these cases, emphasis was placed on minimising potential impacts, including where possible a preference to follow the existing road corridor boundary to limit potential impacts to the fringe areas of the SEA. Encroachment into SEA outside the existing road reserve was minimised. It is anticipated that through the detailed design phase and future regional consenting process there will be further opportunities to minimise and mange potential impacts on SEA.

23.2 Section 171(1)(d)

Section 171(1)(d) requires the territorial authority to have particular regard to:

> *Any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.*

It is considered that there are no other matters under section 171(1)(d) that are reasonably necessary to make a recommendation on the NORs.

23.3 Other policy considerations

Other legislation and policy that has informed the development of, and will inform the future implementation of, the Warkworth Package is set out in Table 23.1.

Table 23.1: Assessment against other policy considerations

National
Government Policy Statement on Land Transport for 2021/22 – 2030/31
The GPS 2021 continues the strategic direction of the GPS 2018, but provides stronger guidance on what Government is seeking from land transport investments. The GPS 2021 outlines the Government's strategy to guide land transport investment over the next 10 years, influencing decisions on how money from the National Land Transport Fund will be invested across activity classes, such as state highways and public transport. The overall strategic priorities for GPS 2021, the national objectives for land transport and the themes and the results the Government wishes to achieve through the allocation of the fund are summarised as follows: Safety – a safe system, free of death and serious injury

16 AUP:OP B7.2.1(1), (2), D9.2(1)
17 AUP:OP D9.2(1)

National

Access – a system that provides increased access to economic and social opportunities
Climate change – a low carbon transport system that supports emissions reductions, while improving safety and inclusive access
Improving freight connections – improving freight connections for economic development.

The Warkworth Package provides a safe and reliable arterial network that supports growth, enables travel choice, addresses safety concerns and improves access to employment and social amenities. The Warkworth Package is anticipated to significantly reduce the risk of deaths and serious injuries, and improve road safety for all users. The Warkworth Package will improve all transport facilities for all modes, resulting in improved safety for those that travel by car, freight, active mode and public transport. It improves corridor capacity, resulting in improved journey times and reliability for future freight and public transport demand.

The GPS 2021 prioritises reduction of greenhouse gas emissions and a shift to active modes, public transport and low emission vehicles. The Warkworth Package is well aligned with this objective as it provides an increase in modal choice including active modes and public transport, which supports a reduction in greenhouse gas emissions compared to trips taken in private vehicles. Overall, the Warkworth Package positively contributes towards the strategic priorities in the GPS 2021.

Climate Change Response Act 2002 (CCRA)

The main regulatory tool for managing New Zealand's climate change response is the CCRA. The CCRA sets a system of emissions budgets to meet a long term 2050 emissions target (net zero GHG emissions, other than biogenic methane).

The CCRA sets the overarching legal framework to drive domestic emissions reductions to enable New Zealand to meet its international climate change commitments, and to provide a means for identifying and adapting to the effects of climate change that pose a material level of risk to New Zealand now and in the future. Waka Kotahi and AT work within this framework and actively consider climate change considerations throughout the business case, optioneering and planning phase of project development. This includes considering how an efficient transport network can be developed that:

Seeks to reduce carbon emissions from transport infrastructure, particularly in the context of vehicle kilometres travelled (VKT), and
Seeks to ensure both existing and new transport infrastructure can adapt and be resilient to the effects of climate change.

The CCRA also sets a framework to enable New Zealand to adapt effectively to the consequences of climate change. The CCRA requires risks and opportunities arising from the effects of climate change to be identified through National Climate Change Risk Assessments, and appropriate policy responses to be developed through National Adaptation Plans.

Emissions Reduction Plan 2022

Section 5ZN of the CCRA provides that a person or body may, in exercising or performing a public function, power, or duty conferred on that person or body by, or under law, take into account the following matters "if they think fit":

The 2050 target; or
An emissions budget; or
An emissions reduction plan.

In May 2022 the Government published the first three emissions budgets (for 2022-25, 2026-30 and 2031-35), as well as the national Emissions Reduction Plan (ERP) setting out policies and strategies for meeting emissions budgets.

The first ERP sets the following specific transport targets (relevant targets are bolded):

1. Reduce total vehicle kilometres travelled (VKT) by the light fleet (private vehicles) by 20 per cent by

National
2035 through improved urban form and providing better travel options, particularly in our largest cities; 2. Increase zero-emissions vehicles to 30 per cent of the light fleet by 2035; 3. Reduce emissions from freight transport by 35 per cent by 2035; and 4. Reduce the emissions intensity of transport fuel by 10 per cent by 2035. The Warkworth Package projects have taken into account transport target 1 as it seeks to connect communities in a manner that assists in reducing vehicle kilometres travelled by light fleet by providing safe and reliable public transport facilities (NOR 1) and high-quality walking and cycling facilities. Transport targets 2, 3 and 4 in the ERP are more effectively addressed through the other national and regional policy and economic levers set out above which sit outside the RMA and form part of the CCRA framework which is the primary mechanism for regulating responses to climate change in New Zealand.
The Thirty Year New Zealand Infrastructure Plan 2015
The Thirty Year New Zealand Infrastructure Plan looks to make changes to the current approach to planning and management and to encourage investment in New Zealand's infrastructure while recognising the challenges the country needs to navigate. The Plan envisages that by 2045 New Zealand's infrastructure will be resilient and co-ordinated and will contribute to a strong economy and high living standards. In regard to Auckland, the Plan notes that challenges exist around projected population growth with Auckland forecast to grow by another 716,000 people by 2045 meaning Auckland will need to provide 400,000 more dwellings. The Warkworth Package provides an integrated approach to land-use and infrastructure planning which is critical to delivering good urban outcomes. The Warkworth Package forms part of this spending and falls within the scope of this plan by supporting future urban growth in Warkworth.
Waka Kotahi Amended Statement of Intent 2021-2026
This document sets out how Waka Kotahi will realise the vision of its new strategic direction, Te kāpehu | Our compass. Te kāpehu was developed in response to changes to the strategic and operating environments, including release of the GPS 2021. The Waka Kotahi focus is on creating an efficient and sustainable transport system that is safe, easy and connected providing one integrated land transport system that helps people get the most out of life and supports business. The Warkworth Package provides a safe and reliable arterial network that supports growth, enables sustainable travel choice, addresses safety concerns and improves access to employment and social amenities. It is therefore consistent with the Waka Kotahi Amended Statement of Intent.
Road to Zero: New Zealand's Road Safety Strategy 2020-2030
Road to Zero outlines a strategy to guide improvements in safety on our roads, streets, footpaths, cycleways, bus lanes and state highways in New Zealand over the next 10 years. The vision of the strategy is a New Zealand where no one is killed or seriously injured in road crashes. The strategy focuses on achieving this vision through system management, road user choices, vehicle safety, work-related road safety and infrastructure improvements and speed management. The Warkworth Package plays a key role in providing the opportunity to plan and design system improvements that embed the Road to Zero strategy. The Warkworth Package is anticipated to reduce the risk of deaths and serious injuries and improve road safety for all users. The Warkworth Package will improve all transport facilities for all modes, resulting in improved safety for those that travel by car, freight, active mode and public transport.

National

Regional

Auckland Transport Alignment Project

ATAP is a joint project involving Auckland Council, the Ministry of Transport, AT, Waka Kotahi, the Treasury and the State Services Commission. The final report (April 2018) sets out a clear direction for the development of Auckland's transport system over the next 10 years. The vision seeks transport investment decisions that deliver broad economic, social, environmental and cultural benefits to Auckland and New Zealand by providing safe, reliable and sustainable access to opportunities. Specifically, this includes easily connecting people, goods and services to where they need to go, providing high-quality and affordable travel choices for people of all ages and abilities, seeking to eliminate harm to people and the environment, supporting and shaping Auckland's growth, and creating a prosperous, vibrant and inclusive city.

The ATAP package highlights the need for significant investment in transport infrastructure to enable urban growth in greenfield FUZ areas, encourage the use of public transport and active modes, and to provide a reasonable level of service to future residents. ATAP specifically notes investment in three main areas including arterial roads and footpaths (including bus and cycle lanes where required).

The Warkworth Package is consistent with ATAP as it will provide a safe and reliable arterial network that integrates with land use planning, supports growth, enables sustainable travel choice for all transport users, addresses safety concerns and improves access to employment and social amenities.

Auckland Regional Land Transport Plan 2018-2028

The RLTP sets out the funding programme for Auckland's transport services and activities over a 10 year period. Planned transport activities for the next three years are provided in detail while proposed activities for the following seven years are outlined. The RLTP is jointly delivered by AT, Waka Kotahi and KiwiRail, and forms part of the National Land Transport Programme.

The Te Tupu Ngātahi Supporting Growth Programme is identified as a committed, ongoing programme in the RLTP which it identifies will enable the sequence of land release specified in the FULSS, and improves access to places where people live and work.

Hauraki Gulf Marine Park Act 2000

The Hauraki Gulf Marine Park Act seeks to integrate the management of natural, historic and physical resources of the Hauraki Gulf, the islands and its catchment. The Act recognises the national significance of the Hauraki Gulf and life supporting capacity of the environment of the Gulf.

The Warkworth Package is designed with provision for stormwater treatment through the use of ponds and / or swales. Space for the relevant stormwater treatment features is provided within the designations to enable the treatment of runoff from the corridor before discharge into the receiving environment of the Hauraki Gulf. This enables the protection of the Hauraki Gulf environments life supporting capacity.

Auckland Plan 2050

The purpose of the Auckland Plan is to contribute to Auckland's social, economic, environmental and cultural well-being through a 30 year vision for Auckland's growth. It sets a strategic direction for Auckland and its communities that integrates social, economic, environmental, and cultural objectives. The Auckland Plan's Development Strategy outlines the direction Auckland will take managing expansion in future urban areas noting the constraint that these areas are predominantly rural at present and have little or no infrastructure in place to cope with urban development. The Auckland Plan outlines the need to provide the required bulk infrastructure (water, wastewater, storm water and transport) to these areas in the right place at the right time. The Auckland Plan also seeks that Aucklander's will be able to get where they want to go more easily, safely and sustainably.

National
The Warkworth Package will provide a safe and reliable arterial network that integrates with land use planning, supports growth, enables sustainable travel choice for all transport users, addresses safety concerns and improves access to employment and social amenities. The development of the Warkworth Package has been a direct response to the Auckland Plan. The Warkworth Package will help facilitate the sustainable growth of Warkworth enabling the bulk transport infrastructure required to unlock development potential.
Vision Zero for Tāmaki Makaurau: a transport safety strategy and action plan to 2030
Developed in 2019, Vision Zero extends the existing safe system approach to stop the human sacrifice of mobility, placing safety at the forefront of the future transport system for all modes by designing safe places for people. Vision Zero has a goal to eliminate transport deaths and serious injuries by 2050 (in line with the Auckland Plan 2050). The Warkworth Package plays a key role in providing opportunity to plan and design system improvements that embed Vision Zero principles, and specifically contribute to the Vision Zero priorities. The Warkworth Package is anticipated to reduce the risk of deaths and serious injuries and improve road safety for all users. The Warkworth Package will improve all transport facilities for all modes, resulting in improved safety for those that travel by car, freight, active mode and public transport.
Auckland Long-Term Plan 2018-2028 / The 10-Year Budget 2021-2031 (Our Recovery Budget)
The Auckland Long Term Plan 2018-2028, which is required to be prepared under the Local Government Act 2002, sets out Auckland Council's 10 year financial plan, and is guided by the strategic direction set by the Auckland Plan, as described and assessed above. The budget was superseded by 'Our Recovery Budget' 2021-2031 as a result of COVID19. The new budget responds to investment demands from rapid growth, transport demand, aging assets, and climate change. The Warkworth Package supports investment in transport, as well as support rapid growth demands. It proposes upgrades to existing assets (roads) and future proofs them for example through provision for new rainfall / flooding expectations and supporting shift to active mode for changing communities.
Te Tāruke-ā-Tāwhiri: Auckland's Climate Action Framework and Plan
The purpose of Auckland's Climate Action Framework and Plan is to increase Auckland's resilience to the impact of climate change and reduce emissions that cause climate change, with one of the key moves identified to deliver clean, safe and equitable transport options. The Warkworth Package has been designed having regard to and taking into account climate change and resilience. The Warkworth Package will deliver better accessibility and mode choice (thus reducing the present reliance on low occupancy vehicles). This provides an important component to realising the regional emissions benefits of an integrated network. This shows alignment with, and a positive contribution towards the Climate Action Framework and Plan.
Te Ara Whakaheke Tukuwaro Ikiiki: Transport Emissions Reduction Pathway
The Transport Emissions Reduction Pathway sets out a plan to reduce Auckland's transport emissions by 64 per cent by 2030. The Transport Emissions Reduction Pathway sets out 11 areas for transforming Auckland's transport system and land use planning that align with the government's Emissions Reduction Plan. They are (relevant areas are bolded): **making walking and cycling safer, easier and more accessible** **using public transport much more** prioritising and resourcing sustainable transport reducing travel where possible and appropriate **making neighbourhoods safer with less traffic**

National
putting things closer to where people live using vehicles powered by electricity **enabling new transport options** using low emission buses, trains and ferries making freight and services cleaner and more efficient **helping Aucklanders make sustainable transport choices**. The Warkworth Package is unlikely to be built within the 2030 target but is well-aligned with the Transport Emissions Reduction Pathway as it seeks to connect communities in a manner that assists in reducing vehicle kilometres travelled by light fleet by providing safe and reliable public transport facilities (NOR 1) and high-quality walking and cycling facilities.
Auckland's Urban Ngahere (Forest) Strategy
The Auckland Urban Ngahere (Forest) strategy recognises the ecosystem services as well as economic and cultural benefits delivered by green infrastructure within the urban environment and sets out objectives of the strategy which include the need to grow and protect urban ngahere in existing and future urban areas. Although the Warkworth Package will require the removal of some street trees and trees within SEAs (i.e., trees that are protected by the district plan rules), this will be mitigated by planting within the new road layouts and results in overall increase of trees from existing, due to the general lack of trees within Warkworth. The long-term outcome of comprehensive street tree planting will be more trees in the public realm and increased amenity value within the road network, consistent with the Auckland Urban Ngahere (Forest) strategy.
Local
Rodney Local Board Plan
The Warkworth Package is situated within the Rodney Local Board area. The Rodney Local Board Plan 2020 identifies outcomes relating to provision of safe, improved transport options that connect communities, infrastructure and development meeting the needs of growing communities and protection and care for the natural environment. The Warkworth Package is consistent with the outcomes of the Rodney Local Board Plan as it will provide high quality transport corridors including walking and cycling facilities that integrate with surrounding land uses and the wider transport network.
Warkworth Structure Plan
The Warkworth Structure Plan is the strategic planning document for Warkworth, which is supported by a number of planning principles. These principles seek to achieve a vision developed for Warkworth which is: *"Warkworth is a Satellite Town that retains its rural, natural, and cultural character. It is centred around the Mahurangi River and has easy walking and cycling access around the town. There are a variety of high-quality residential neighbourhoods. Warkworth is largely self-sufficient with plenty of employment, education, shopping and recreation opportunities. Transport and other infrastructure are sequenced to support Warkworth's planned growth."* A number of planning principles were developed as part of the Warkworth Structure Plan in order to guide Warkworth's growth to achieve the vision above. The key planning principles of relevance to the Warkworth Package include: Use the development of Warkworth's growth areas to help address Warkworth's existing road congestion through integrated land use and transport planning and new infrastructure Prioritise convenient, segregated, and safe walking and cycling routes through the FUZ connecting residential areas with key locations (e.g. schools, parks, centres), and the existing town, and to regional walking / cycling routes

National
Provide convenient, high quality public transport routes through the FUZ (connecting to the rest of Warkworth, the surrounding rural settlements, and Auckland) Plan for infrastructure (transport, water, etc.) to be sequenced to enable new houses and businesses are built in the FUZ. All of the new transport corridors and corridor upgrades in the Warkworth Package contain walking and cycling facilities, achieving safe, connected and high amenity linkages. Public transport will be able to utilise the upgraded roads and new corridors providing efficient public transport linkages throughout Warkworth as it develops. NOR 1 will also provide a Public Transport Hub which will enable safe and efficient public transport access for residents of North Warkworth.

24 Assessment of Part 2 of the RMA

Section 171(1) states that when considering a NOR, a territorial authority must consider the effects on the environment having particular regard to a number of matters (assessed above) and subject to Part 2 of the RMA.

Section 5(1) of the RMA states that the purpose of the RMA is to promote the sustainable management of natural and physical resources. Section 5(2) of the RMA provides a definition of sustainable management. In our view, in determining whether the Warkworth Package promotes sustainable management, consideration of sections 6, 7 and 8 of the RMA is required before drawing any conclusions regarding consistency with section 5 of the RMA.

The following section provides an assessment of the effects of the Warkworth Package against Part 2 of the RMA.

24.1 Matters of national importance

Section 6 of the RMA states that in achieving the purpose of the RMA, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for specified matters of national importance. Table 24.1 provides an assessment against Section 6 of the RMA.

Table 24.1: Section 6 Assessment

Matter of national importance	Assessment
the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development	The Warkworth Package NORs will preserve the natural character of the stream environments through reinstatement and mitigation planting at the completion of works.
the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development	The Warkworth Package projects avoid outstanding natural features and landscapes.
the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna	SEA vegetation and significant habitats have been avoided through corridor alignment choice where possible. Some vegetation removal is unable to be avoided. Potential impacts on natural wetlands will be assessed and managed through a future consenting process.
the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers	The Warkworth Package does not impact on public access to and along the coastal marine area, lakes and rivers.
the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga	Manawhenua have been actively involved throughout the development of the Warkworth Package. This has included through the alternatives assessment and identification of the preferred options.

Matter of national importance	Assessment
	The partnership with Manawhenua has involved the identification of opportunities to acknowledge and respond to the cultural landscape along the Warkworth Package corridors and restore and enhance the natural and cultural landscapes. The Project has also recognised Manawhenua cultural values, particularly with regards to the mauri of, and the relationships of Manawhenua with natural and physical resources including freshwater, land, air and coastal resources. Significant adverse effects on these values are required to be avoided, with adverse effects avoided, remedied or mitigated as appropriate.
the protection of historic heritage from inappropriate subdivision, use, and development	Effects on historic heritage will be managed through the implementation of a HHMP. Effects on heritage and archaeological sites will be avoided where possible. No scheduled heritage sites will be impacted by the Warkworth Package.
the protection of protected customary rights	The Warkworth Package does not impact upon any known protected customary rights.
the management of significant risks from natural hazards	A number of design measures to provide resilience to flooding, inundation and climate change have been adopted across the Warkworth Package. The Assessment of Flooding and Stormwater Effects has made recommendations which are to be implemented at detailed design so that: There is no increase in flood levels for existing authorised habitable floors that are already subject to flooding; and There are no new flood prone areas created. There is sufficient space within the designations for stormwater and flood mitigation.

The Warkworth Package is considered to be consistent with section 6 of the RMA for the reasons set out above.

24.2 Other matters

Section 7 of the RMA states that, in achieving the purpose of the RMA, particular regard shall be had to specified other matters. Table 24.2 provides an assessment against Section 7 of the RMA.

Table 24.2: Section 7 assessment

Other matter	Assessment
kaitiakitanga	Manawhenua have been actively involved through the NOR phase of the Warkworth Package and will continue to exercise kaitiakitanga through the future phases of these projects. This includes the preparation of management plans and the involvement of Manawhenua as partners in the detailed design and consenting phases of these projects.
the ethic of stewardship	This has been recognised through engagement with key stakeholders, business associations, community groups and the

Other matter	Assessment
	wider community who exercise stewardship over particular resources.
the efficient use and development of natural and physical resources	Through the assessment of alternatives process, the Warkworth Package was determined to be the most efficient use of natural and physical resources to achieve the needs of the community.
the efficiency of the end use of energy	Not considered relevant to the Warkworth Package.
the maintenance and enhancement of amenity values	This will primarily be achieved through the implementation of the ULDMP which is a condition on the designations.
intrinsic values of ecosystems	Adverse effects on ecosystems have been avoided as far as practicable while providing sufficient width within the designation boundaries. It is expected that designation boundaries will be further refined during the detailed design. Appropriate mitigation will be undertaken where ecosystem values are compromised.
maintenance and enhancement of the quality of the environment	The quality of the environment will be maintained and enhanced in some places through the implementation of the ULDMP which is a condition on the designations.
any finite characteristics of natural and physical resources	Not considered relevant to the Warkworth Package.
the protection of the habitat of trout and salmon	Not considered relevant to the Warkworth Package.
the effects of climate change	The Project responds to the effects of climate change and the reduction of greenhouse gas emissions by providing improved reliability for public transport and high quality walking and cycling facilities. The Project responds to the effects of climate change through the provision of replanting that, when delivered, will contribute to reducing urban heat island effects.
the benefits to be derived from the use and development of renewable energy	Not considered relevant to the Warkworth Package.

The Warkworth Package is considered to be consistent with section 7 of the RMA for the reasons set out above.

24.3 Section 8: Treaty of Waitangi

In achieving the purpose of the RMA, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

AT has partnered with Manawhenua throughout the development of the Warkworth Package. This has resulted in the selection of transport corridors which avoid and minimise adverse effects on cultural values where practicable. This has included avoiding or minimising impacts on SEAs, wetlands and streams and ensuring that construction management plans will be in place to protect

water quality and any previously unrecorded items of cultural heritage encountered.

Further engagement will be undertaken in the detailed design and construction phases to ensure that the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) are taken into account.

Given the above, the development of the Warkworth Package is considered to be consistent with the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and section 8 of the RMA.

24.4 The purpose of the Act

Section 5 of the RMA sets out the purpose of the RMA which is to promote the sustainable management of natural and physical resources.

The Warkworth Package will result in some adverse effects, however, when considering the significant regional and local benefits of the package, and the measures proposed to avoid, remedy and mitigate the adverse effects, the Warkworth Package achieves the purpose and principles of the RMA.

25 Other statutory approvals required

Further and separate approvals under other legislation are required and will be obtained in the future. This report does not seek authorisation or approval for those works, but they are set out in Table 25.1 for clarity.

Table 25.1: Other statutory approvals required

Other statutory approval required	Discussion
Outline plan of works	In accordance with section 176A of the RMA, AT (as the requiring authority) will submit to Auckland Council (as the territorial authority) one or more Outline Plan(s), detailing all relevant aspects of the transport corridors following the completion of detailed design and prior to the commencement of construction.
Land subject to existing designations	Some land to be designated for the transport corridors is subject to existing designations by other requiring authorities. In order to undertake work in accordance with a designation on land with an existing designation, written consent from the requiring authority of the earlier designation is required under section 177(1)(a). The section 177(1)(a) approvals required for each corridor are set out in Section 9 under the existing planning environment. Written approval is required in order to undertake works within the earlier designations where those works may prevent or hinder the earlier designation's purpose or project. Consultation has occurred with these requiring authorities to confirm acceptability of indicative designs; however, it is appropriate that written consent is sought at detailed design prior to construction when further detail will be known and to account for any changes to status of earlier designation. Therefore, written approval under section 177(1)(a) of the RMA will be sought closer to construction.
Future resource consents	The transport corridors will require NES and regional resource consents to enable works. Although not being sought at this stage, their implications have been considered in the indicative designs, options assessment and the designation footprints. These consents will be sought when the detailed design for each of the transport corridors is completed.
Approvals under other legislation	Other matters which will need to be considered include: PWA – the acquisition of required land HNZPTA – authorities for works on or in any archaeological sites Reserves Act 1977 – approvals as required for affected reserves Wildlife Act 1953 – wildlife permits for the disturbance or relocation of protected species (e.g., taking and / or killing of wildlife for certain purposes and / or causing damage).

Appendix A: Assessment of Alternatives

Appendix B: Statutory Assessment

Appendix C: Proposed NOR Conditions

ATTACHMENT 26

APPENDIX A: ASSESSMENT OF ALTERNATIVES

TE TUPU NGĀTAHI
SUPPORTING GROWTH

Warkworth Project Assessment of Alternatives

May 2023

Version 1.0

Document Status

Responsibility	Name
Author	Sheetal Naidu, Simon Titter
Reviewer	Simon Titter, Natasha Garvan, Daniel Wilcocks
Approver	Chris Scrafton

Revision Status

Version	Date	Reason for Issue
1.0	12 May	Issued for lodgement

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Acronym/Term	Description
AT	Auckland Transport
AUP: OP	Auckland Unitary Plan – Operative in Part
DBC	Detailed Business Case
IBC	Indicative Business Case
MCA	Multi-criteria analysis
NOR	Notice of Requirement
NPS:FW	National Policy Statement for Freshwater Management
PBC	Programme Business Case
RMA	Resource Management Act 1991
SEA	Significant Ecological Area
SGA	Te Tupu Ngātahi Supporting Growth Alliance
SME	Subject Matter Expert
TFUG	Transport for Future Urban Growth (PBC)
Waka Kotahi	Waka Kotahi NZ Transport Agency

PART A

Overview and Background

1 Introduction

1.1 Purpose of this report

The purpose of the Te Tupu Ngātahi programme (the programme) is to identify the recommended transport networks for route protection to support Auckland's planned greenfield growth over the next 10-30 years. The Warkworth Detailed Business Case (DBC) has identified the transport network for Warkworth. Eight NoRs are being submitted for components of the Warkworth transport network and these are the subject of this alternatives assessment and identified in Table 1-1 below.

Table 1-1. Warkworth NOR Projects

Project	NoR	Description
Northern Public Transport Hub and Western Link – North	1	New northern public transport hub and associated facilities including a park and ride at the corner of State Highway 1 (SH1) and the new Western Link – North. New urban arterial cross-section with active mode facilities between the intersection of SH1 and Te Honohono ki Tai (Matakana Link Road) to the proposed bridge crossing, enabling a connection for development in the Warkworth Northern Precinct as provided for in the Warkworth North Precinct.
Woodcocks Road (Western Section)	2	Upgrade of the existing Woodcocks Road corridor between Mansel Drive and Ara Tūhono (Puhoi to Warkworth) to an urban arterial cross-section with active mode facilities.
State Highway 1 – South	3	Upgrade of the existing SH1 corridor between Fairwater Road and the southern Rural Urban Boundary to an urban arterial cross-section with active mode facilities.
Matakana Road	4	Upgrade of the existing Matakana Road corridor between the Hill Street intersection and the northern Rural Urban Boundary to an urban arterial cross-section with active mode facilities.
Sandspit Road	5	Upgrade of the existing Sandspit Road corridor between the Hill Street intersection and the eastern Rural Urban Boundary to an urban arterial cross-section with active mode facilities.
Western Link – South	6	New urban arterial cross-section with active mode facilities between the intersection of SH1 and McKinney Road and Evelyn Street.
Sandspit Link	7	New urban arterial cross-section with active mode facilities between the intersection of Matakana Road and Te Honohono ki Tai (Matakana Link Road) and the existing Quarry Road.
Wider Western Link – North	8	New urban arterial cross-section with active mode facilities between Woodcocks Road and the Mahurangi River.

As part of the route protection process, this assessment of alternatives report has been prepared on behalf of Auckland Transport (AT) and Waka Kotahi NZ Transport Agency (Waka Kotahi), as the requiring authorities for the Warkworth strategic transport network. This report will support the Notices of Requirement (NoR) for designations and has been prepared in accordance with Section 171(1)(b) of the Resource Management Act 1991 (RMA).

Section 171(1)(b) of the RMA requires that when making a recommendation on a NoR, a territorial authority shall have regard to whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work in circumstances where the requiring authority:

a) Does not have an interest in the land sufficient for undertaking the work; or
b) Where it is likely that the work will have significant adverse effects on the environment.

There are several principles and key considerations for a requiring authority to apply and adhere to when undertaking an assessment of alternatives and identifying a preferred option. Of note are the following:

a) The process should be adequately transparent and robust, and clearly recorded so that it can be understood by others;
b) An appropriate (but not exhaustive) range of alternatives should be considered; and
c) The extent of options considered, and the assessment of these options, should be proportional to the potential effects of the options being considered.

AT and Waka Kotahi do not have sufficient interest in the land required for the Project(s) and as such are required to give adequate consideration to alternatives.

Accordingly, this report covers the following matters:

- Overview of the previous business case processes and methodology for the consideration of alternatives (refer to Part A);
- Consideration of alternative routes and methods (refer to Part B).

1.2 Report structure

This report is structured as follows:

Section	Heading	Description
1	Introduction	Purpose of the report.
2	Assessment of Alternatives Methodology	Overview of the assessment of alternatives methodology used to develop and assess route options for the Warkworth IBC and DBC and ultimately determine the Warkworth transport network.
3	Background	Summary of the business case history and process leading to the identification of the Indicative Strategic Transport Network.
4	Route refinement development and assessment methodology	Overview of the gap analysis undertaken between the IBC option assessment process and the DBC option assessment process.

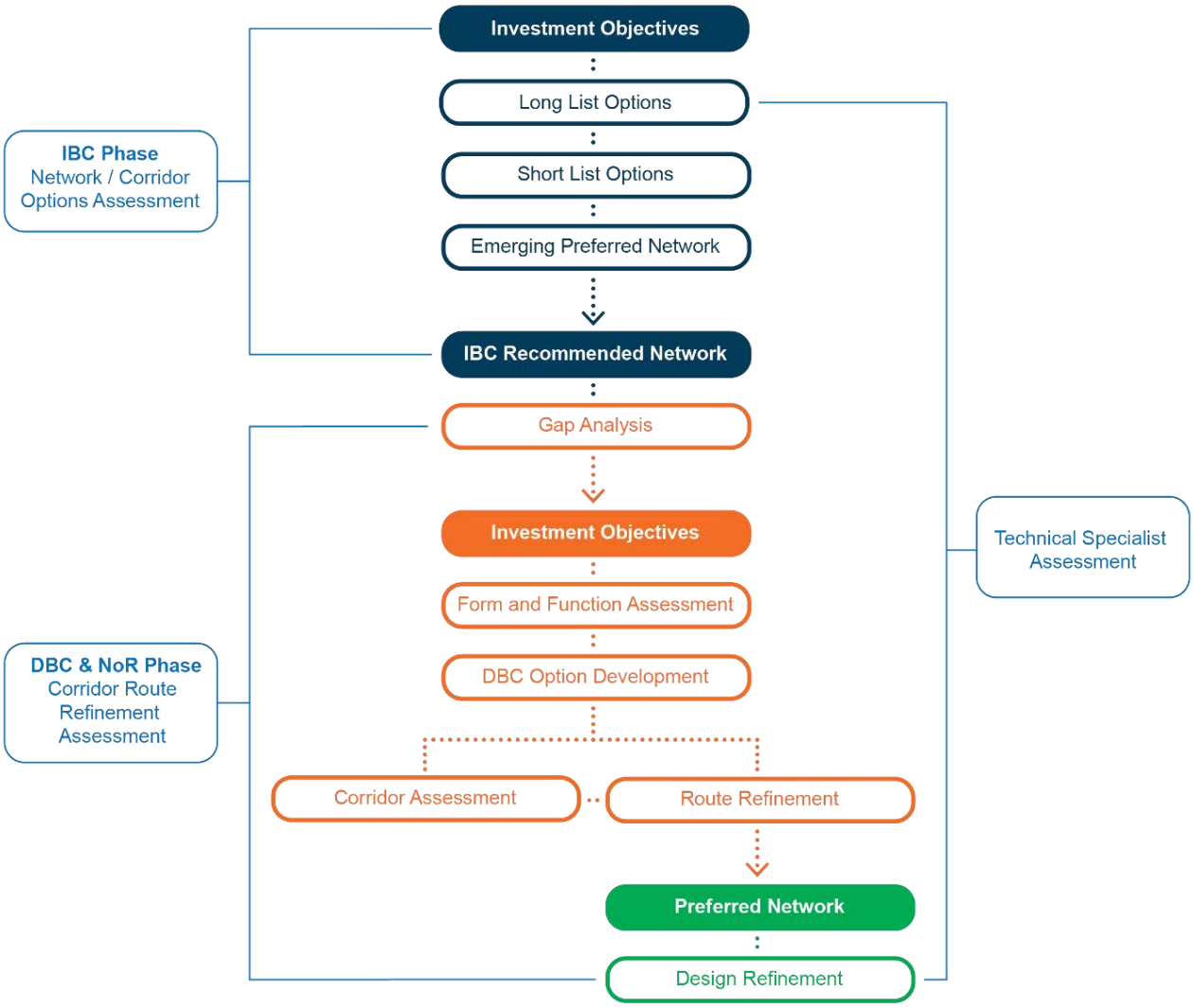
Section	Heading	Description
5	Warkworth Assessment of Alternatives	Overview of the assessment of alternatives process for the 8 NoRs which are the subject of this report.
5.2	NOR 2	Option development and assessment for the Existing State Highway 1 Upgrade (Southern Section).
5.3	NOR 3	Option development and assessment for the Woodcocks Road Upgrade.
5.4	NOR 4	Option development and assessment for the Matakana Road Upgrade.
5.5	NOR 5	Option development and assessment for the Sandspit Road Upgrade.
5.6	NOR 6	Option development and assessment for the new Western Link – South.
5.7	NOR 7	Option development and assessment for the new Wider Western Link (Northern Section).
5.8	NOR 8	Option development and assessment for the new Sandspit Link.
5.9	NOR 1	Option development and assessment for the new Northern Public Transport Hub + Western Link – North.
6	Post DBC Option Refinement	Refinement of the recommended transport network based on engagement post DBC.

2 Assessment of Alternatives Methodology

2.1 Overview

This section provides an overview of the assessment of alternatives methodology used to develop and assess route options for the Warkworth transport network and ultimately determine the preferred option. This methodology was applied to both the Indicative Business Case (IBC) and the Detailed Business Case (DBC) processes. In some instances, where specific circumstances required, deviation from the process set out below occurred. Where the process was deviated from, this is identified and described within the following sections. Figure 2-1 below provides an overview of the corridor and route refinement assessment of alternatives process.

Figure 2-1. Summary of the Assessment of Alternatives Process



The process for the assessment of alternatives was as follows:

a) **The development of multicriteria assessment framework**
To guide the evaluation and comparison of options across the Supporting Growth Programme, a Multi-Criteria Assessment (MCA) framework was developed. The MCA is a common tool that is

often used to assist in the decision-making process and provides an opportunity to understand how different options compare against a set of standard and grouped criteria. This interdisciplinary framework was tailored for the Supporting Growth Programme and developed in consultation with AT, Waka Kotahi and Manawhenua. The MCA framework is set out in Section 2.3.

b) **Option Development**
Informed by the previous stage of assessment (i.e. the PBC informed the options for the IBC and the IBC informed the options for the DBC), an iterative process was undertaken when developing options with an increasing level of detail and refinement occurring depending on the stage of assessment. For example, options developed for a “corridor assessment” were developed as wide corridors across extensive geographical areas generally at the IBC phase whereas “route refinement” options were more developed options within an identified preferred corridor generally at the DBC phase unless where specified.

c) **Te Tupu Ngātahi GIS Options Assessment Viewer**
Once developed, all options were uploaded to the Te Tupu Ngātahi GIS Options Assessment viewer, which was an online, interactive tool created specifically to allow all technical experts to view all known constraints within the vicinity of the option subject to evaluation.

d) **Briefing Packs**
Briefing packs were provided to technical experts with an outline of the options to be assessed, the criteria to be used in undertaking this assessment including the MCA framework, and a pre-scoring spreadsheet.

e) **Pre-scoring**
In advance of interdisciplinary workshops, experts were asked to pre-score options using the MCA tool so that these could be compiled and discussed during the workshop. Supporting each score was an explanation (reason) for the score.

f) **Interdisciplinary workshops**
MCA scores were presented and challenged in an interdisciplinary workshop. Experts were given the opportunity to amend their scores in light of the discussion at the workshop, if they felt that was appropriate. The presence of the design team at the workshop provided a valuable opportunity for experts to clarify / confirm the nature of all the options before confirming or assigning their final scores. It should be noted that, while the MCA tool was typically used when undertaking a Corridor or Route level assessment, it was not the sole means of assessing options, but was complementary to the decision-making process.

g) **Analysis and testing of results**
Upon completion of the workshops, the Project Team met to review and test the results. Where necessary, technical experts were brought in to review the scores and provide additional context.

h) **Identification of technical preferred**
Once assessment of the findings of the technical workshops was complete, the Project Team identified emerging technical preferred option(s).

i) **Engagement**
Following identification of the technical preferred option, assessment of stakeholder feedback was then undertaken.

j) **Analysis and testing of results**
Upon completion of the engagement period, the Project Team met to review the technical preferred option(s) in light of the feedback received through engagement and refine the options as necessary.

k) **Recommendation by the Project Team**
Once the emerging preferred options were confirmed and the Project was identified, the Project Team presented the assessment and overall recommendation to seek endorsement of the option prior to presenting the option to the AT and Waka Kotahi Boards as a recommendation for approval.

2.2 Option development

The option development process for both the IBC and the DBC phases was an iterative process with an increasing level of detail and refinement occurring depending on the stage of assessment. At the end of each stage (for instance, upon the completion of the IBC and at the beginning of the DBC) the Project Team considered if any new information had become available since the previous assessment was undertaken that could potentially impact or influence the development of options. If new information was available, the consideration of options was developed accordingly.

Potential options were developed in a group / workshop setting with representatives of the Project Team and where relevant, technical experts. Each workshop considered the following:

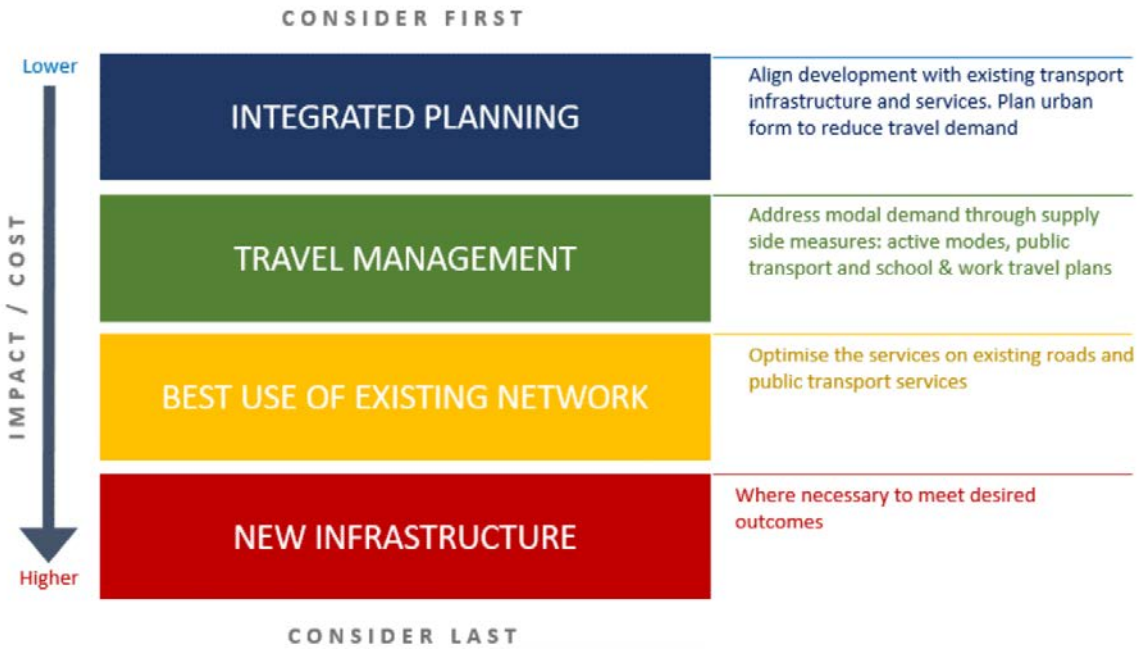
a) Any new information identified since the previous options assessment process (e.g. through a Gap Analysis)
b) The anticipated typology for that option
c) Known physical constraints that would influence the consideration of options (for example, topography and geology)
d) Mapped features, including Auckland Unitary Plan Operative in part (AUP:OP) zones, precincts, overlays and controls
e) Known community facilities and places of significance as identified by Manawhenua
f) New information obtained during site visits with the Project Team and technical experts, Manawhenua and AT / Waka Kotahi
g) The outcomes from previous and ongoing engagement (including stakeholder and community)
h) The overall strategic function of the network, and relevant engineering matters including the indicative cross-section and road typology.

In developing options, the project team and specialists first considered options that integrated with land use planning and reduced the need to travel through utilisation of the existing transport infrastructure in the first instance. Options that increased the network capacity through the provisions of new transport infrastructure were considered last. This approach aligns with the intervention hierarchy approach of prioritising lower impact and cost-effective options first, the intervention hierarchy approach is shown in Figure 2-2 below.

In summary, use of the existing network was considered first, however, to achieve the identified transport outcomes, new infrastructure was identified as being required for projects where appropriate.

For options where new infrastructure was required corridor assessment was undertaken to identify a preferred route alignment, which was then refined and in further detail (route refinement). Where the existing network was to be utilised and upgraded, route refinement considered whether upgrades may be accommodated, generally widening to the left, right or both sides of the corridor.

Figure 2-2. Intervention hierarchy approach



2.3 Options Assessment framework

2.3.1 Multi criteria assessment

A Multi Criteria Assessment (MCA) Framework was developed for the wider programme of work, in consultation with AT, Waka Kotahi and Manawhenua. The MCA criteria included the relevant Investment Objectives and was largely based on the four well-beings: Cultural, Social, Environmental and Economic. The MCA Framework is appended to this report as Appendix A.

Criteria were developed for consideration by Manawhenua under the cultural wellbeing grouping. On review, Manawhenua stated a preference to rank options where possible (rather than score) and to provide a collective Manawhenua response, rather than each iwi individually. Accordingly, Manawhenua representatives expressed their views and provided specialist cultural advice on key issues through the optioneering and assessment of alternatives process.

For the DBC, where the IBC – DBC gap analysis recommended the project progress through a route refinement assessment rather than a corridor assessment, a refined MCA criteria was utilised, the criteria was designed to be specific to the relevant constraints or considerations for the corridor under assessment. For example, some projects did not have any specific identified heritage constraints or considerations, as a result this criterion was omitted from the MCA criteria for the particular project

and noted as N/A in the specific project MCA assessment because it was considered that further detailed assessment (from that previously undertaken at the IBC corridor assessment phase) of the project against this criterion was not required in order to inform the route refinement assessment process. Projects recommended for a route refinement assessment or a corridor assessment in the DBC are identified in Table 2-1 below.

As noted in Table 2-1 below, projects identified to progress through route refinement in the Warkworth DBC were those requiring upgrades to existing road corridors. As such, a single centreline route option following the existing road corridor was developed in GIS. At the assessment stage, the project team and technical specialists applied the relevant constraints map to the single centreline route option developed and determined whether the corridor should be widened from the centreline / or to the east / west to avoid and / or minimise impacts based on the constraints within proximity to the corridor. The options to upgrade the corridor utilising the centreline or widening to the east / west were subsequently assessed by the Project Team against the refined MCA criteria with technical experts where required to identify the preferred option.

Table 2-1. DBC corridors assessment recommendation

Project	Level of assessment
Northern Public Transport Hub and Western Link - North	Corridor refinement
Woodcocks Road Upgrade	Route refinement
State Highway 1 Upgrade	Route refinement
Matakana Road Upgrade	Route refinement
Sandspit Road Upgrade	Route refinement
Western Link – South	Corridor refinement
Wider Western Link	Corridor refinement
Sandspit Link	Corridor refinement

2.3.2 Scoring methodology

Technical experts were appointed to undertake assessments of the options in their area of expertise. The experts were required to differentiate between the effects experienced in the existing environment and effects that would be experienced in a realistic, future environment (as discussed further below). This differentiation is particularly relevant within the Future Urban Zone (FUZ), which is earmarked for urban development but currently functions, primarily, as a rural area.

The MCA used a graduated scoring scale, ranging from -5 for Very High Adverse Effect to +5 Very High Positive Impact (see Table 2-2) to score options against the MCA Framework. The varying shades of green represent what was identified in the MCA as a score above '0' and is associated with a positive impact, whereas shades of red represent what was identified in the MCA as a score below '0' and is associated with an adverse impact.

Table 2-2 MCA scoring scale

Effects criteria	Scoring
Very high adverse impact	-5
High adverse impact	-4
Moderate adverse impact	-3
Low adverse impact	-2
Very low adverse impact	-1
Neutral impact	0
Very low positive impact	1
Low positive impact	2
Moderate positive impact	3
High positive impact	4
Very high positive impact	5

Scoring was completed by technical experts (ecologists, stormwater experts, archaeologists, etc.) and the Project Team (including planners, designers, transport engineers). Scores were presented and challenged in an interdisciplinary workshop setting.

When considering the options and assigning scores, experts considered options and potential effects in the context of a likely future environment within which the transport corridor would likely be operating. It is considered that there are broadly two likely future environments that could apply:

a) Environments that are likely to experience material change as a result of urbanisation; and
b) Environments that are not likely to materially change in the future.

When considering the future environment, there are four scenarios that are likely to eventuate through the Te Tupu Ngātahi Programme, two of which have a high probability of change as a result of a signal of land use change by way of operative planning provisions. These are outlined in the table below:

Table 2-3 Overview of likely scenarios eventuating through the Te Tupu Ngātahi Programme

Environment today	Zoning	Likelihood of change	Likely future state environment
Rural	Rural	Low	Rural
Rural	Urban	High	Urban
Rural	Future Urban	High	Urban
Urban	Urban	Low	Urban

Unless circumstances suggested otherwise, when considering effects in areas where there was a high likelihood of change, the approach that was adopted was that construction effects were to be considered in the context of an un-urbanised environment and operational effects were to be considered within the context of an urbanised environment. This is on the basis that while construction is likely to occur prior to urbanisation, the relevant project is to operate in an urbanised environment.

In addition to the MCA framework, several additional (and important) inputs were included in the assessment framework as outlined in Table 2-4 below.

Table 2-4 Other inputs in the MCA framework

Project Partners, including Manawhenua, and landowner feedback	Project partner feedback for each option identifying scale / validity of objections; identified preference / proposed changes to options etc. Feedback provided by other key stakeholders, the community and landowners.
Policy Analysis	Options alignment with the strategic policy framework including the AUP:OP, the Auckland Plan, and the Warkworth Structure where it assisted in differentiating between options.
Indicative costs	High level indication of costs (including construction and property purchase) where it assisted in differentiating between options.

2.4 Intersection and stormwater approach

2.4.1 Intersection Form Assessment Methodology

An assessment was undertaken to identify likely intersection forms for the Warkworth transport network. The purpose of this process was to identify the indicative intersection controls and subsequent footprint implications. It is noted that the final decision of the form and control of the intersections, could be modified when further land use certainties are known at time of implementation.

For the purposes of the intersection assessment the following factors were considered:

- Safety
- Transport network function (movement) and land use function (place)
- Form and Level of Service (LOS) / Quality of service required for different modes
- Land use integration
- Site specific constraints
- Urban form
- Design constraints
- Roundabout vs signals guidance
- Network staging and route protecting
- Future land used assumptions
- Future transport network assumptions.

For each intersection control chosen, design features were also considered to ensure that the intersection meets the needs of different users safely and effectively and responds to the site-specific factors. This check was done by the engineering and urban design teams following the initial selection process completed by the transport planning team.

The guidance adopts a 'Safe System' approach and recommends roundabouts as the first choice for at-grade intersections due to the safety benefits for vehicular traffic resulting from slowing down through traffic and reducing the number of conflict points. However, where roundabouts are not considered appropriate for example due to engineering constraints or land use implications, signalised intersections were then considered.

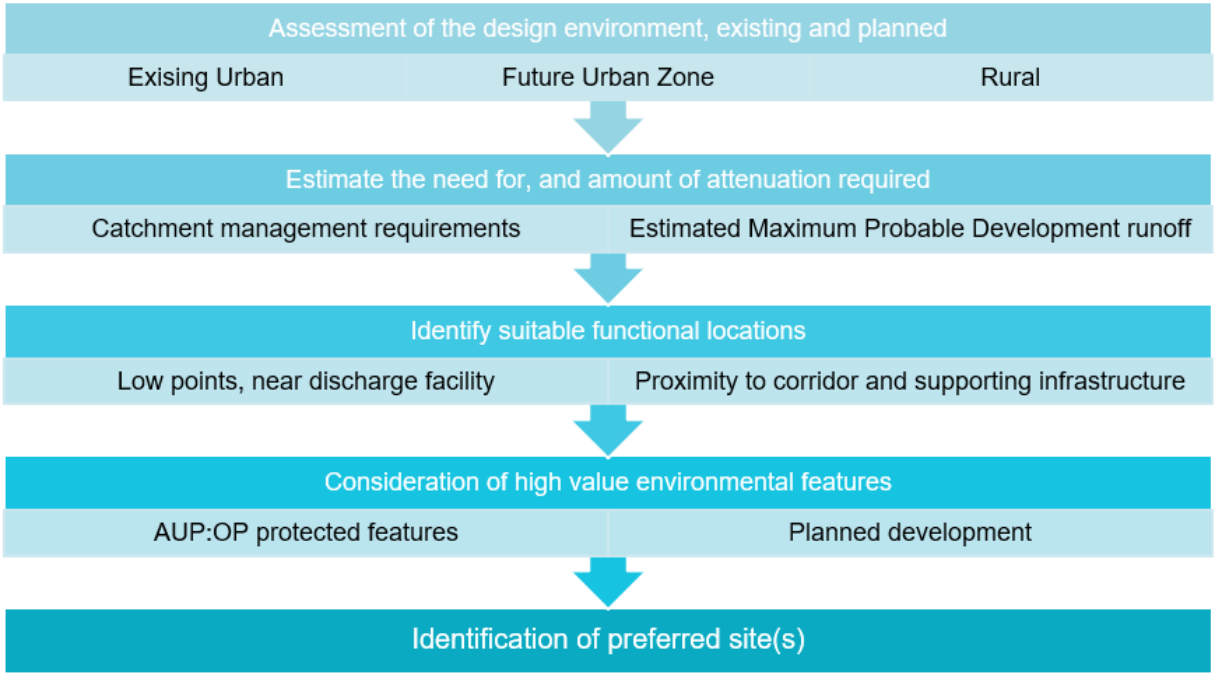
The intersection assessments have been consolidated to consider the key intersections – specifically Arterial to Arterial or Arterial to Collector roads. Intersections with a local road are generally priority-controlled intersections and are assumed to remain priority-controlled intersections in the future.

SIDRA modelling was undertaken to inform the intersection size requirements. It should be noted that in some cases modelling constraints resulted in limited turning volumes. In these cases, high level assumptions on likely turning movements were utilised.

2.4.2 Stormwater Infrastructure Design and Management

As part of route protection, the projects are required to identify and appropriately protect the land necessary to enable the future construction, operation, and maintenance of required transport corridors / infrastructure. The design has therefore considered the appropriate stormwater management methods to meet likely catchment needs and achieve the future regulatory requirements the process for identifying stormwater treatment form and location is summarised in Figure 2-3 below.

Figure 2-3. Stormwater infrastructure design and location approach



2.4.2.1 Design Environment Assessment

The type of stormwater management device was identified based on the Te Tupu Ngātahi design framework which considered:

- The surrounding existing and planned land-use
- Form of the transport route
- Road hierarchy
- How connectivity to adjacent properties would be provided.

This approach is summarised in Table 2-5 below.

Table 2-5. Stormwater System Design Approach

Design Environment	Conveyance	Treatment	Retention	Detention (Attenuation)	Diversion
Existing Urban – footpath and cycleway within existing road reserve	Pits and pipes	Discharge across berm	Raingarden	Wetland / pond	N/A
Existing Urban – increased road reserve and road upgrade	Pits and pipes	Raingardens or treatment wetland / pond, or as a lesser preference, proprietary treatment devices	Raingarden	Wetland / pond	N/A

Design Environment	Conveyance	Treatment	Retention	Detention (Attenuation)	Diversion
Future Urban Zone	Pits and pipes preferred	Raingardens or treatment wetland / pond	Raingardens	Wetland / pond	Diversion drain or cut-off channels as required
Rural	Conveyance channels	Treatment swales or treatment wetland / pond	Retention swales	Attenuation swale or wetland / pond	Diversion drain or cut-off channels as required

2.4.2.2 Need and scale of attenuation required

Design of attenuation devices was undertaken at a high level to determine the need for, and amount of attenuation required, the design approach considered the following:

- Evaluate the overall catchment management plan requirements as approved by Council to determine if attenuation or a “pass it forward” approach was proposed for the catchment
- Determine the road runoff discharge conditions for any tie ins to existing systems or discharge to overland flow paths
- Estimate runoff from maximum probable development in the catchment (i.e., maximum expected impervious areas).

This information was used in the:

- Design of a primary (10-year) network to cater for the estimated runoff
  - Location and sizing of primary (10-year) attenuation devices (if required) to address any capacity constraints in the downstream network, or to reduce the size of stormwater infrastructure (e.g., pipes) required
- Identification of secondary (100-year) flow paths and floodplains
  - Location and sizing of secondary (100-year) attenuation devices to reduce floodplain and overland flow path extents and avoid directly impacting on these.

2.4.2.3 Suitable functional location

If a wetland was required, the location of the wetland was selected by identifying a suitable functional location. The functional location considered the off-line low point along the alignment (based on existing topography), which was in sufficient proximity to the corridor for ongoing maintenance access, and suitably located for supporting infrastructure such as pipes and discharge outlets to nearby natural streams.

Where there were opportunities to upgrade or share existing public stormwater assets these were preferred and have been selected in various places along the corridors. Co-locating or upgrading existing assets has the benefit of reducing project land requirements, more effectively managing ongoing maintenance requirements through larger and fewer stormwater facilities, rather than multiple smaller devices. If practicable, across the Warkworth Package, new wetlands were also designed to service multiple routes, to achieve co-location efficiencies.

2.4.2.4 Consideration of high value environmental features

Once functional locations were considered the design then sought to avoid high value environmental features and where practicable minimise impacts on existing residential or business development.

Where new information or opportunities became available, the Project Team refined the stormwater solutions design and location. For example, where a consent might be granted for new development, the team made efforts to reconfigure ponds or discharge outlets to reduce impacts on developer aspirations and private property. However, this was not always practicable in constrained corridors.

2.4.2.5 Summary

The stormwater solution preferred is generally use of centralised wetlands. Wetlands have the benefit of being more effective to operate and maintain, they serve as both attenuation and treatment, and they reduce the overall corridor cross section width. Swales and raingardens for example would impact many owners along the corridor, and in existing urban areas where development is built up this would be particularly undesirable. Additionally, the Warkworth transport network is seeking to support growth, and developable land adjacent to the corridors should therefore be maximised. Wider corridors for open channel systems and swales would not be as supportive of this objective as wetlands.

3 Summary of previous business case processes

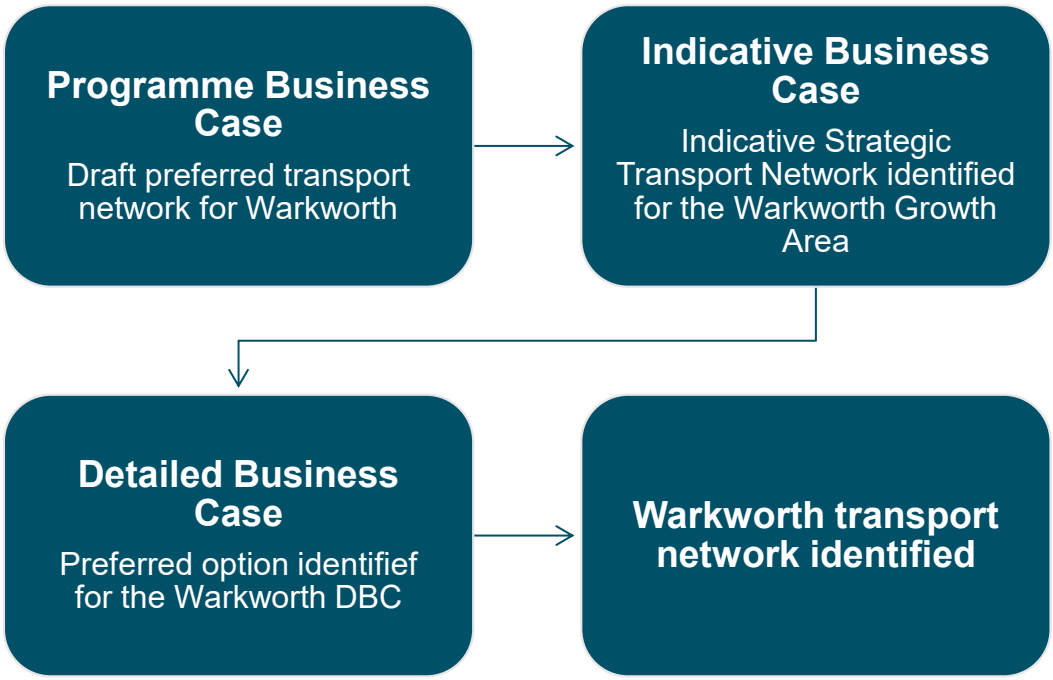
3.1 Overview

To determine the most appropriate transport solution to respond to the scale and pace of growth in Auckland, AT and Waka Kotahi worked in partnership to develop business cases for each of Auckland's identified growth areas: Warkworth, North, North West and South. To date, this process has involved the following:

a) The completion of a Programme Business Case (PBC) in 2016, which identified a high-level Preferred Programme and Transport Network for Warkworth, North, North West and South Auckland
b) The completion of four IBCs in 2019, which identified an Indicative Strategic Transport Network (ISTN) for Warkworth, North, North West and South Auckland
c) The progression of a number of Detailed Business Cases for the ISTN which started in mid-2019 and identified projects for route protection including the Recommended Strategic Warkworth Network.

This Warkworth process is illustrated in Figure 3-1 below.

Figure 3-1. Process leading to the identification of the Warkworth transport network



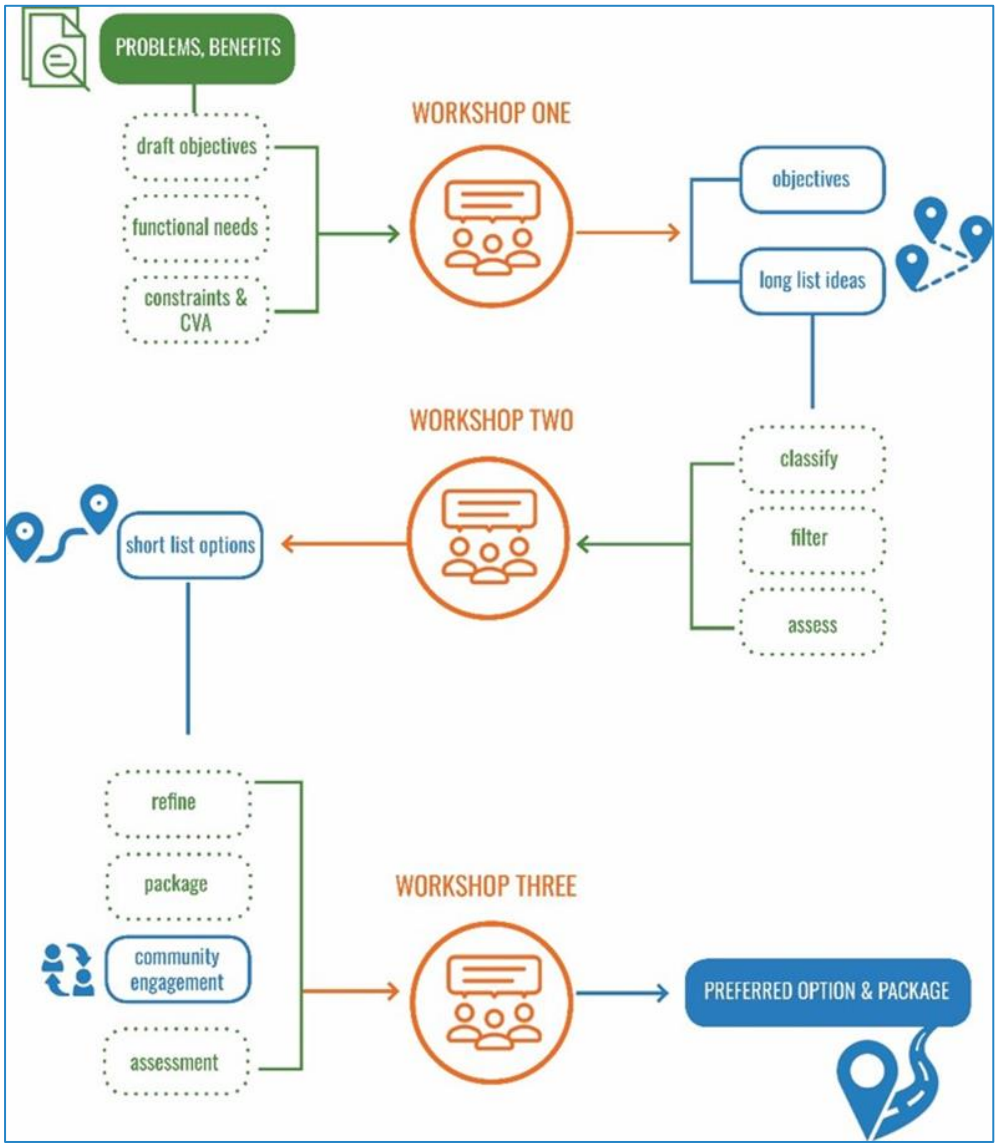
The PBC identified a draft preferred transport network within the Warkworth area. The IBC then further tested and developed the recommendations of the PBC. The purpose of the IBC process was to confirm the recommendations of the PBC were robust and to develop a recommended transport network that met the investment objectives for the region for AT Board / Waka Kotahi Board approval.

The section to follow briefly describes the optioneering process that was undertaken during the IBC phase of works. This process resulted in the identification of the Warkworth ISTN which was approved for further investigation in the DBC.

3.2 Indicative Strategic Transport Network

The IBC optioneering process is shown in Figure 3-2 below.

Figure 3-2. IBC Optioneering Process



Optioneering began with the development of a long list of options and this process focused on developing breadth and depth of possible interventions, network sections and options. As a result, over 100 options were considered as part of the initial longlist development. The long list was subsequently filtered to exclude options that were:

a) considered beyond the scope of the IBC (i.e. those that were outside the project area or beyond the control of AT or Waka Kotahi);

b) land use options (such opportunities were discussed separately with Auckland Council);
c) already part of a designated / consented / funded project;
d) considered business as usual, so would otherwise be implemented (for example: use of staging);
e) considered unfeasible due to significant physical constraints – based on a high-level engineering assessment; and
f) duplicates of another option.

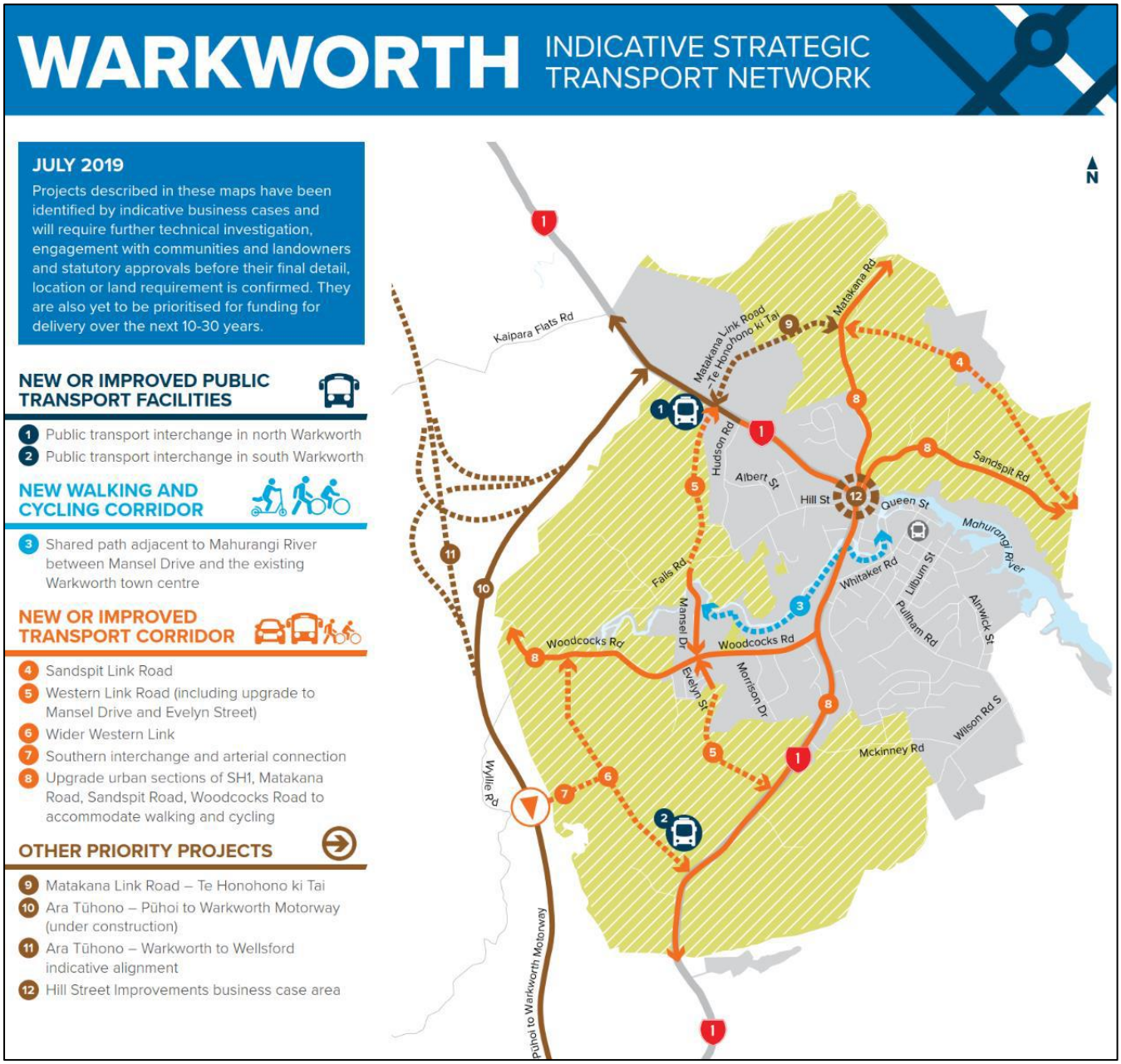
Following the filtering process, the remaining options were categorised by type, grouped by geographic extent, and assessed against the Te Tupu Ngātahi MCA framework in a workshop setting. This process resulted in a number of options being recommended to proceed to a shortlist.

Following this the recommended shortlist underwent a refinement and packaging process. This included the preparation of indicative cross sections which assumed a 30m wide corridor for SH1, a 20m wide corridor for existing collector-type roads, and a 25m wide corridor for new arterials to provide a guide as to where the corridor could be located, with the refined alignment to be determined as part of the DBC. This also involved packaging together individual sections and assessing competing options (or packages of options) and interdependencies between different options.

Feedback on the refined short list was also obtained through one round of external stakeholder and public engagement in June 2018. This involved a series of workshops with elected members, stakeholders and public open days. The purpose of this engagement was to provide stakeholders and the public with an opportunity to review and provide input into the overall IBC recommended network and for the Project Team to identify matters that will inform that network.

Following the engagement period, the short list was evaluated, and the Warkworth Indicative Strategic Transport Network as set out in Figure 3-3 below was identified:

Figure 3-3 Warkworth Indicative Strategic Network recommended through the IBC



3.3 Identification of the Warkworth Detailed Business Case

Following the identification of the Indicative Strategic Transport Network at the IBC phase, the IBC gave consideration to the below matters and provided an indication of how projects could be packaged in the future and progressed at the DBC phase:

- Identifying sections of the components that could “stand alone” as projects;
- The environment each section sits within, and where that environment changes;
- The urgency for the delivery of any section of a component; and
- The complexity of any section of a component.

Following on from this, all sections of the Indicative Strategic Transport Network were grouped into packages for the purposes of further refinement at the DBC phase. These packages and the indicative route protection mechanisms for each project to be further addressed in the DBC phase are shown in Table 3-1 below.

Table 3-1. IBC indicative DBC packages and route protection mechanisms

Package	Components	Indicative Mechanism	Priority
W1 New Arterials and new interim park and ride	Western Link - North	Developer agreement or NOR	High
	Western Link - South	NOR	High
	Upgrade to Mansel Drive	NOR	High
	Sandspit Link	NOR	Medium
	Interim Park and ride	NOR (if required)	High
W2 Upgrades to arterials	State Highway 1 upgrade – widening to add active modes and public transport (include. Hill Street Bridge)	NOR alteration	High
	Woodcocks Road	NOR	High
	Whitaker Road	NOR	High
	Matakana Road	NOR or potential for delivery via 'business as usual' consents teams	Medium
	Sandspit Road	NOR or potential for delivery via 'business as usual' consents teams	Medium
W3 Interchanges	Southern Interchange	NOR / Alteration	Medium / high
	South public transport interchange	NOR	Medium
	Wider Western Link	NOR	Medium
W4 Collector Road Improvements	McKinney Road, Wilson Road, Pulham Road, Alnwick Road	Unknown at this stage (AT)	Medium
W5 Cycleways along waterways	East-west cycleway connection along streams	Unknown at this stage (AT)	Medium / high

3.4 Components of the Warkworth DBC

The Warkworth DBC encompasses 12 projects from the IBC Indicative Strategic Network components shown above. Together these projects form a cohesive transport response for Warkworth to respond to planned future growth. The transport investment identified in the DBC will enable an integrated transport system with a range of strategic and local elements supporting mode choice in Warkworth. It is predicated on creating a connected walking and cycling network and supporting an enhanced local and regional public transport system. The timing for implementation will vary and will be dependent on the release of surrounding land use.

The DBC considered the case for investment and refinement of options for the following projects from the IBC noting that the collective benefit of the network outweighs the individual benefits to each element.

- New Northern Public Transport Hub and Park and Ride
- New Southern Public Transport Hub
- New Southern Motorway Interchange on Ara Tūhono
- Upgrade to SH1
- Upgrade to Woodcocks Road
- Upgrade to Matakana Road
- Upgrade to Sandspit Road Upgrade
- Western Link – North
- Western Link – Central Upgrade
- Western Link – South
- Wider Western Link
- Sandspit Link.

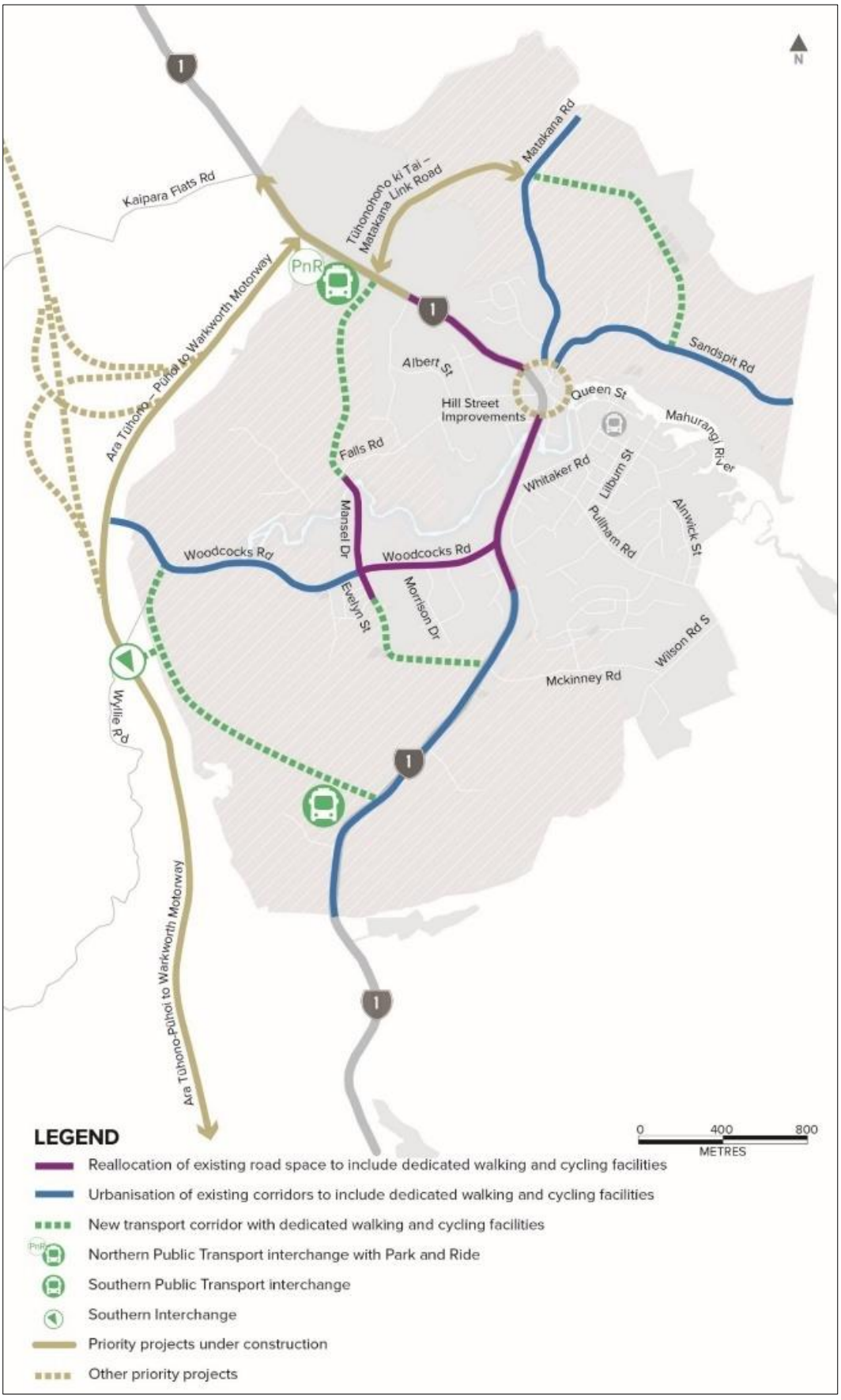
These projects form the arterial roads for Warkworth, but the DBC acknowledged that there will also need to be a complementary collector road network and other cycle connections. The Mahurangi Shared Path between Mansell Drive and the existing town centre was excluded from the DBC and remains part of the Rodney Local Paths Plan (formerly known as the Greenways project). The Hill Street improvements project was progressed by a separate business case in parallel to the Warkworth DBC. The Warkworth IBC projects which did not proceed to the Warkworth DBC, and the reasons why are shown in Table 3-2 below.

Table 3-2. IBC recommended projects excluded from the DBC

Warkworth IBC Project	Reason for exclusion from Warkworth DBC
Interim Park and Ride	The interim park and ride as part of the IBC recommended network was funded by the Local Board / AT and shifted out of the project scope.
W4 Collector Road Improvements McKinney Road, Wilson Road, Pulham Road, Alnwick Road	IBC recommended that Package W4 (Collector Road Improvements) of the IBC recommended network requires completion of a DBC and that this will need to be procured separately by the appropriate owner (AT or the Transport Agency).
W5 Cycleways along waterways East-west cycleway connection along streams	IBC recommended that W5 of the IBC recommended network will require completion of a DBC and that this will need to be procured separately by the appropriate owner (AT or the Transport Agency).

The Warkworth IBC projects which proceeded to the Warkworth DBC are shown in Figure 3-4 below.

Figure 3-4. Warkworth DBC Projects



4 Route refinement development and assessment methodology

4.1 Overview

The following section provides an overview of the gap analysis undertaken prior to the commencement of the DBC, this included a review of the IBC assessment, policy updates, developer aspirations and interdependencies. Following gap analysis, a land use and constraints mapping exercise and corridor form and function assessment were undertaken to develop new options and refined routes.

4.2 Gap analysis – IBC to DBC

Prior to the commencement of the DBC assessment of alternatives process, a gap analysis was undertaken for the Warkworth Indicative Strategic Transport Network (ISTN). The purpose of this exercise was to review how the ISTN was identified, and to check if any information or assumptions had changed since the corridor assessment was completed for the IBC. This included policy direction and statutory documents (for example, plan changes), and any issues that required further consideration. The gap analysis included the following:

- Review of Te Tupu Ngātahi Programme Business Case (formerly Transport for Future Urban Growth (TFUG)) recommendations
- Review of the corridor assessment undertaken and the Warkworth IBC (main document and Options Assessment Report), including the long list and the short list options, and the reasons why options were recommended or discounted
- Consideration of the alignment of the recommended options with relevant policy documents (for example, Government Policy Statement on Transport, AUP:OP), in particular, to see if anything had changed since the Warkworth IBC and corridor assessment recommendations
- Consideration of the alignment with strategic plans, other statutory documents and developer aspirations that may have progressed from the IBC. For example, structure plans, plan changes (or appeals), recent NORs and developer plans
- Consideration of other projects planned in the area
- Consideration of feedback from landowner engagement.

The gap analysis also identified whether the IBC corridor assessment had considered alternatives proportional to the scale of potential effects of each Project. Where new information was identified, or the corridor assessment did not consider alternatives proportional to potential effects sufficiently, additional assessment was recommended at the DBC phase. To achieve the level of assessment required to progress to route protection, two approaches to developing options were recommended for transport components in the Warkworth DBC:

Corridor assessment - involves the development of additional options or geometric variations to the IBC recommended option within a defined study area. These options had the potential to deviate from the IBC recommended option identified in the Indicative Strategic Transport Network. Upon completion of the corridor assessment process, the recommended option was then progressed through to the route refinement assessment process (described below).

A corridor assessment was deemed necessary where the gap analysis determined that:

a) New information, for example, land use changes, new growth projections and any issues and opportunities identified through engagement with stakeholders and landowners since the completion of the IBC, had the potential to influence that option; and / or
b) Assessment undertaken at the IBC phase was not considered to be proportional to the scale of potential effects.

Route refinement – options based on an IBC recommended option but with refinement based on the effects, constraints and opportunities from corridor widening on either side, both sides, or a combination.

Route refinement was deemed appropriate (and so a corridor reassessment was not necessary) where a gap analysis had determined that:

a) The option had adequately considered all known information (including land use changes, engagement etc.) relating to that option; and
b) Options considered at the IBC phase had sufficiently considered alternatives proportional to the scale of potential effects.

A summary of the analysis undertaken for each Project is summarised in each of the Project specific sections and the approach recommended for option development for each NOR project in the DBC phase is outlined in Table 2-1 of section 2.3.1.

4.3 Land Use Review and Constraint Mapping

Following gap analysis, a review of the AUP:OP maps and constraints was undertaken. The purpose of the review was to identify potential constraints, inform design development and refinement, and identify whether additional corridor options should be developed. Key constraints included:

- Geological conditions
- Natural hazards such as flooding
- Cultural values – as identified by Manawhenua
- Contours and likely project earthworks requirements
- Strategic land use plans including live zoning, future urban areas and structure plans
- Identified sensitive areas through the AUP:OP overlays, conflicts with critical services and special purpose zones
- Environmental constraints.

Constraints were mapped on Te Tupu Ngātahi GIS and discussed at a workshop with the Project Team and specialists.

4.4 Form and Function Assessment

To determine the desired function, and therefore the future form of alternative options, a form and function assessment process was undertaken in 2021.

4.4.1 Corridor Assessment Principles

The Corridor Form Assessment Framework (CFAF) has been designed by Te Tupu Ngātahi to provide a consistent methodology to define the desired corridor form and function requirements and ensure all modes are considered. The CFAF assessments were completed for all multi-modal corridors within the Warkworth recommended network, except for the Wider Western Link Road, Western Link – North and Western Link – South. The corridor form and function requirements for these corridors were endorsed during early works, a summary of the findings from this work is summarised in the below section.

The CFAF output recommends traffic capacity, bus priority measures, walking and cycling facilities and other corridor elements which influence the corridor footprint. All modes are considered in the development of the cross-section, however facilities for all modes may not necessarily be provided. The resulting cross-section forms the basis for route protection for the corridor.

The form and function of a corridor is determined using a combination of 'place' and 'movement' significance on the individual setting:

- **Place factors** consider the existing land use, future land use plans and trip generators present in the catchment area. It also includes an assessment of the future density of residential, industrial or mixed land use and local / regional trip attraction areas e.g. metro stations, schools, hospitals.
- **Movement factors** consider the hierarchy of the corridor in the regional road network (PT network, strategic freight network), modal priorities for the corridor and existing and future traffic volumes to determine the future typology and recommendations for a corridor function. Movement is considered at both local and network levels to ensure that duplication of facilities is avoided, and the corridors have targeted modal functions.

Table 4-1 below provides a summary of the inputs and outputs of the CFAF tool used during the assessment.

Table 4-1. Inputs and Outputs of the CFAF tool

Inputs	Modelling inputs required	Parameters	Outputs	Impact on modelling
Place and corridor function	No	Qualitative assessment based on the Roads and Streets Framework (RASF)	Determines the purpose of the route and feeds into wider modal priority assessment	N/A
Public transport	No	AT Remix File[1]	Public transport priority	No
Walking and cycling	No	Te Tupu Ngātahi primary and secondary walking and cycling network used, based on urban design framework	Helps with geometric design, determining suitable paths and	Chosen facility type for different corridors coded into SAMM

[1] Te Tupu Ngātahi Remix File refers to the Auckland Transport vision of the 2048+ bus network. Data and routes are subject to change.

Inputs	Modelling inputs required	Parameters	Outputs	Impact on modelling
			which sides to include the facility	
General traffic	Yes	ADT volumes used, extracted from SATURN	If PT priority needed, helps determine whether corridor is route protected for 2 or 4 lanes	Number of lanes included in MSM, used for SATURN outputs
Freight	Yes	User Class 3 (heavy vehicles) divided by total of all user classes (all vehicles) to determine the percentage of freight. Data extracted from SATURN	Informs role within wider freight network and whether specific freight measures are needed along corridor	Yes
Speed Environment	No	Assumption based on RASF and future land use. Parameters for high and low speed based on the IBC design philosophy	High level assessment concludes a low speed of 50/60km/h or a high speed of 80km/h. These are the base assumptions for the speed, subject to vary through the DBC Optioneering process	Speed along each network included in MSM, used for SATURN outputs

4.4.2 Updated CFAF cross-sections

The output from the CFAF process indicates the necessary width required to provide a Te Tupu Ngātahi cross section and subsequently meet the outcomes sought by the Alliance. However, due to significant physical and environmental constraints, not all the corridors on the Warkworth recommended network can accommodate the initial identified CFAF cross-section.

These corridors include:

- Matakana Road
- Sandspit Road.

Due to identified constraints along these corridors, bespoke cross-sections were developed through the option assessment process and is further detailed in project specific sections under Section 5.

4.5 Route protection methods

Upon identification of the DBC transport network, in accordance with Section 171(1)(b) of the RMA, an evaluation of alternative methods was undertaken for the Warkworth Package. As part of the consideration of alternatives, the options for statutory approval that enable route protection and future implementation were considered in light of a number of contextual elements including project strategic importance, project urgency / timing and project complexity risk profile.

A range of options were considered including:

a) Designations;
b) Resource consents;
c) Landowner / developer negotiations;
d) Plan changes (initiated or submitted on);
e) Structure plans; and
f) Traditional property acquisition.

Upon testing these options in the context of Warkworth and alongside consideration of programme wide criteria, designations were considered to be the most logical and effective method to protect a route in an evolving environment for the following reasons:

a) A designation provides certainty to all parties including the community and affected landowners;
b) It is a well-recognised and understood tool for route protection which also enables land acquisition processes through the link to the PWA;
c) It maximises flexibility for future implementation;
d) It negates the need for additional land use consents to implement works authorised under the district plan (s9(3) of the RMA); and
e) It will continually provide for future operation and maintenance requirements.

In some cases, alternative mechanisms to designations such as plan changes and landowner agreements, and existing statutory provisions were identified as being a more appropriate form of route protection. These approaches to route protection were preferred where there were areas of active interest for development and where plan changes or the equivalent had already been confirmed and / or proposed. In the context of this report the following NOR projects are relevant:

- **NOR 1 Northern Public Transport Hub and Western Link – North**
  The southern section of the Western Link corridor is provided for through the Plan Change 25 process and the provisions of the Warkworth North Precinct Plan
- **NOR 7 Wider Western Link – North**
  The southern section of the corridor will be provided for via the Plan Change process in combination with landowner agreements.

5 Warkworth Assessment of Alternatives

5.1 Overview

The Warkworth DBC confirmed the transport network for Warkworth and the route protection strategy determined the route protection approach for each project in the transport network. The following section provides a summary of the assessment of alternatives process undertaken for the eight projects undergoing route protection via an NOR process. These projects are shown in Figure 5-1 below.

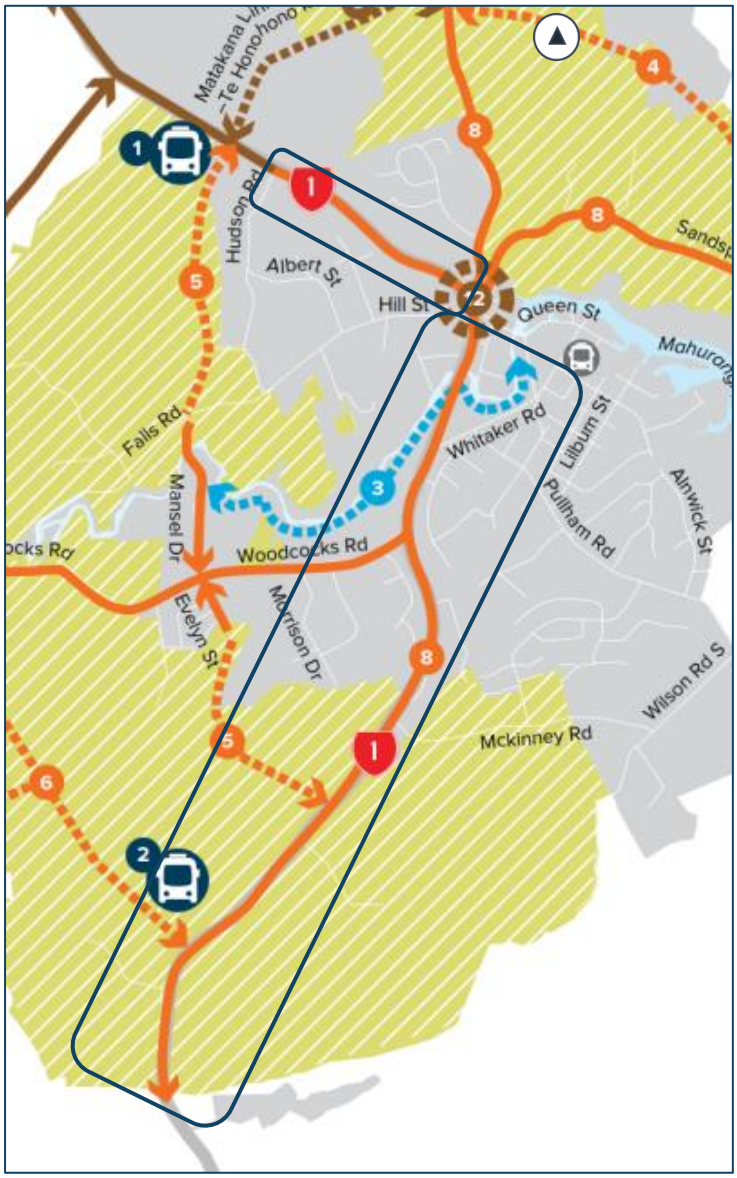
Figure 5-1. Warkworth NOR Projects Overview

5.2 NOR 2 Existing State Highway 1

5.2.1 Corridor Overview

The IBC recommended option for the upgrade of SH1 to provide for an urban arterial cross section with active mode facilities is shown in Figure 5-2 below.

Figure 5-2. IBC SH1 Upgrade

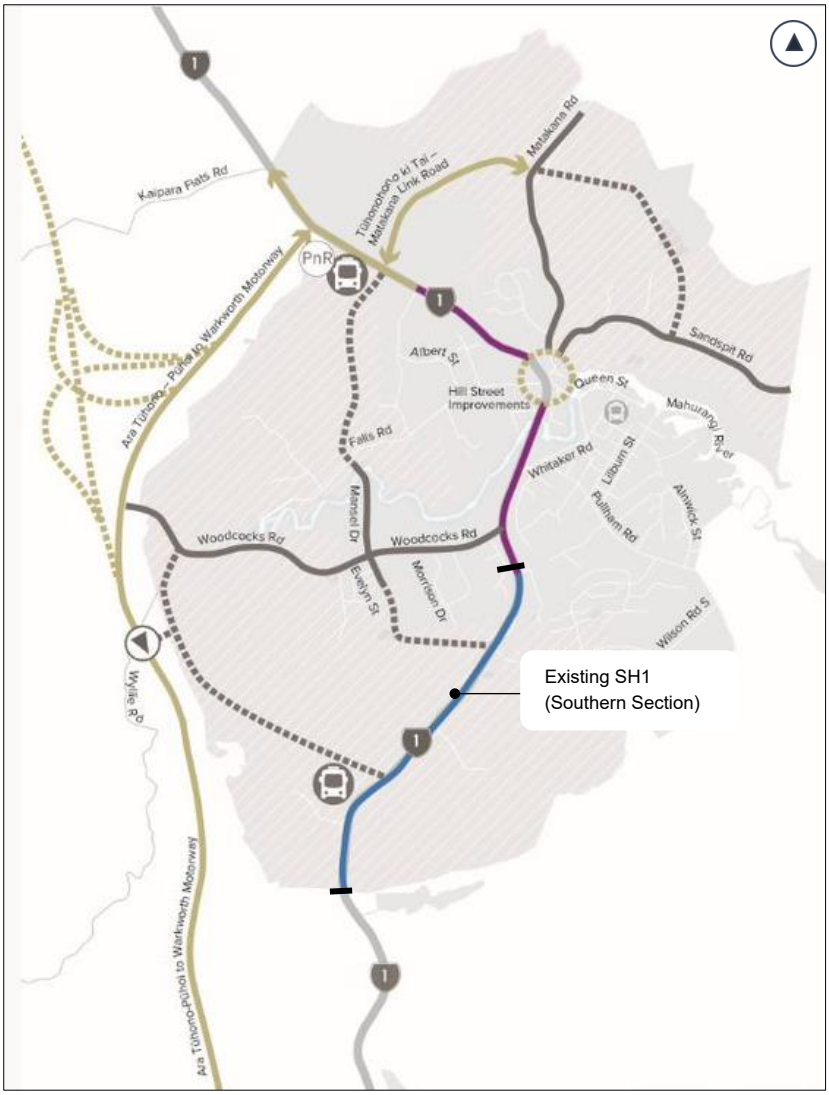


Upon the completion of Ara Tūhono – the Pūhoi to Warkworth motorway the role of the existing SH1 will change. Much of the existing traffic through Warkworth will shift from the current route and the Hill Street intersection in the central Warkworth township, allowing SH1 to function as an urban arterial. Meaning the existing SH1 will become the key north-south route for public transport to connect local communities and town centres as well as the central spine for active transport choices to encourage safer cycling, and greater pedestrian access.

For the purpose of this report, only the option development and assessment process for the existing SH1 from Fairwater Road to the edge of the southern FUZ boundary (existing SH1 southern section)

will be outlined in the following sections The report will not cover the option development and assessment process for the existing SH1 from Hudson Street to Fairwater Road as the assessment outcome for this extent (as part of the existing SH1) in the DBC identified that upgrades would be completed utilising the reallocation of road space within the existing road corridor. As a result, route protection via the NOR process is not required. Figure 5-3 below provides an overview of the corridor extent relevant to this report.

Figure 5-3. Overview of existing SH1 (Southern Section)



5.2.2 Gap Analysis

The gap analysis concluded that adequate corridor assessment was undertaken at the IBC phase and a need for further corridor assessment was not required for the upgrade of the existing SH1 (southern section). The analysis recommended that the corridor should progress through route refinement in the with consideration given to the following:

- Changes in land use along the extent of the corridor section with the northern section being an existing urban area and the remainder of the corridor generally being rural with future urban zoning
- Consider integration with the following the projects:
  - Ara Tūhono – Puhoi to Warkworth Motorway

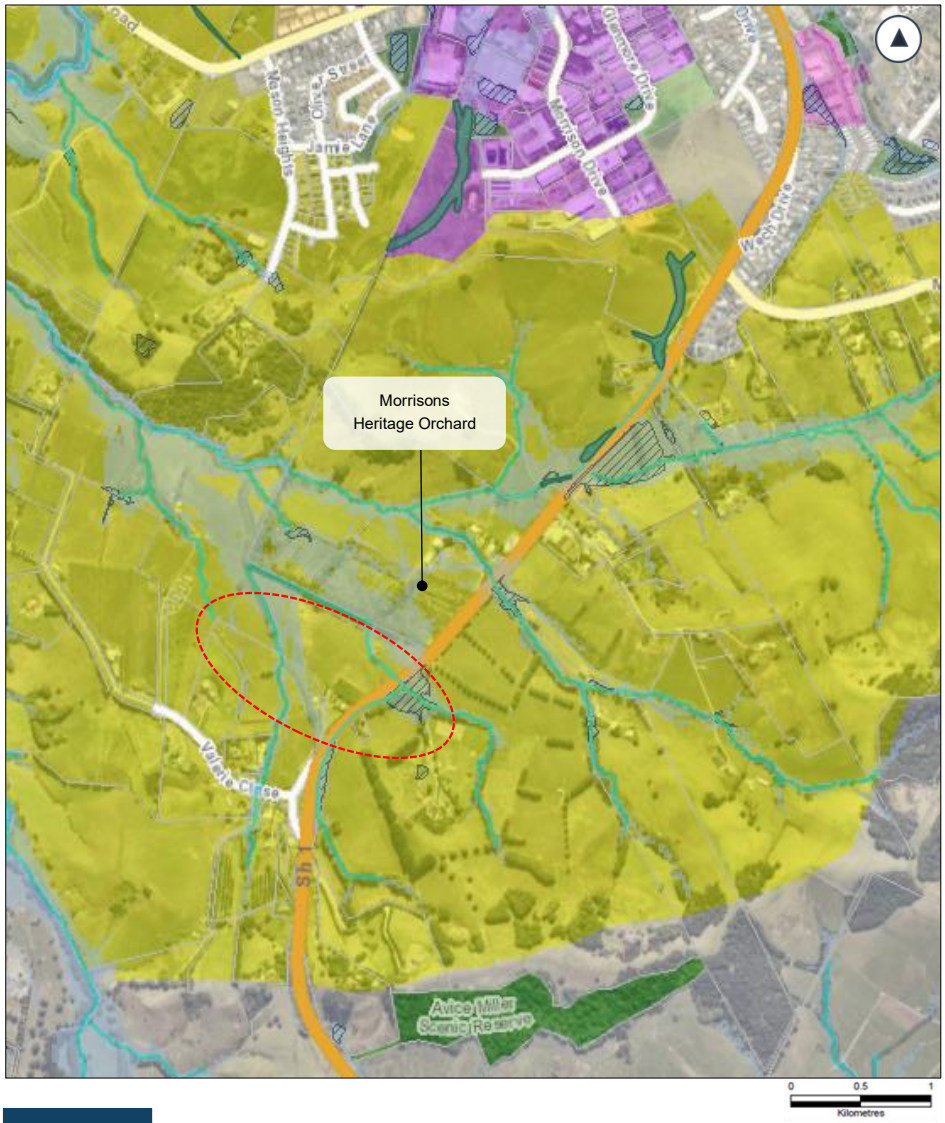
- Proposed Warkworth South Plan Change area.

5.2.3 Route: Option Development

In developing options, the Project Team considered the following known key features in the area. These are mapped in Figure 5-4 below and include:

a) Commercial, residential, and rural properties fronting the corridor
b) Flood plains indicated to flow on sections of the SH1 carriageway
c) Large flood plain alongside SH1 from Mahurangi River
d) Potential natural wetlands adjacent to corridor
e) Existing SH1 designation (6763) along length of existing corridor
f) Proposed Warkworth South Plan Change area
g) Morrisons Heritage Orchard.

Figure 5-4. Map of key constraints and features



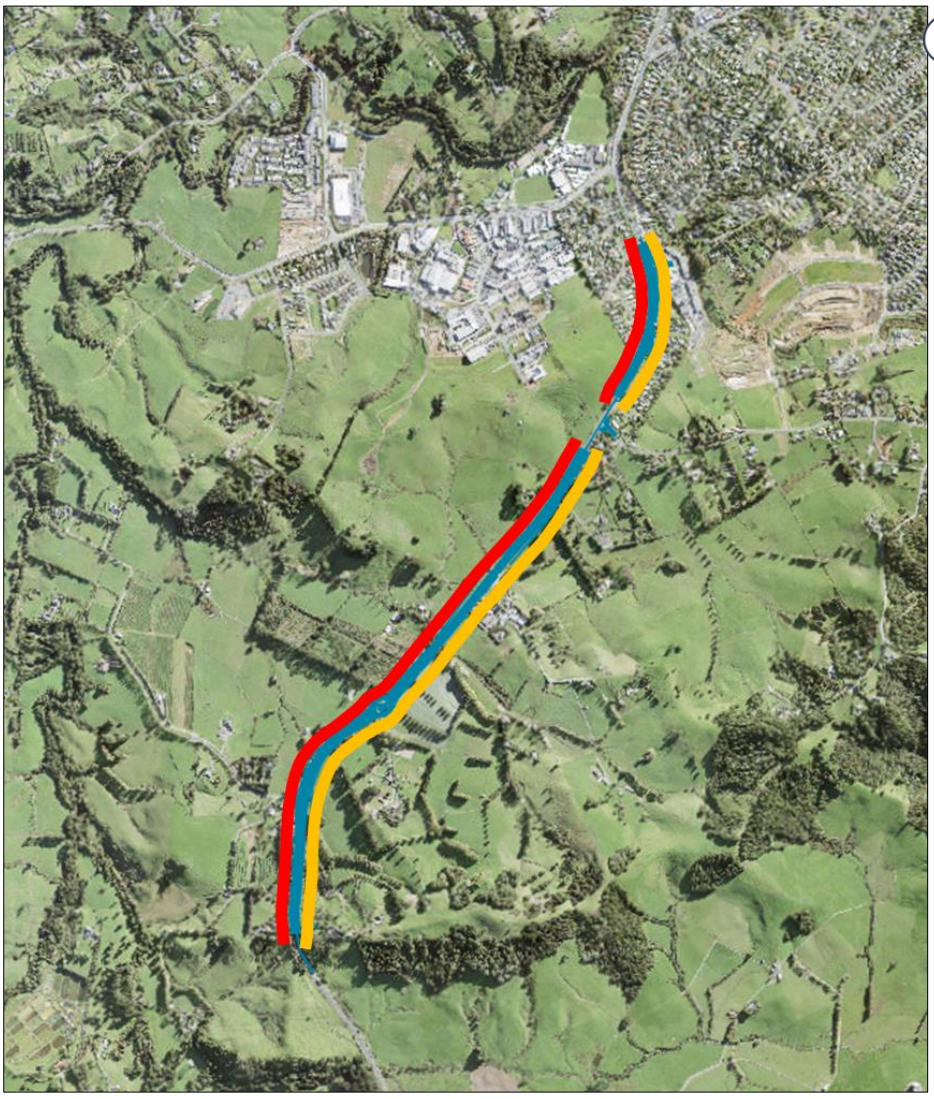
Approx proposed Plan Change area
Floodplains
Existing urban area
Future Urban Zone
Business – Local Town Centre Zone

In consideration of the land uses and constraints within the corridor extent three options were developed for the southern section. These are shown in Table 5-1 and Figure 5-5 below and are discussed in the sections to follow.

Table 5-1: SH1 Upgrade – Southern Section

Option	Description
1	Holding centreline and widening equally on both sides
2	Widen to the west (hold eastern boundary)
3	Widen to the east (hold western boundary)

Figure 5-5. SH1 Upgrade Options Developed



LEGEND

- Option 1
- Option 2
- Option 3

5.2.4 Route: Option Assessment

As outlined in Section 2, options were assessed against the investment objectives and criteria within the four well-beings; cultural, social, environmental and economic. The project team engaged in a refined MCA workshop to undertake an assessment, placing each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green).As noted in Section 5.4 MCA in the route refinement phase was targeted, where there had previously been a corridor assessment of the project at the IBC phase and where there were no identified constraints under a specific criterion which required further consideration, this criterion was not revisited and is shown as N/A in Table 5-2 below.

Table 5-2 below identifies the assessment outcomes for the existing SH1- South

Table 5-2: SH1 Upgrade Section 3 option assessment summary

MCA Criteria	Option 1	Option 2	Option 3
I.O.1 – Access			
I.O.2 – Integration			
I.O.3 – Travel Choice			
Heritage			
Land use			
Land Requirement			
Stormwater			
Ecology			
Construction impacts			
Construction disruption			
Urban Design	N/A	N/A	N/A
Social Cohesion	N/A	N/A	N/A
Human health and wellbeing	N/A	N/A	N/A
Landscape / Visual	N/A	N/A	N/A
Natural Hazards	N/A	N/A	N/A
Construction cost / risk	N/A	N/A	N/A

The project team reviewed and compared the options identified above and noted that all the options achieved the investment objective, all options support planned growth and enables transport and land use integration. All proposed options additionally improve the resilience of the network and foster reliable people movement through the provision active mode amenities.

Key differentiating factors between the options were impacts on heritage, land requirement, stormwater, ecology, and construction impacts / disruption. Option 2 was assessed as having a higher potential impact on the Morrison's Heritage Orchard and the natural wetland compared to the other options as a result of widening to the west. While all options had stormwater impacts, Option 2 and 3

were assessed as requiring more work within the floodplains intersecting with the corridor. It was identified that Option 3 would also have potential higher adverse impacts on land requirement compared to the other two options due to a greater impact on the larger section of existing urban area the northern extent of the corridor, including businesses and residential properties. Resulting in higher potential encroachment into these properties and the associated construction impacts and disruption.

Accordingly, the Project Team identified Option 1 as the preferred option. While the option does have a potential impact on the identified natural wetland, it has the least amount of works required within the floodplains, has the lowest level of adverse effect on land required and physical works to the existing carriageway. During the assessment the project team additionally identified that there were potential design options that could be considered in the design refinement phase to minimise the option's impacts on the Morrison Heritage Orchard. A qualitative summary of the assessment outcomes for the preferred and discounted options are provided in Table 5-3 and Table 5-4 below.

Table 5-3: Assessment outcome for the preferred option

Option	Assessment Outcome
1 (holding centreline and widening equally on both sides)	• Option has a lower adverse land requirement impact, widening equally on both sides potentially requires less full or partial property acquisitions compared to Option 2 and 3. While option has a potential impact on the frontage of the Morrison's Heritage Orchard, it was identified that there were potential design options that could be considered in the design refinement phase to minimise impacts on the orchard • There is a potential flooding risk along the existing corridor due to the corridor being in a large floodplain in the central section, in the tapered end of a smaller floodplain in the southern section and is adjacent to flood prone areas along the eastern extent However, option has lesser works located in the floodplains compared to Option 1 and 2 • Option potentially in proximity to the ecological wetland along its north-western extent • Option results in requirement for less physical works as minimal widening of the pavement is required as such there is less embodied carbon associated to this option.

Table 5-4: Assessment outcomes for the discounted options

Option	Assessment Outcomes
2 Widen to the west (hold eastern boundary)	• Option has the most potential to adversely impact the Morrison's Heritage Orchard as a result of requiring a higher degree of encroachment into the property for construction purposes • Potentially higher adverse land requirement and construction disruption impacts compared to Option 1 due to affecting an existing residential area in the northwest resulting in more full or partial property acquisitions • Option requires works within large floodplains in the central and southern section • Option in close proximity to the ecological wetland adjacent to the corridor in the northern section • Option would require more physical works to the existing carriageway due to widening / rebuild of the pavement on the western side as such there is more embodied carbon associated to this option.
3 Widen to the east (hold	• Potentially higher adverse land requirement and construction disruption impacts compared to Option 1 and 2 due to affecting a larger existing urban area in the northeast, including residential properties and various commercial businesses • Impacts on Heritage Orchard limited to localised construction effects along the frontage

Option	Assessment Outcomes
western boundary)	• Option requires works within large floodplains in the central and southern section • Option would require more physical works to the existing carriageway due to widening / rebuild of the pavement on the eastern side as such there is more embodied carbon associated to this option.

5.2.5 Engagement

Table 5-5 below provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members.

Table 5-5. Existing SH1 Engagement Feedback

Project	Feedback
SH1 Upgrade	• Support for dedicated walking and cycling facilities along the corridor and support for access to local facilities and town centres • General agreement for the principle to provide an urban arterial road for southern section following the centreline principles • Support to upgrade the bridge on SH1 • Support for road widening in some locations.

5.2.6 Option Refinement

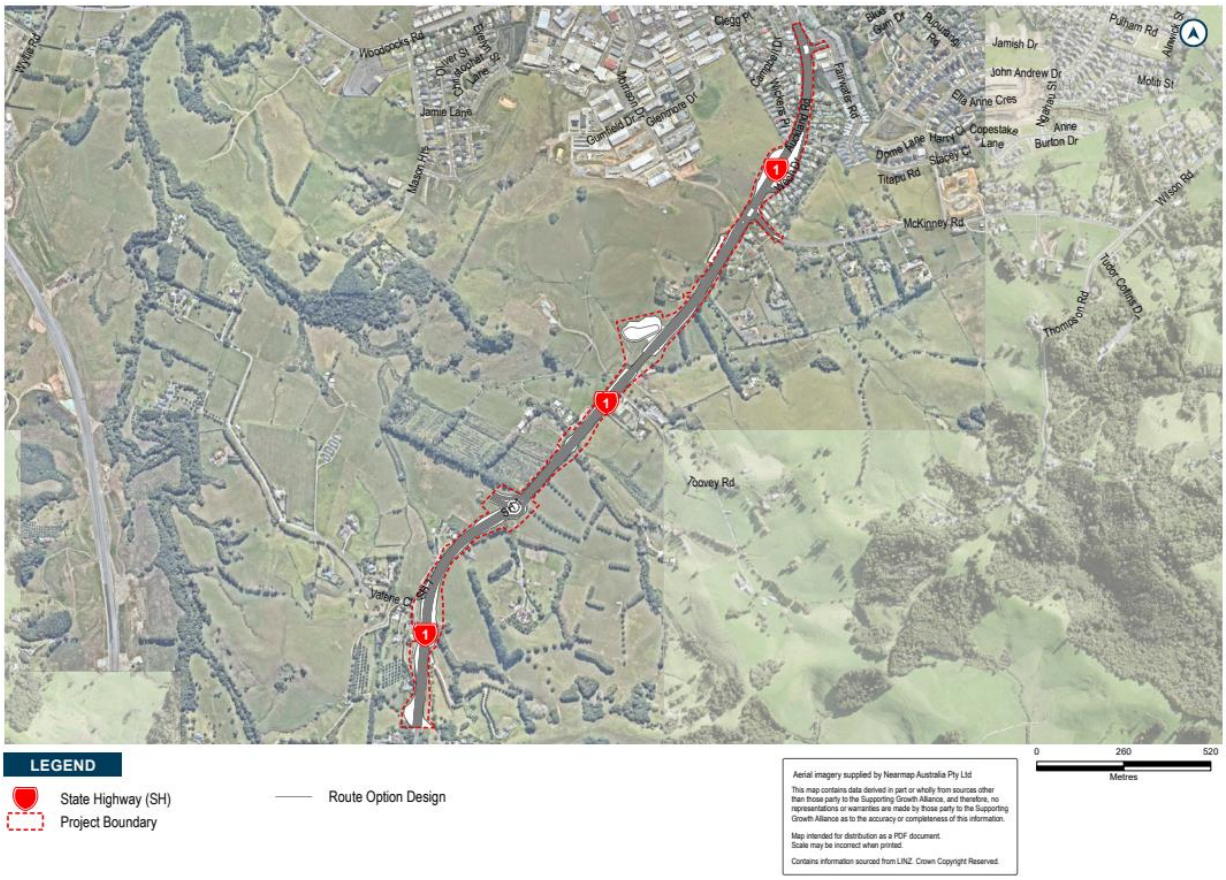
During the detailed design phase, the following refinements were made to the preferred option:

- Upon the review of the Revision A drawings of the proposed corridor upgrade, the proposed alignment centreline has been pulled back to the existing centreline to reduce impact on The Range Warkworth
- Impact on Morrison's Heritage Orchard to be minimised through construction of a retaining wall along the orchard's frontage. The project team considered widening the corridor to the east in this location to minimise impacts however it was identified that this would encroach further into the Warkworth South Plan Change area to the east. On balance, it was noted that providing a retaining wall along the frontage of the Morrison's Heritage Orchard was the preferred option whilst avoiding impact on the plan change area to the east of the corridor in this section.

5.2.7 Option Summary

Following the engagement and option refinement process the existing SH1 (southern section upgrade was confirmed and is illustrated below in Figure 5-6.

Figure 5-6. Existing SH1 (southern section)



5.3 NOR 3 Woodcocks Road

5.3.1 Corridor Overview

The IBC recommended option for the upgrade of Woodcocks Road to provide for an urban arterial cross section with active mode facilities is shown in Figure 5-7 below.

Figure 5-7. IBC Woodcocks Road Upgrade

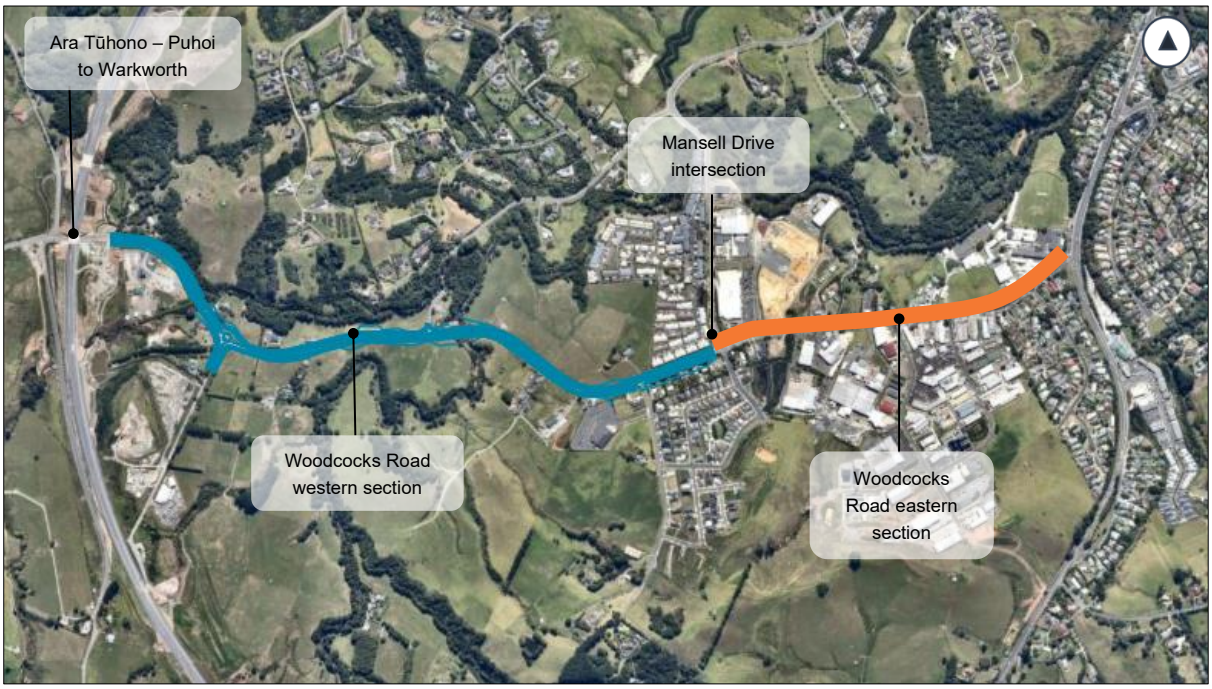
5.3.2 Gap Analysis

The gap analysis concluded that adequate corridor assessment was undertaken at the IBC phase and a need for further corridor assessment for Woodcocks Road was not required. The analysis recommended that the corridor should progress through route refinement for the upgrade of Woodcocks Road and consider the following:

- Changes in land use along the corridor – the eastern portion of the corridor consists of a relatively built-up environment adjacent to the industrial centre which changes to rural land use west of Mansel Drive.

Following the recommendations of the gap analysis the Project Team, as part of the option development process to give regard to land use variation along the corridor, split the corridor into two sections; a western 'rural' section extending from the Ara Tūhono intersection in the west to the Mansel Drive intersection in the east, and an eastern 'urban' section extending from Mansel Drive in the west to the corridor's intersection with SH1 in the east (see Figure 5-8 below for section overview).

Figure 5-8. Woodcocks Road section overview



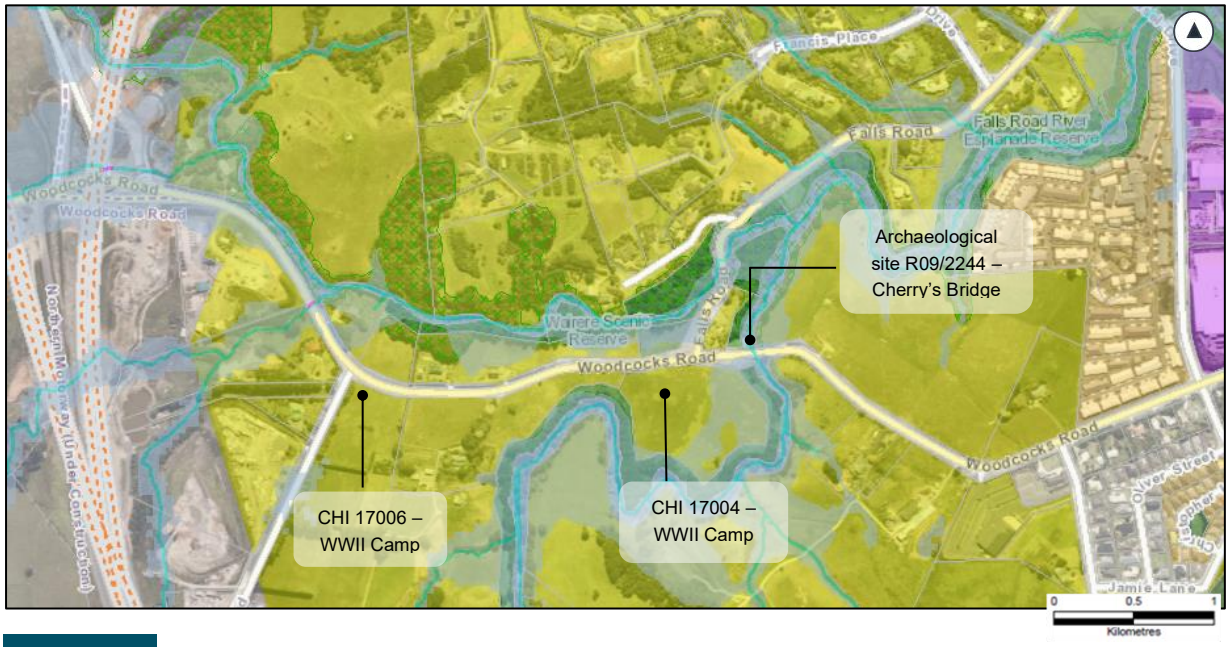
For the purpose of this report, the option development and assessment process for the eastern section of the corridor (from Mansel Drive intersection to SH1) will not be outlined in the following sections. The assessment outcome for the eastern section identified that upgrades would be completed for the section utilising the reallocation of road space within the existing road corridor due to the surrounding existing environment including industrial uses and Mahurangi College located north of the corridor. As a result, route protection via the NOR process is only required for the western section of Woodcocks Road.

5.3.3 Route: Option Development

In developing options for the western section of the corridor, the Project Team considered the following known key features mapped in Figure 5-9 below and include:

- Cultural heritage inventory and archaeological sites along the extent of the corridor
- Significant ecological areas to the north of the corridor
- Flood plains and areas of high flooding potential through the midsection of the corridor
- Open space conservation zoning adjacent to river / streams within the Woodcocks Road extent
- Open space informal recreational zoning within the Woodcocks Road extent.

Figure 5-9: Woodcocks Road Constraints Map

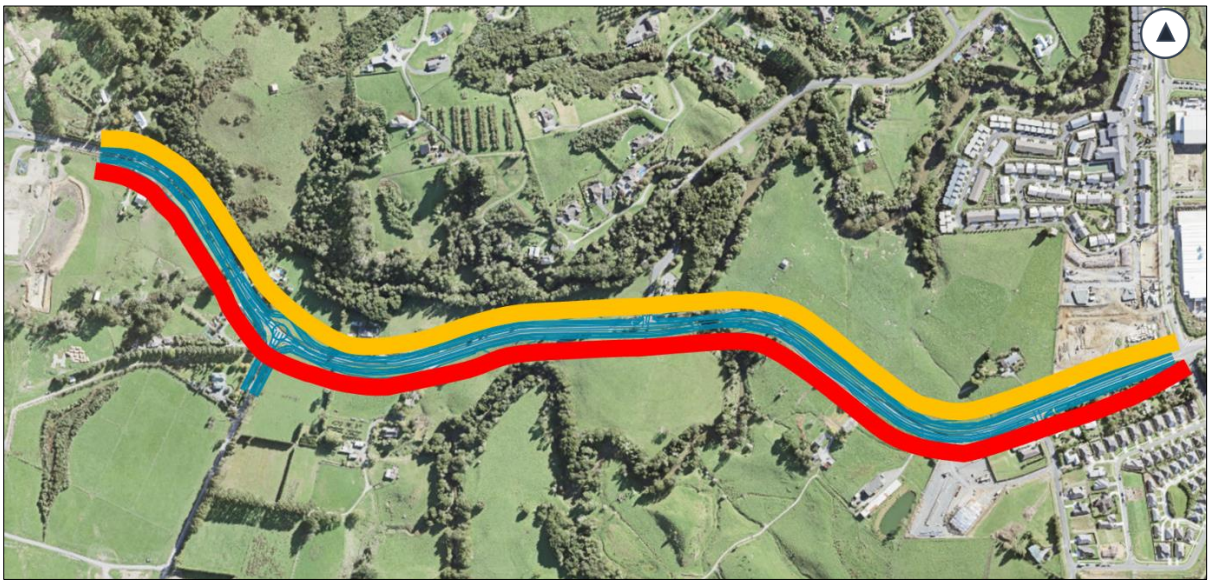


In consideration of the above factors, three options were developed through route refinement as outlined in Table 5-6 and Figure 5-10 below. These are discussed in the sections to follow.

Table 5-6: Woodcocks Road (western section) options

Option	Description
1	SGA 24m cross section – Holding centreline and widening equally on both sides
2	SGA 24m cross section – Widening to the south (hold northern boundary)
3	SGA 24m cross section – Widening to the north (hold southern boundary)

Figure 5-10. Woodcocks Road (Western Section) Options Developed



5.3.4 Route: Option Assessment

A route refinement assessment was undertaken for the western section of the corridor by the Project team. As outlined in Section 2, options were assessed against the Investment Objectives and criteria within four well-beings, cultural, social, environmental, and economic. The project team engaged in a workshop to undertake an assessment, placing each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green). As noted in Section 5.4 MCA in the route refinement phase was targeted, where there had previously been a corridor assessment of the project at the IBC phase and where there were no identified constraints under a specific criterion which required further consideration, this criterion was not revisited and is shown as N/A in Table 5-7 below.

The following table identifies the outcomes from this assessment.

Table 5-7: Woodcocks Road Upgrade Assessment (Western Section)

MCA Criteria	Option 1	Option 2	Option 3
I.O.1 – Access			
I.O.2 – Integration			
I.O.3 – Travel Choice			
Heritage			
Land use			
Land Requirement			
Stormwater			
Ecology			

MCA Criteria	Option 1	Option 2	Option 3
Construction impacts			
Construction disruption			
Urban Design	N/A	N/A	N/A
Social Cohesion	N/A	N/A	N/A
Human health and wellbeing	N/A	N/A	N/A
Landscape / Visual	N/A	N/A	N/A
Natural Hazards	N/A	N/A	N/A
Construction cost / risk	N/A	N/A	N/A

Overall, the assessment identified that all the options achieved investment objectives, all options support planned growth and enabled transport and land use integration. All options additionally improved the resilience of the network and supported reliable people movement through the provision of active mode amenities.

Due to a large upstream catchment of the Mahurangi River located in the central section of the corridor all options had the same stormwater and potential flooding risks with the key differentiators between the options being heritage, land requirement and ecology. Generally, option 3 had a higher overall adverse impact compared to option 1 and 2. The option of widening to the north has a greater potential impact on the heritage site (CHI 2244 Cherry's Bridge), will potentially have a higher amount of property acquisition, more adverse impact on the Open Space – Informal Recreational Zone, and impacts on the Open Space – Conservation Zone and SEA located along the northern extent of the corridor.

While option 1 and 2 are preferred to option 3, both options were assessed as having similar impacts. There is a slight variation in heritage impact based on Option 1 being in closer proximity to CHI 2244, with regard to land requirement, Option 2 has a more adverse land requirement impact as it will encroach further into properties however Option 1 has potential impacts on land use due to localised impacts on the Open Space – Informal Recreation Zone in the north and Conservation Zone that runs north-south through the midsection of the corridor. As there was only a slight variation between Option 1 and 2 the project team selected both options as the preferred options to progress to the detailed design stage for further refinement.

Table 5-8: Assessment outcome for the preferred option

Option	Assessment Outcome
1 (holding centreline and widening equally on both sides)	• Option has a lower adverse land requirement impact, widening equally on both sides potentially requires less full or partial property acquisitions, with reference to the existing residential area in the eastern section of the corridor, compared to Option 2 and 3 • Potential for the corridor to have localised adverse impacts on the Open Space – Informal Recreation Zone and SEA in the north (slightly greater than option 2), avoids impacts on stream, and Conservation Zone that runs north-south through the midsection of the corridor • Option has a potential impact on CHI 2244 (Cherry's Bridge) but to a lesser degree compared to Option 3 • Option results in requirement for less physical works as minimal widening of the existing pavement is required as such there is less construction

Option	Assessment Outcome
	disruption and embodied carbon associated to this option than option 1 and 3.
2 Widen to the south (hold northern boundary)	• Potential localised construction impacts only on the SEA, avoids stream and Open Space – Informal Recreation Zone to the north of the existing corridor • Potentially higher adverse land requirement and construction disruption impacts compared to Option 1 due to having a greater impact on an existing residential area to the south- of the eastern section of the corridor likely resulting in more full or partial property acquisitions • Potential moderate adverse impact on the Open Space Conservation – Zone to the south of the option • Option would require more physical works to the existing carriageway due to widening / rebuild of the existing pavement on the southern side as such there is more construction disruption and more embodied carbon associated to this option than option 1 • Option has less potential impact on CHI 2244 (Cherry's Bridge) compared to Option 1 and 3

Option 3 was discounted by the Project Team for reasons outlined in Table 5-9 below.

Table 5-9: Assessment outcomes for discounted option Woodcocks Road Upgrade (western section)

Option	Assessment Outcomes
3 SGA 24m cross section – Widen to the north (hold south boundary)	• Potentially higher adverse land requirement and construction impacts compared to Option 1 due to affecting an existing residential area, which includes an established retirement village complex, to the north of the eastern section of the corridor likely resulting in more full or partial property acquisitions • Potential moderate impacts on the SEA, stream and Open Space – Informal Recreation Zone to the north and Open-Space – Conservation Zone running north-south through the midsection of the corridor • Option would require more physical works to the existing carriageway due to widening / rebuild of the pavement on the northern side as such there is more construction disruption and embodied carbon associated to this option • Option has potential moderate adverse impact on CHI 2244 (Cherry's Bridge)

5.3.5 Engagement

The following section provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members.

Project	Feedback
Woodcocks Road Upgrade	• General agreement from all partners and stakeholders on the provision of a 24m wide corridor in the western section • Community members are supportive of walking and cycling facilities along the entire length of the corridor • During initial engagement the Ministry of Education requested that Mahurangi College and the future planned school at 100 Woodcocks Road be considered in any upgrade to the corridor by the Project team.

5.3.6 Option Refinement

Based on the outcome of the option assessment, at the design refinement stage a preferred alignment confirmed utilising the strongest components of the two preferred options. As a result, the corridor will generally be upgraded using centreline widening, where this impacts on the SEA and Open Space – Conservation Zone localised widening to the south will be utilised to minimise these impacts.

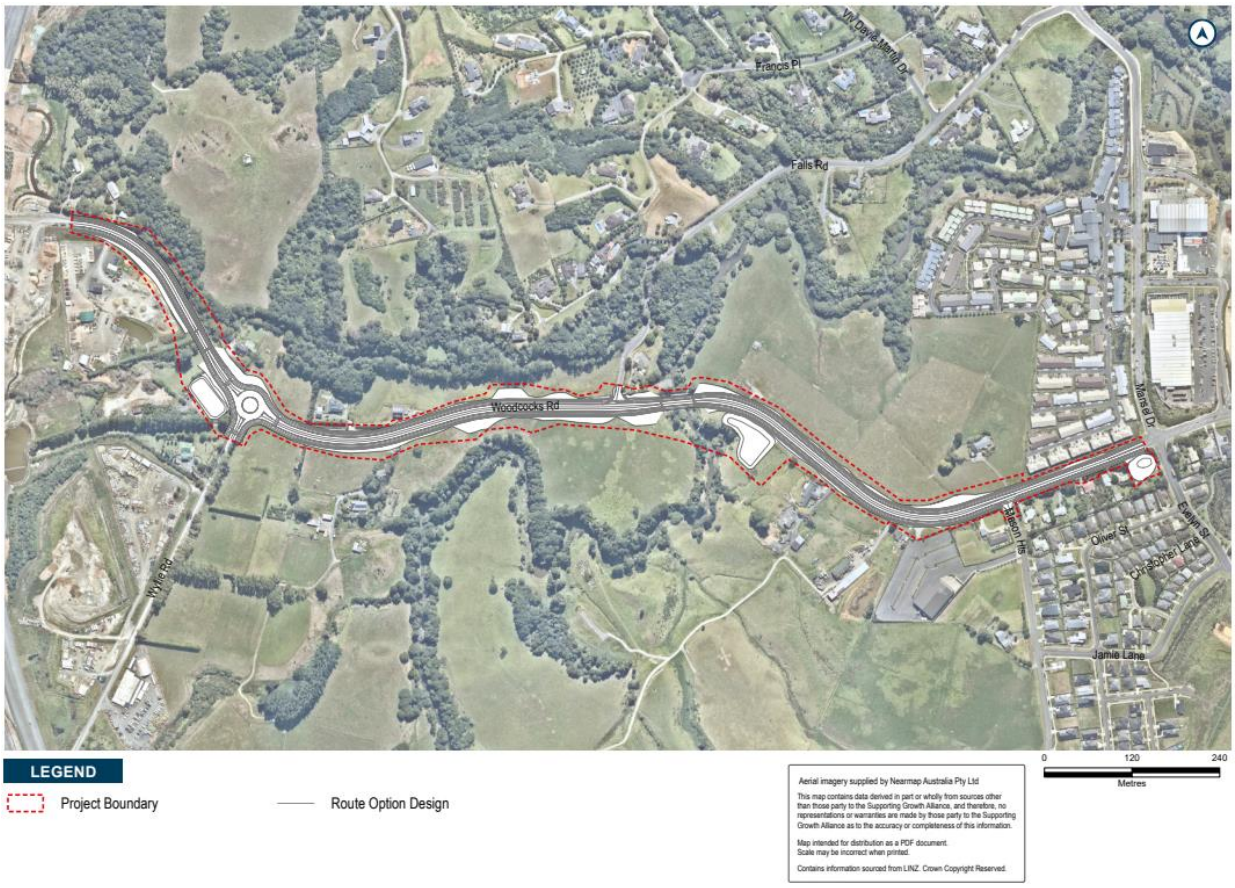
Feedback received from the Ministry of Education was applied to the option development and assessment process and the preferred option avoids property impact on the future planned school site (100 Woodcocks Road) with the implementation of cycling facilities and footpaths on both sides of the corridor supporting active mode user access to the planned school.

Upon the production of Revision A drawings, the project team identified the need to reduce the corridor width from 24m to 20m with the provision of walking and cycling amenities on both sides of the road on the eastern section of the corridor to reduce property and construction impacts on residential properties adjacent to the southern extent of the corridor in this section.

5.3.7 Option Summary

Following the option development and assessment process the preferred route refinement option for the upgrade of Woodcocks Road upgrade is shown below in Figure 5-11 below.

Figure 5-11: Preferred Route Refinement Option Woodcocks Road Upgrade (western section)

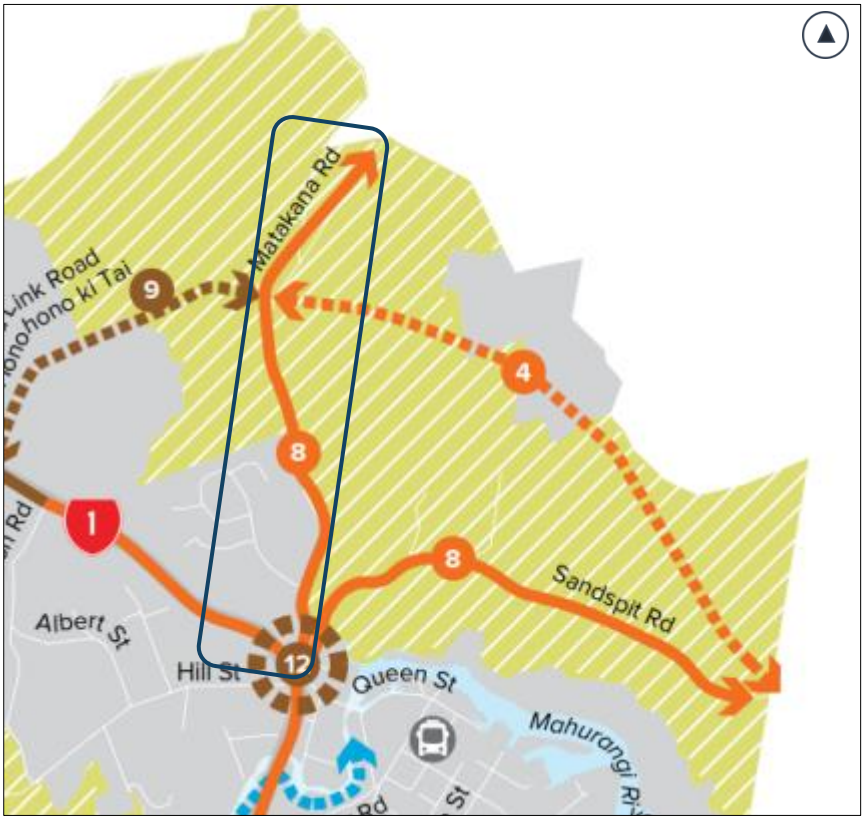


5.4 NOR 4 Matakana Road

5.4.1 Corridor Overview

The IBC recommended for the upgrade of Matakana Road to provide for an urban arterial cross section with active mode facilities is shown in Figure 5-12.

Figure 5-12: IBC Matakana Road Upgrade



Matakana Road is an existing corridor in the Warkworth transport network and forms a north south connection for all modes between the Warkworth growth areas and the Kōwhai Coast. An upgrade of Matakana Road to include walking cycling provisions will have the following outcomes:

- Improves accessibility for the northern growth area to access Warkworth Town Centre and schools
- Contributes to the development of a low carbon cycle network in Warkworth supporting area wide mode shift by completing a primary link in the network
- Contributes to improved active mode safety outcomes along the corridor
- Integration with the transport network and land use will contribute to a corridor with high quality urban form.

5.4.2 Gap Analysis

The gap analysis concluded that adequate corridor assessment was undertaken at the IBC phase and a need for further corridor assessment was not required for the upgrade of Woodcocks Road. The analysis recommended that the corridor should progress through route refinement and consider the following:

- Integration with the Auckland Transport (AT) Hill Street Intersection Upgrade including tie in point and extent of works required for the corridor
- Tie into Te Honohono ki Tai (Matakana Link Road) intersection.

5.4.3 Route: Option Development

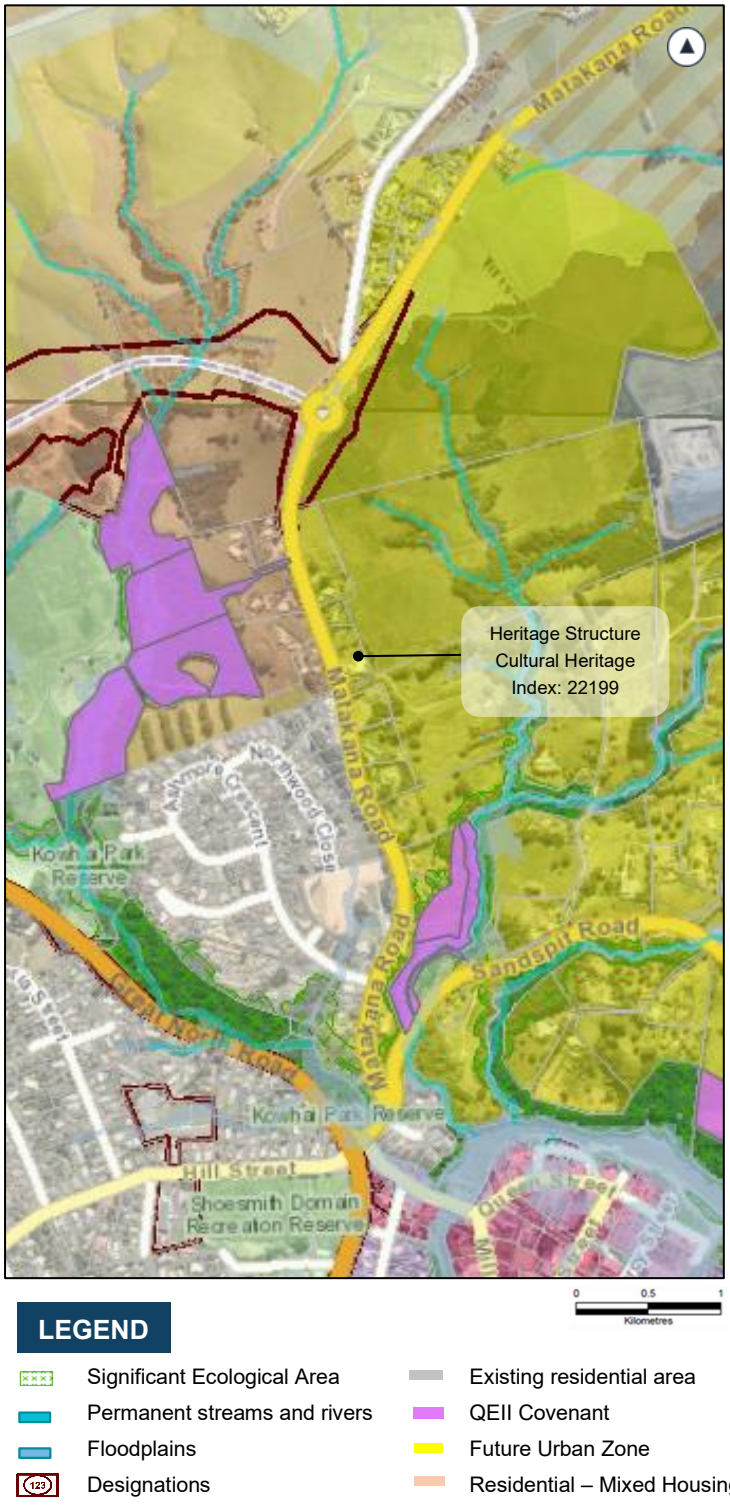
Options for the initial route refinement were generally limited to an area extending from the Matakana Road – Hill Street intersection in the south to the edge of the FUZ boundary for the following reasons:

a) The scope of Te Tupu Ngātahi is to provide for the upgrade and provision of new infrastructure within the future urban areas of Warkworth and this scope does not extend to the rural urban area outside of the FUZ boundary.

In developing options, the Project Team also considered current and future land uses, and the following known key features in the area. These are mapped in Figure 5-13 below and include:

a) Cultural heritage structure to the northeast of the corridor (CH1 2219)
b) A mixture of native and exotic woodland to the west of the corridor and cedar trees located to the southwest of the corridor
c) Overland flow path, flood plains, and SEA in the southern section of the corridor
d) Tie into the Hill Street Intersection Upgrade and Te Honohono ki Tai intersection
e) Te Honohono ki Tai designation
f) Existing urban area along the western length of the corridor
g) QEII covenant.

Figure 5-13. Matakana Road - Constraints Map

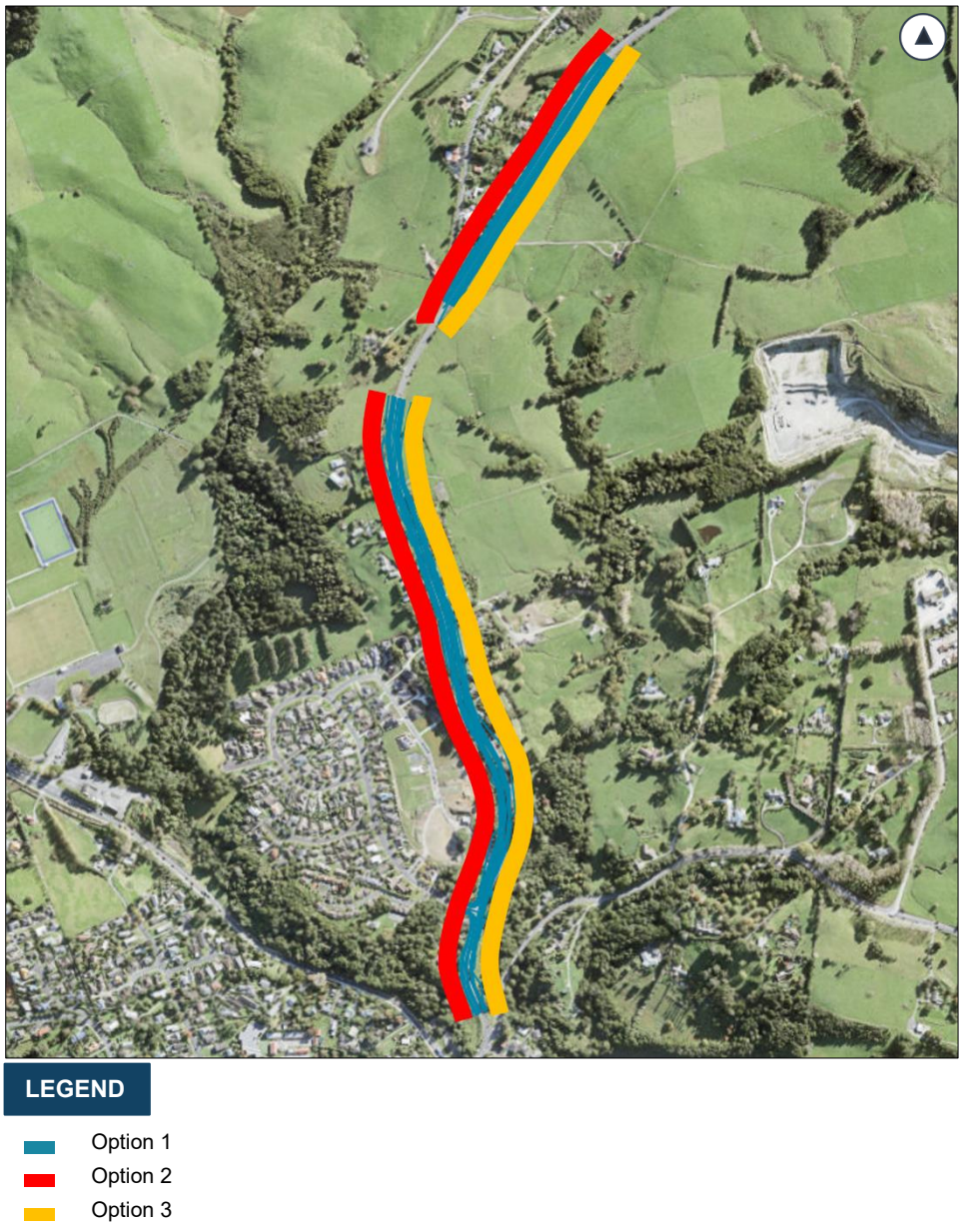


Three options were developed through route refinement as outlined in Table 5-10 and Figure 5-14 below. These are discussed in the sections to follow:

Table 5-10: Matakana Road Upgrade Options

Option	Description
1	SGA 24m cross section - Holding centreline and widening equally on both sides
2	SGA 24m cross section - Widen to the west (Hold eastern boundary)
3	SGA 24m cross section - Widen to the east (Hold western boundary)

Figure 5-14. Matakana Road Upgrade Options Developed



5.4.4 Route: Option Assessment

As outlined in Section 2, options were assessed against the Investment Objectives and criteria within four well-beings, cultural, social, environmental, and economic. The project team engaged in a workshop to undertake an assessment, placing each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green). As noted in Section 5.4 MCA in the route refinement phase was targeted, where there had previously been a corridor assessment of the project at the IBC phase and where there were no identified constraints under a specific criterion which required further consideration, this criterion was not revisited and is shown as N/A in Table 5-11 below.

Table 5-11 below provides a summary of the assessment outcomes for the Matakana Road Upgrade.

Table 5-11: Matakana Road Upgrade option assessment summary

MCA Criteria	Option 1	Option 2	Option 3
I.O.1 – Access			
I.O.2 – Integration			
I.O.3 – Travel Choice			
Heritage			
Land use			
Land Requirement			
Ecology			
Construction impacts			
Construction disruption			
Urban Design	N/A	N/A	N/A
Social Cohesion	N/A	N/A	N/A
Human health and wellbeing	N/A	N/A	N/A
Landscape / Visual	N/A	N/A	N/A
Natural Hazards	N/A	N/A	N/A
Stormwater	N/A	N/A	N/A
Construction cost / risk	N/A	N/A	N/A

Overall, all the options achieved the investment objectives and the differentiators between the three options were the level of land requirement, disruption of existing land use in existing urban areas, ecology, and heritage impacts. Of the three options, option 2 and 3 had the higher potential land requirement and impact on existing land use due to widening of the corridor to the east / west, in comparison although option 1 will have some impact with regard to these criteria the impact is to a lesser extent.

Additionally, option 2 and 3 had a higher adverse ecological impact of all three options due to the proposed widening of the corridor impacting on SEA and QEII to the southeast and SEA and mature woodland to the southwest. The project team noted that option 1 also had a potential impact on these ecological constraints but identified that the option could be refined the during the detailed design phase to avoid / reduce impacts on identified constraints.

Option 3 will additionally impact on the CHI located in the east of the central section of the corridor, Option 1 also potentially impacts on the CHI however the project team noted that this could be reviewed and refined during the detailed design phase to avoid / reduce impacts.

Overall, Option 2 and 3 have greater adverse impacts on the assessed criteria compared to Option 1. This is due to the proposed widening of the existing corridor to the east / west resulting in greater existing land use and land requirement impacts in addition to more impact on ecological features located in the southern section. Accordingly, the Project Team identified Option 1 as the preferred route refinement option for the reasons provided in Table 5-12 below.

Table 5-12: Assessment outcome of the preferred option

Option	Assessment outcomes
1 SGA 24m cross section - Holding centreline and widening equally on both sides	• Option has a lower adverse land requirement impact, widening equally on both sides potentially requires less full or partial property acquisitions compared to Option 2 and 3 through minimising impacts on existing residential zoned areas • Possibly reduces impacts on future land use along the western extent of the corridor as less encroachment onto the developable Residential - Mixed Housing Urban Zone is required • Potential impact on the CHI feature to the east of the central section can be considered and likely minimised during the detailed design phase, greater impact on setting than option 2 • Impacts of the option on constraints such as mature woodland to the southwest of the corridor and the SEA adjacent to the southeast and southwest of the corridor can be considered and minimised during the detailed design phase • Option results in requirement for less physical works as minimal widening of the existing pavement on either side of the corridor is required as such there is less embodied carbon associated to this option.

The remaining options were discounted by the Project Team for the reasons provided in Table 5-13 below.

Table 5-13: Assessment outcomes for the discounted options

Option	Assessment outcomes
2 SGA 24m cross section - Widen to the west (Hold eastern boundary)	• Option potentially has higher adverse land requirement and construction disruption impacts compared to Option 1 and 3 due to affecting a large existing residential area along the southwestern extent • Impacts on future land use along the western extent of the corridor due to encroachment into the Residential - Mixed Housing Urban Zone resulting in possible reductions of developable parcels and residual land • Potential impacts on CHI limited to localised construction effects on setting, avoids feature • Impacts on mature woodland and SEA to the southwest of the corridor • Option would require more physical works to the existing carriageway due to widening / rebuild of the pavement on the western side, as well as steep topography to the west of the corridor, as such there is more embodied carbon associated to this option.

Option	Assessment outcomes
3 SGA 24m cross section - Widen to the east (Hold western boundary)	• Option potentially has higher adverse land requirement and construction disruption impacts compared to Option 1 due to affecting existing residential properties in the central section of the corridor resulting in more full or partial property acquisitions • Impacts on SEA and QEII to the southeast of the corridor • Impacts on the CHI to the east of the central section • Option would require more physical works to the existing carriageway due to widening / rebuild of the pavement on the eastern side as such there is more embodied carbon associated to this option.

5.4.5 Engagement

Table 5-14 provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members throughout the option development and assessment process.

Table 5-14: Matakana Road upgrade engagement summary

Project	Feedback
Matakana Road upgrade	• Need to be aware of environmental areas identified as including native bush and existing sensitive areas • Consider support for dedicated walking and cycling facilities along the corridor and support for access to local facilities and town centres • General agreement of the principle to provide 24m road reserve on Matakana Road based on centreline widening • Community identified that the corridor was in poor condition and in urgent need for upgrade.

5.4.6 Option Design Refinement

Completion of further design works including the development of geometric designs which enabled the project team to review the detailed design of the corridor, confirmed that the preferred route refinement option (24m wide cross section utilising centreline widening) had adverse constructions impacts on environmental features (i.e. SEA) in the southern section of the corridor and property impacts along the southern section and mid length of the corridor due to topography adjacent to the corridor.

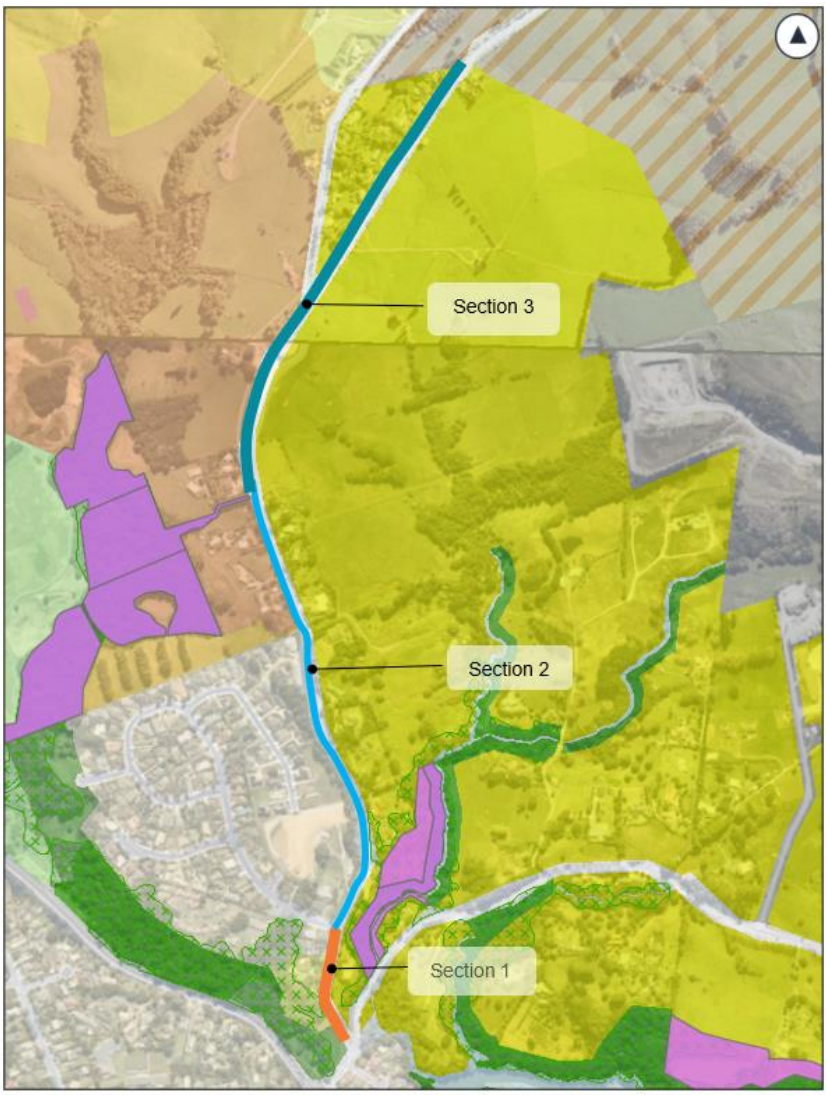
The design was subsequently refined to achieve improved land use outcomes and reduce impacts on the existing environment. These refinements did not compromise the proposed project's ability to achieve the investment objectives and continues to support mode shift to active modes through the provision of new, safe active mode facilities for the length of the corridor and new mode access to the Warkworth Town Centre and wider active mode network.

Through the refinement process due to the constraints and considerations within the corridor extent the corridor was split into three sections to better enable the project team to avoid and / or minimise impacts on the identified constraints specific to each section. The Matakana Road section extents are outlined below:

- **Section 1**: Hill Street intersection tie-in to Melwood Drive intersection
- **Section 2**: Melwood Drive intersection to the south of Te Honohono ki Tai (Matakana Link Road) intersection
- **Section 3**: South of the Te Honohono ki Tai (Matakana Link Road) intersection to north FUZ boundary.

Figure 5-15 below provides an overview of the Matakana Road option refinement sections.

Figure 5-15. Matakana Road – Option refinement sections



The following changes were made to the initial recommendation of a 24m wide cross section using centreline widening with cycle lanes and footpaths on both sides of the corridor:

- **Section 1:** Alignment reduced to a 17m wide cross section using centreline widening with bidirectional cycling on the western side between the Hill Street and Melwood Road intersection due to identified constraints and considerations including; integration (tie-in) with the (non-SGA) Hill Street intersection Project, the presence of SEA to the east of the corridor (with a QEII covenant area located further to the east), sloping topography immediately adjacent to the corridor, and existing single house zoned residential properties to the west of the corridor that appear

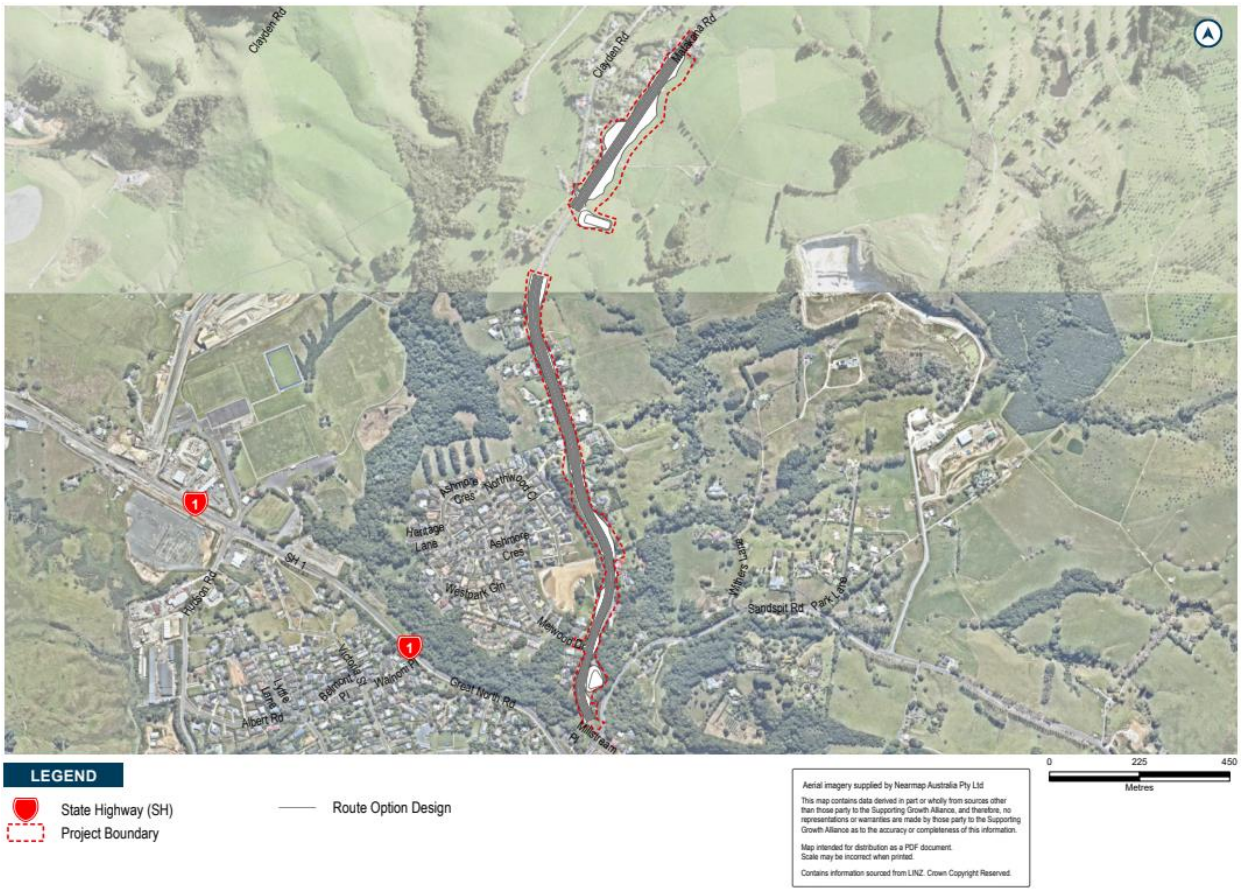
unlikely to be redeveloped as it is identified as an existing residential area in the Warkworth Structure Plan. A reduction in the cross section from 24m to 20m wide was tested however this still resulted in property and SEA impacts

- **Section 2:** Recommendation to widen to the west with a 20m wide cross section from Melwood Road to south of the Te Honohono ki Tai (Matakana Link Road) intersection, resulting in the need to straighten the corridor in some areas, due to the initial recommendation resulting in impacts to the FUZ and substantial property impacts on the recently established residential development to the west of the corridor, as a result of steep topography directly adjacent to the formed road. The project team tested a number of alternative options for this section to mitigate and reduce impacts including:
  - A reduced 20m wide cross section utilising centreline widening rather than the option to utilise a 20m wide cross section and widen to the west as noted above. However, this option was discounted as there is insufficient space for the corridor to be implemented, without resulting in the same or similar impacts on the FUZ and residential property, due the steep topography located to the west of the corridor
  - A 24m wide cross section utilising widening to the east only. However, this option was discounted as it still resulted in impacts to the west, as well as resulting in considerable impacts on the FUZ, while also impacting on the SEA and QEII covenant area located to the east of the corridor
  - The recommended refined option was identified as the best outcome for this section as the reduced 20m wide corridor will provide a suitable transition to and from the reduced 17m wide corridor to the south and into the 24m wide corridor to the north while achieving transport outcomes by providing for cycle lanes and footpaths on both sides of the corridor and reduce the previously adverse property impacts on west of the corridor
- **Section 3:** From south of Te Honohono ki Tai (Matakana Link Road) intersection to the northern extent of the project at the FUZ boundary the corridor will continue as a 24m wide cross section utilising centreline widening and will have cycle lanes and footpaths on both sides of the corridor. The initial corridor recommendation remains applicable to this section of the corridor as it does not have ecological, topographical, or residential constraints which require avoidance.

5.4.7 Option Summary

Following the engagement and option refinement process the Matakana Road upgrade was confirmed and is illustrated below in Figure 5-16.

Figure 5-16: Matakana Road upgrade

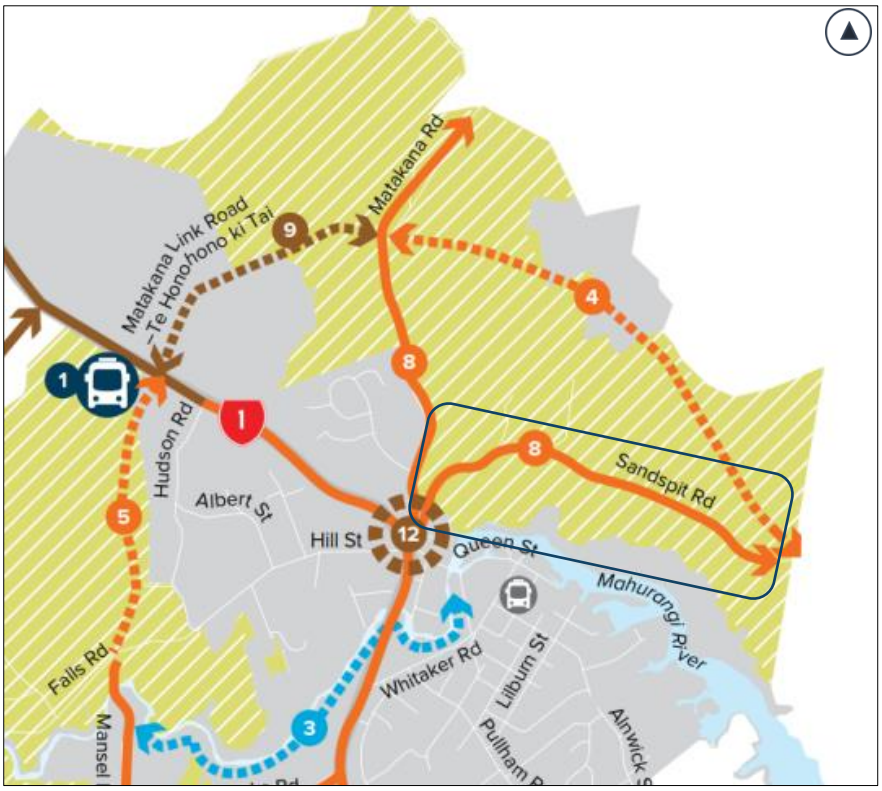


5.5 NOR 5 Sandspit Road

5.5.1 Corridor Overview

The IBC recommended option for the upgrade of Sandspit Road to provide for an urban arterial cross section with active mode facilities is shown in Figure 5-17.

Figure 5-17: Overview of Sandspit Road Upgrade



Sandspit Road is an existing corridor in the Warkworth transport network and forms a key east-west connection between the north-east Warkworth growth area and the Mahurangi Peninsula. An upgrade of Sandspit Road to include walking cycling provisions will have the following outcomes:

- Improve accessibility for active mode users to social and economic opportunities around Warkworth
- Contributes to development of a low carbon network in Warkworth
- The provision of active mode facilities supports area wide mode shift as well as contributing to improved safety outcomes along the corridor
- Integration with the transport network and land use will contribute to a corridor with high quality urban form.

5.5.2 Gap Analysis

The gap analysis confirmed adequate corridor assessment was undertaken at the IBC phase and a need for further corridor assessment was not required for the upgrade of Sandspit Road. The analysis recommended that the corridor should progress through route refinement and give consideration to the following:

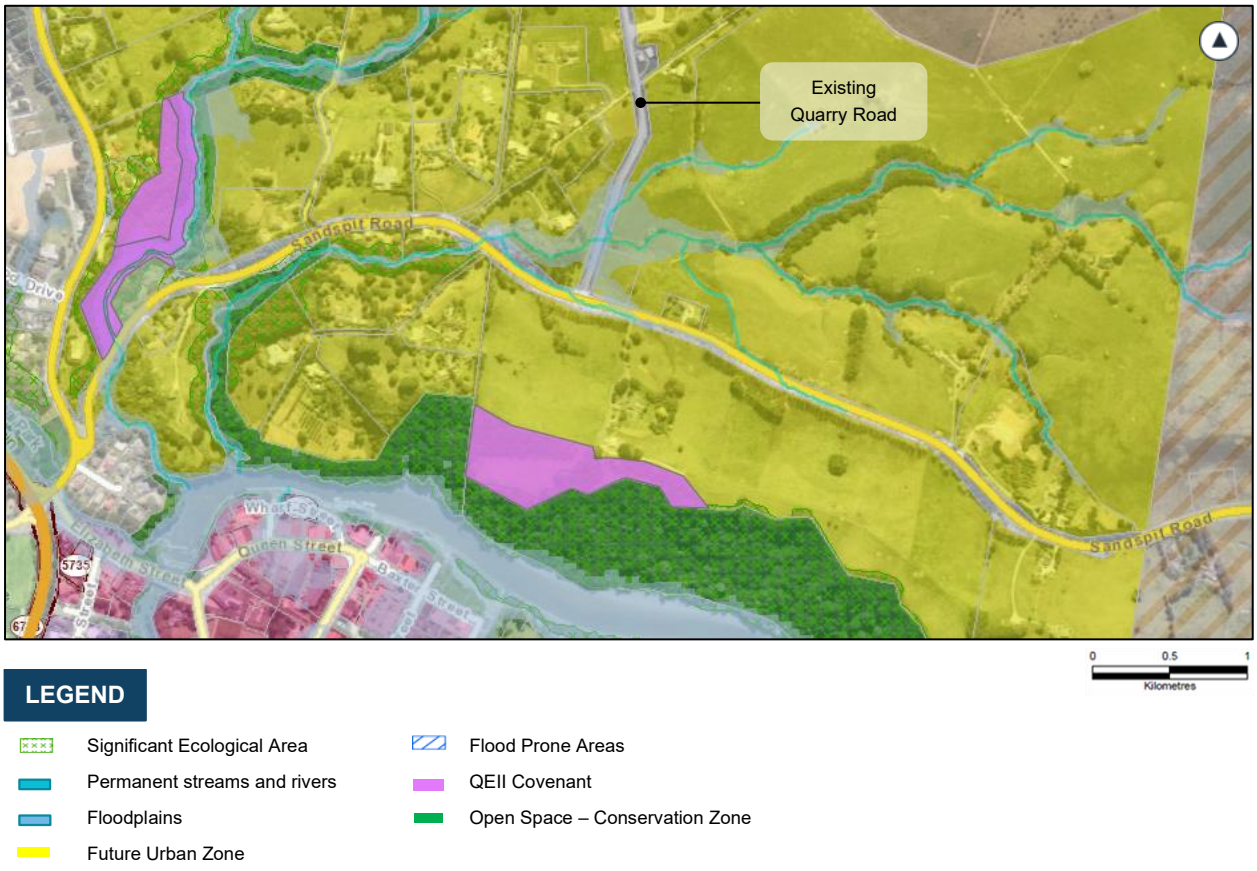
- Integration with the Auckland Transport (AT) Hill Street Intersection Upgrade including tie in point and extent of works required for the corridor.

5.5.3 Route: Option Development

In developing options, the Project Team considered the following known key features in the area in addition to future and current land uses within the corridor extent. These are mapped in Figure 5-18 below and include:

a) SEA to the north and south of the western extent of the corridor
b) Permanent streams and flood plains in the western extent of the corridor
c) Tie in with the Hill Street Intersection Upgrade and existing quarry road
d) Queen Elizabeth II (QE11) covenant to the north of the western section of the corridor
e) Open Space – Conservation Zone to the north and south of the western extent of the corridor
f) Steep topography and a large existing retaining wall.

Figure 5-18: Sandspit Road Constraints Map



In consideration of the above factors, three options were developed for route refinement as outlined in Table 5-15 and Figure 5-19 below. These are discussed in the sections to follow:

Table 5-15: Sandspit Road Upgrade Options

Option	Description
1	SGA 24m cross section - Holding centreline and widening equally on both sides
2	SGA 24m cross section - Widen to the north (Hold southern boundary)
3	SGA 24m cross section - Widen to the south (Hold northern boundary)

Figure 5-19. Sandspit Road Options Developed

LEGEND

- Option 1
- Option 2
- Option 3

5.5.4 Route: Option Assessment

As outlined in Section 2, options were assessed against the Investment Objectives and criteria within four well-beings, cultural, social, environmental, and economic. Technical specialists engaged in a full day MCA workshop to undertake an assessment, placing each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green). As noted in Section 5.4 MCA in the route refinement phase was targeted, where there had previously been a corridor assessment of the project at the IBC phase and where there were no identified constraints under a specific criterion which required further consideration, this criterion was not revisited and is shown as N/A in Table 5-16 below.

The following table identifies the outcomes from this assessment.

Table 5-16: Sandspit Road Upgrade option assessment summary

MCA Criteria	Option 1	Option 2	Option 3
I.O.1 – Access			
I.O.2 – Integration			
I.O.3 – Travel Choice			
Land use			
Land Requirement			
Stormwater			
Ecology			
Construction impacts			
Construction disruption			
Social Cohesion	N/A	N/A	N/A
Human health and wellbeing	N/A	N/A	N/A
Landscape / Visual	N/A	N/A	N/A
Natural Hazards	N/A	N/A	N/A
Construction cost / risk	N/A	N/A	N/A

The assessment identified that all options achieved the investment objectives. Due to a large floodplain located in the north-western extent of the corridor, the remainder of this floodplain running north-south through the western section of the corridor, and streams intersecting various sections of the corridor, all options were assessed as having potential flooding risks.

The key differentiators between the options were ecology, land requirement, and construction impacts / disruption. Due to widening north / south both option 2 and 3 had a moderate adverse impact on the SEA in the western and central sections of the corridor, more land requirement, and would cause greater disruption to the Open Space – Conservation Zone running north-south in the western section of the corridor.

The project team noted that option 1 could potentially impact on the SEA on the western and central section of the corridor, the QEII located on the northern extent of the western section and the Open Space – Conservation Zone but identified that these impacts could be reduced at the design refinement stage through consideration of utilising localised widening along the corridor where required. Accordingly, option 1 was identified as the preferred by the project team for the reasons identified in Table 5-17 below.

Table 5-17: Assessment outcome for the preferred option

Option	Assessment Outcome
1 SGA 24m cross section - Holding centreline and widening equally on both sides	• Minimises impacts on SEA and QEII located on the northern extent of the western section and the SEA in the central section • Lower potential adverse impacts on the Open Space – Conservation Zone running north-south through the western section of the corridor compared to Option 2 and 3 • Option has a lower adverse land requirement impact, widening equally on both sides potentially requires less full or partial property acquisitions compared to Option 2 and 3 with the topography adjacent to the corridor exacerbating impacts to the north and the south

Option	Assessment Outcome
	• Option results in requirement for less physical works as minimal widening of the existing pavement is required, and with option less impacted by topography adjacent to corridor, as such there is less embodied carbon associated to this option • Minimises impacts on streams and works required within floodplains adjacent to the corridor.

The remaining options were discounted by the Project Team for the reasons outlined in Table 5-18 below.

Table 5-18: Assessment outcomes for discounted options

Option	Assessment Outcome
2 SGA 24m cross section - Widen to the north (Hold southern boundary)	• Option potentially has higher adverse land requirement and construction disruption impacts compared to Option 1 due to affecting existing residential properties along the northern extent of the corridor • Impacts on the Open Space – Conservation Zone, QEII, and SEA to the northwest of the corridor • Option would require works in a large extent of the floodplains located adjacent to the central section of the corridor • Option would require more physical works to the existing carriageway due to widening / rebuild of the pavement on the northern side, and steep topography adjacent to corridor, as such there is more embodied carbon associated to this option.
3 SGA 24m cross section - Widen to the south (Hold northern boundary)	• Option potentially has higher adverse land requirement and construction disruption impacts compared to Option 1 due to affecting existing residential properties along the southern extent of the corridor • Impacts on the SEA located in the central section of the corridor as well as indigenous vegetation and stream which runs parallel to corridor to the southwest corridor section • Impacts on streams adjacent to the corridor along the southern extent and would require works in the stream in the southwestern section • Impacts on the Open Space – Conservation Zone to the southwest of the corridor • Option would require more physical works to the existing carriageway due to widening / rebuild of the pavement on the southern side, and steep topography adjacent to corridor as such there is more embodied carbon associated to this option.

5.5.5 Engagement

Table 5-19 below provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members.

Table 5-19. Sandspit Road upgrade engagement summary

Project	Feedback
Sandspit Road upgrade	• Strong support for the urbanisation of Sandspit Road and walking and cycling facilities • General agreement of the principle to provide 24m road reserve on Sandspit Road based on centreline widening • Community identified that the corridor was in poor condition and in urgent need for upgrade.

5.5.6 Option Refinement

Completion of further design works including the development of geometric designs enabled the project team to review the detailed design of the corridor which identified that as a result of the need to provide for the upgrade to the existing stormwater culvert in the western section (Hill Street intersection tie-in to first existing bridge) to support the future resilience of the corridor, the preferred route refinement option would result in adverse construction impacts on SEA / QEII covenant and Open Space – Conservation Zone areas to the west of the corridor, and an existing stream parallel to the road on its southwestern extent which therefore made the recommended option inappropriate.

The Project team subsequently tested refinements to the design of the western section of the alignment to minimise, or avoid, impacts on these areas. Through this refinement process it was identified that due to the identified constraints and considerations there was a need to split the corridor into three sections to better enable the project team to avoid and / or minimise impacts on the identified constraints specific to each section. The sections are outlined below:

- **Section 1**: Hill Street intersection tie-in to after the first bridge (stream) crossing adjacent to SEA / QEII
- **Section 2**: First bridge to second bridge
- **Section 3**: Second bridge to eastern FUZ boundary.

An overview of the Sandspit Road sections is shown in Figure 5-20 below.

Figure 5-20. Sandspit Road Section Overview

The following refinements were applied to the initial corridor recommendation:

Section 1: Recommendation for a reduced 18m cross section from the Hill Street intersection to the first bridge, with an interim active mode boardwalk to the south of the corridor parallel to the road connecting to the Hill Street Intersection. Design works revealed that the initial recommendation of a 24m cross section would have a considerable impact on the SEA and stream network adjacent to the corridor, as well as the QEII covenant to the north, and result in high volumes of earthworks due to the steep topography. Additionally, it was identified that construction of the initial 24 cross section would require works to the existing stormwater culvert within the section resulting in adverse flooding effects downstream.

The recommended refined option was identified as the best outcome for this section of the corridor to respond to planned land use and achieve the urbanisation, resilience, and transport outcomes of the corridor and any other future urbanisation will occur within the existing road corridor.

The refined recommendation results in a reduced corridor cross section but continues to achieve investment objectives. The recommended refinement provides access by supporting mode shift to active modes through the provision of a new, safe active mode facility which increases travel choice and contributes to safety outcomes. An alternative option to widen to the east with a 150+ bridge was considered however was discounted due to the high cost and complex constructability associated with this option.

Section 2: A reduced 20m cross section with centreline widening from the first bridge to the second bridge to avoid impacts on the SEA on either side of the corridor and high volumes of earthworks associated with the topography and ease ties into section 1 and section 3 of the corridor.

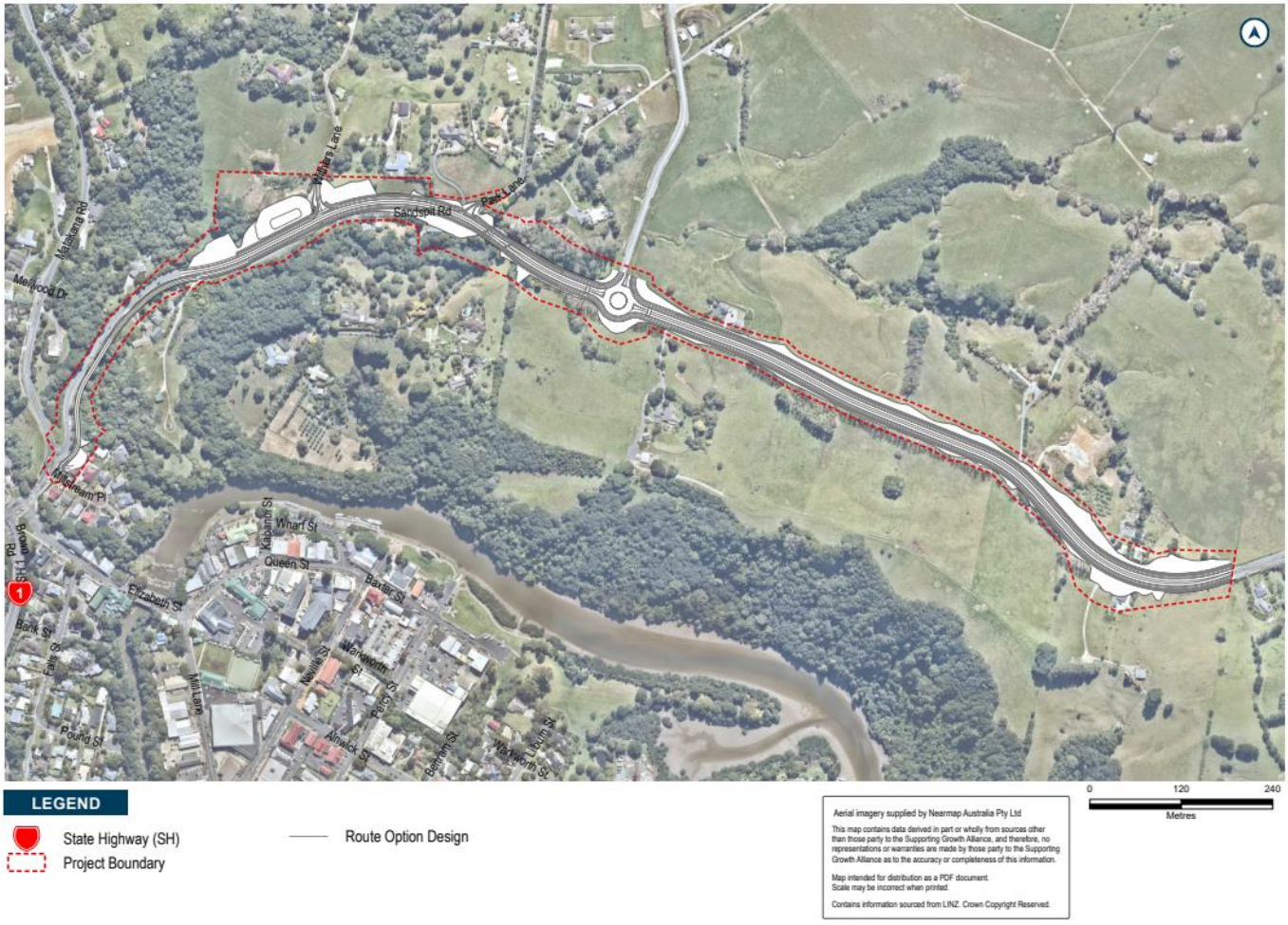
Section 3: From the second bridge to the eastern extent of the project at the FUZ boundary the corridor will continue as a 24m wide cross section utilising centreline widening and will have cycle lanes and footpaths on both sides of the corridor due to becoming less constrained through this

section. The initial corridor recommendation remains applicable to this section of the corridor as it does not have ecological, topographical, or residential constraints which require avoidance.

5.5.7 Option Summary

Following the engagement and option refinement process the Sandspit Road upgrade was confirmed and is illustrated below in Figure 5-21.

Figure 5-21: Sandspit Road upgrade

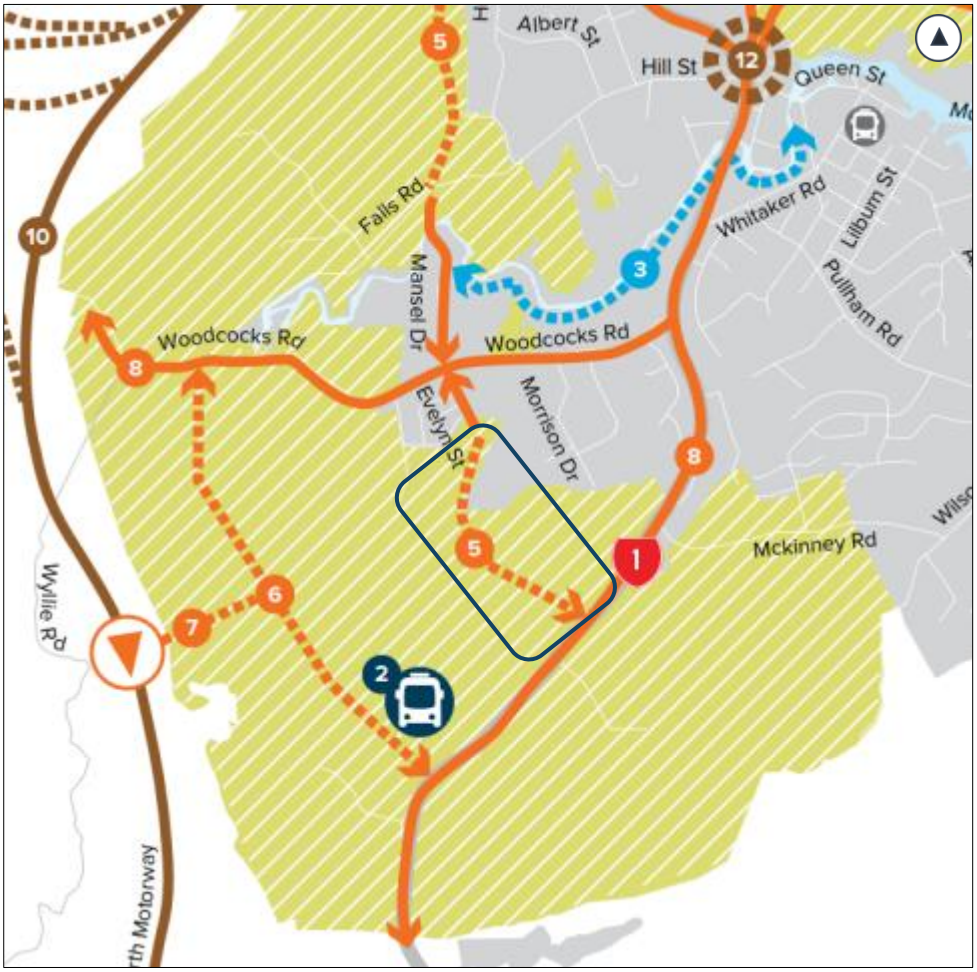


5.6 NOR 6 Western Link – South

5.6.1 Corridor Overview

The IBC recommended option for the new Western Link – South including an urban arterial cross section with active mode facilities is shown in Figure 5-22 below.

Figure 5-22: IBC Western Link - South



The Western Link – South is a proposed new corridor with the purpose of providing connectivity between the southern and northern Warkworth growth areas. The corridor is anticipated to improve network efficiency and integrate with and support the planned urban growth and future transport network in Warkworth.

5.6.2 Gap Analysis

The gap analysis concluded that the Western Link – South should undergo further optioneering through the corridor assessment process. This was due to new corridor alignments being suggested by landowners through engagement, and the following constraints being identified as part of early constraints mapping:

- Pohutukawa grove significant to the landowner in the north-eastern section of the study area
- Large flood plain in the south-eastern section of study area near SH1 and ecological features within the study area i.e., wetlands

- A new landowner dwelling within the study area
- Finalised Warkworth Structure Plan as the IBC was informed by the draft Warkworth Structure Plan.

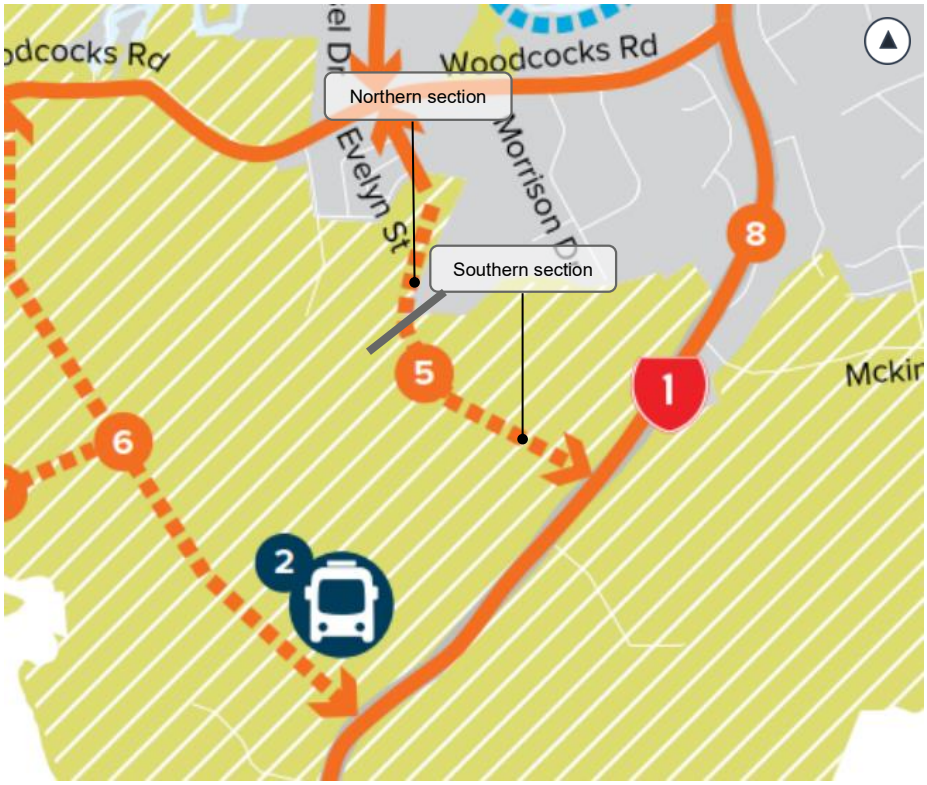
5.6.3 Route: Option Development

For the purposes of option development, the corridor was split into two segments (as shown in Figure 5-23 below).

a) Northern segment: Corridor located between the tie in with Evelyn Street to the southern extent of the industrial zone
b) Southern segment: Corridor located between the boundary with the industrial zone and SH1.

The segments for the corridor were identified based on the presence of live zoned industrial land and the Project Team being made aware of existing developer / landowner activity in the north, including existing lodged consents. Corridor segmentation allowed for the specific characteristics of each section to be given due consideration, and the flexibility to respond to these, through the option development process.

Figure 5-23: Western Link - South section overview



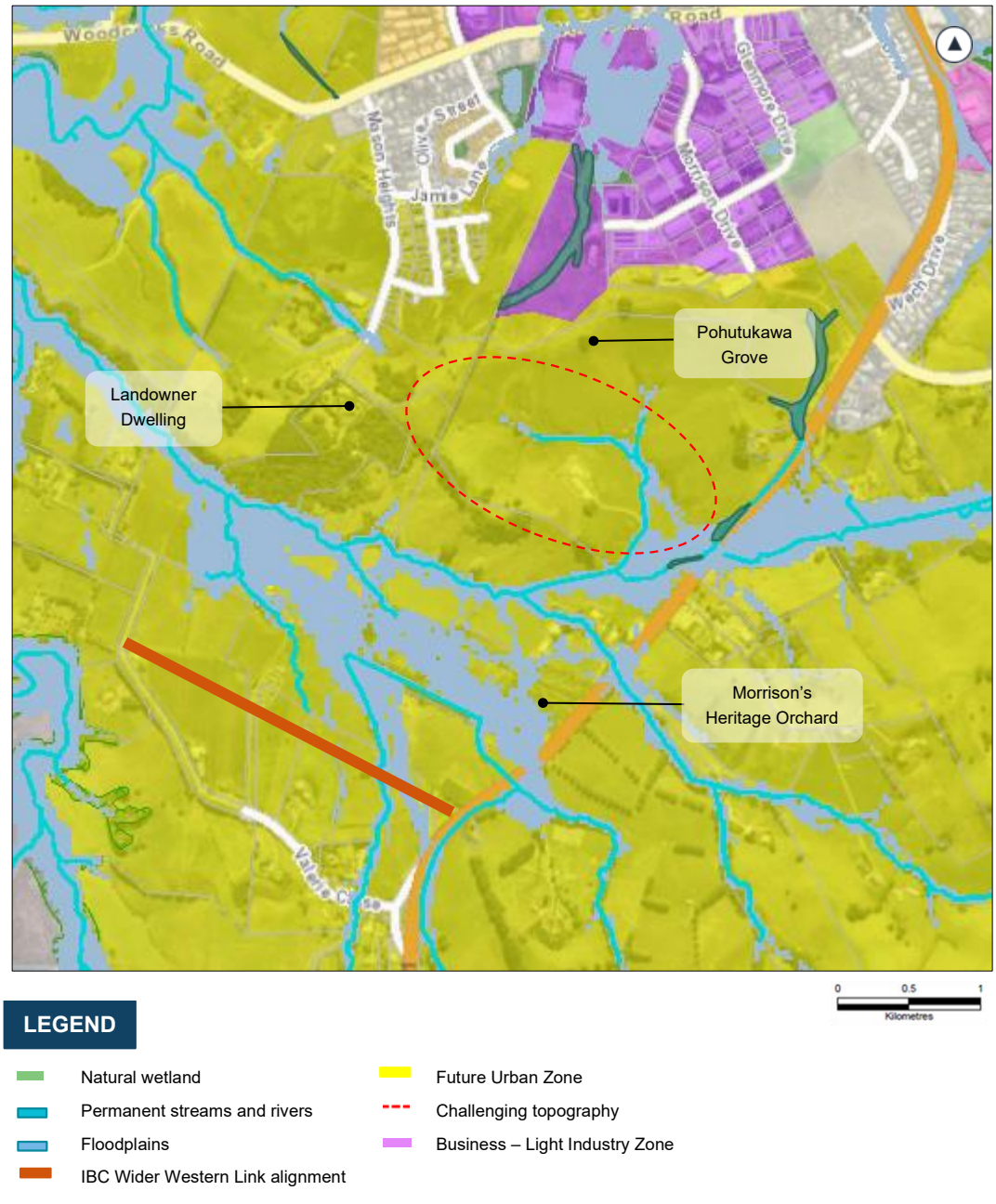
Options for the initial corridor assessment were limited to an area extending from Evelyn Street in the north to SH1 in the south and southeast for the following reasons:

a) Enables development in the south-west Warkworth
b) Provides a direct through onto Mansel Drive and Te Honohono ki Tai
c) Relieves pressure off the eastern section of Woodcocks Road (between Mansel Drive and existing SH1).

In developing options, the Project Team also considered the following known key features in the area. These are mapped in Figure 5-24 below and include:

- Presence of large flood plains and permanent streams to the south
- Pohutukawa grove – significant to landowner and indicatively identified in the Warkworth Structure Plan as an area of open space
- Challenging topography
- Landowner dwellings
- Proximity to the Wider Western Link and Morrison's Heritage Orchard.

Figure 5-24. Western Link - South Constraints Overview



In consideration of the above factors, five options including the IBC option were developed for corridor assessment as outlined in Table 5-20 and Figure 5-25 below. These are discussed in the sections to follow.

Table 5-20: Western Link - South options long list

Option	Description
1	McKinney Road connection / Landowners revised preferred option
2	Landowner indicatively proposed alignment
3	Southern SH1 connection (north of IBC SH1 connection and flood plains)
4	IBC Alignment
5	IBC SH1 connection with refined alignment

Figure 5-25: Western Link - South long list options overview

Constraints mapping for this project was completed in conjunction with the initial option development process. During this process, an option south of the IBC alignment (shown as Option 4 in the above figure) was considered but discounted for the following reasons prior to progressing through to the corridor assessment phase.

a) Proximity of the option, notably the SH1 connection to the Wider Western Link
b) Proximity to flood plain SH1 intersection likely located in major flood plain
c) Is a longer route to connect back to more northern SH1 connections.

5.6.4 Route: Option Assessment

As outlined in Section 2.3, options were assessed against the Investment Objectives and criteria within four well-beings, cultural, social, environmental, and economic. Technical specialists engaged

in a full day MCA workshop to undertake an assessment, scoring each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green).

The following table identifies the outcomes of this assessment.

Table 5-21: Western Link - South MCA assessment summary

MCA Criteria	Option 1	Option 2	Option 3	Option 4	Option 5
I.O.1 – Access					
I.O.2 – Integration					
I.O.3 – Travel Choice					
I.O.4 – Resilience					
Heritage					
Land use					
Urban Design					
Land Requirement					
Social Cohesion					
Human health and wellbeing					
Landscape / Visual					
Stormwater					
Ecology					
Natural Hazards					
Construction impacts					
Construction disruption					
Construction cost / risk					

The Project Team reviewed and compared the options identified above and noted that all options generally scored positively in relation to the investment objectives, land use, and urban design outcomes.

Key differentiators between the options were the extent of impact the options would have on ecological, landscape, stormwater, and construction outcomes. Whilst all the options had some degree of adverse impact on these outcomes, Option 4 and 5 had a higher potential adverse ecological impact compared to the other options. Similarly, Options 1 to 3 had a higher potential construction cost / risk in comparison to the other options but were also assessed as having lower adverse social cohesion impacts.

The MCA scoring did not show a clear preferred option for the whole alignment. The technical specialists and project team preferred the southern section of Option 1 and the northern section of Option 4 and identified an opportunity to create a hybrid option utilising the preferred sections of each option to address the differing constraints within the extent of the corridor.

The remaining options were discounted by the Project Team for the reasons provided in Table 5-22 below.

Table 5-22: Assessment outcomes for discounted Western Link - South options

Option	Assessment outcomes
2 Landowner indicatively proposed alignment	• Northern section of the option severs existing industrial land and southern section runs through the centre of future urban zoned land • Provides low positive contributions to amenity and quality values • Impacts on streams and wetlands.
3 Southern SH1 connection (north of IBC SH1 connection and flood plains)	• Located within proximity to the flood plain • Provides low positive contributions to amenity and quality values • Impacts on streams and wetlands but to a lower extent then Option 2 • Option severs existing industrial land in the northeast of the alignment.
5 IBC SH1 connection with refined alignment	• Southern section of the alignment provides a less direct connection to central and eastern future urban zoned land • Northern section of the alignment cuts through existing industrial land and results in residual existing industrial land being located on the western side of the corridor • Provides low positive amenity and quality values • Crosses three permanent streams and the southern section of the alignment is located within the floodplain near SH1.

Following the identification of the preferred options, the Project Team identified matters to further consider to create a hybrid option of the abovementioned options as follows:

a) Shifting the northern section of the Option 1 alignment west to minimise impacts on existing industrial land
b) Shifting the southern section of the Option 4 alignment to the east to avoid floodplains, wetlands, and the landowner dwelling
c) Consider alternative intersection location to account for safety sight line issues for the SH1 intersection.

As noted above, following the identification of the preferred options for the northern and southern sections of the Western Link – South, a hybrid option of option 1 and 4, Option 6, was developed by the project team for further assessment. The option details and refinement outcomes for Option 6 are outlined and shown in Table 5-23 and Figure 5-26 below.

Table 5-23: MCA Refined – Option 6 (refined Option 1 and Option 4)

Option	Refinement outcomes
6 (hybrid of Option1 and 4)	• Option sleeves around the existing industrial area and forms a boundary (buffer) between the industrial area and FUZ land • Avoids the large flood plain and wetlands

Option	Refinement outcomes
	• The southern connection point with SH1 is in a safe location and addresses safety sightline concerns, without the need for SH1 corridor works.

Figure 5-26. Overview of Western Link - South Option 6

Once the refined option was developed and loaded onto the Te Tupu Ngātahi GIS viewer, the project team and technical specialists participated in an MCA workshop to assess and score the option against the MCA criteria.

Table 5-24 below identifies the outcomes of the assessment

Table 5-24: Western Link - South Option 6 MCA summary

MCA Criteria	Option 6
I.O.1 – Access	
I.O.2 – Integration	
I.O.3 – Travel Choice	
I.O.4 – Resilience	
Heritage	
Land use	
Urban Design	
Land Requirement	
Social Cohesion	
Human health and wellbeing	
Landscape / Visual	

MCA Criteria	Option 6
Stormwater	
Ecology	
Natural Hazards	
Construction impacts	
Construction disruption	
Construction cost / risk	

The Project Team reviewed the option identified above and noted it achieved investment objectives, and land use and urban design outcomes. The team also identified that the option still impacted on an identified heritage feature within the corridor extent and remained in close proximity to the Pohutukawa grove identified as significant to the landowner. The option was however assessed as having a decreased ecological impact, in that it had the lowest level of wetland interaction and avoided majority of the flood plain effects associated with the other options. Additionally, the northern section of the alignment improved urban design outcomes by forming a boundary (buffer) between the FUZ and existing industrial area. Accordingly, the Project Team identified Option 6 as the preferred option for the reasons specified in Table 5-25 below.

Table 5-25. Assessment outcome for the preferred option

Option	Assessment Outcome
6 (hybrid of Option1 and 4)	• Sleeves FUZ and industrial zoning and prevents severance of the existing industrial land • The buffer between future residential and industrial land uses provides an appropriate transition between existing and planned industrial land and future residential land • Avoids key ecological features and floodplains • Southern connection point with SH1 is an acceptable transport outcome.

5.6.5 Engagement

Table 5-26 below provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members.

Table 5-26: Western Link - South engagement summary

Project	Feedback
Western Link – South	• General agreement from Auckland Council with the proposed emerging preferred option – the alignment forming a buffer between industrial land and future residential was strongly supported • There is a preference for the Pohutukawa grove to be avoided as it is significant to the landowner • Project team to consider difficult terrain and topography in the design phase • Concerns around the proximity of the emerging preferred SH1 intersection to the existing McKinney, and potential operational and safety concerns resulting from this.

5.6.6 Option Refinement

In consideration of feedback received through engagement, the project team completed further investigations in relation to the location of the preferred SH1 intersection and identified opportunities for design refinements with the purpose of further minimising potential impacts of the emerging preferred option.

Table 5-27 below outlines the refinements completed and outcomes.

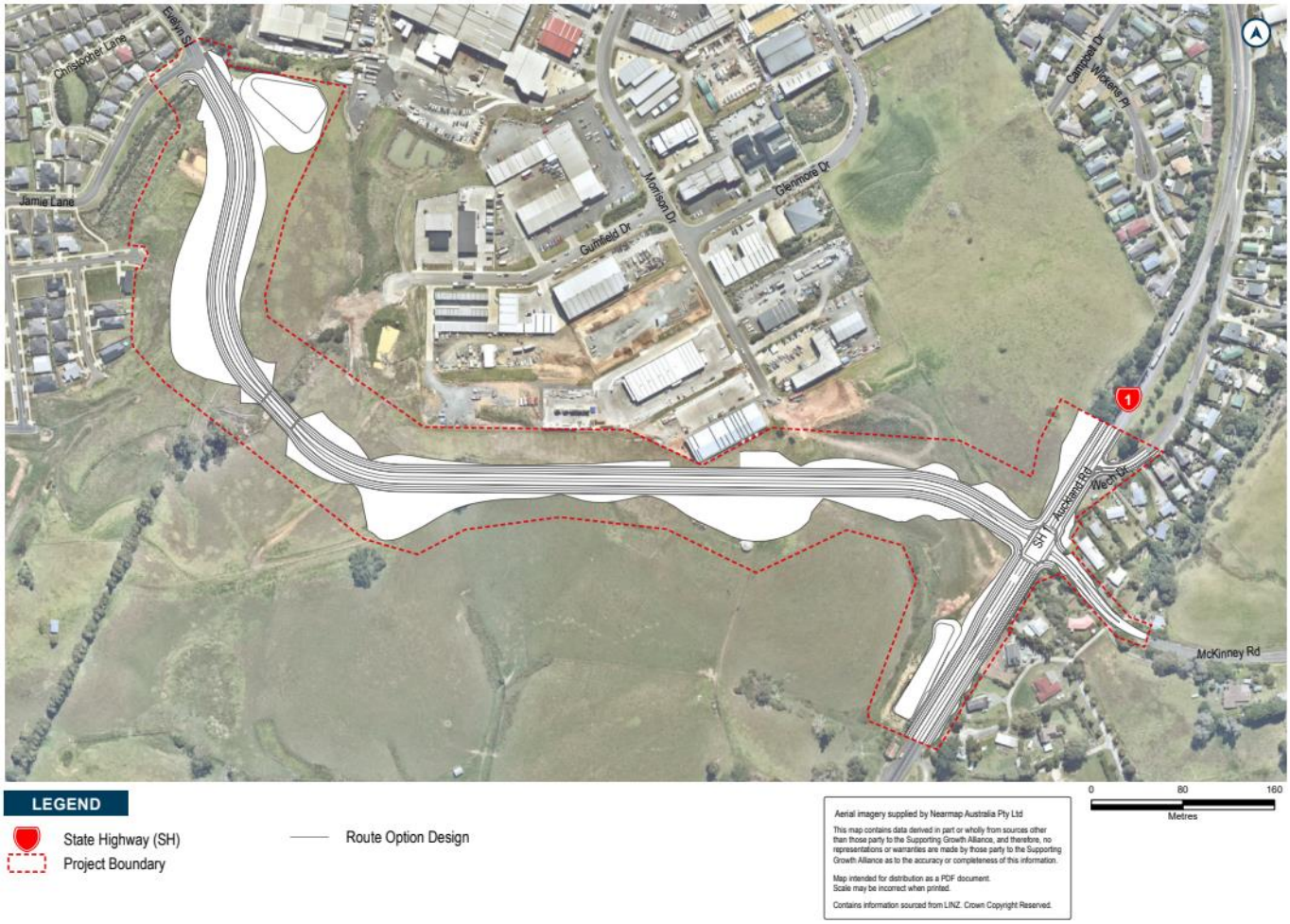
Table 5-27: Post Engagement Refinement

Option	Refinement outcomes
6A	• Alignment has been shifted to minimise impact on wetlands and floodplains and avoids impacting on the Pohutukawa grove • Alignment has been shifted west further into the future urban zoned land to further minimise impact of the alignment and earthworks on existing and future industrial land use • Alignment has been adjusted to utilise the existing SH1 intersection connection at McKinney Road to avoid conflict between a new intersection (as proposed by the emerging preferred option) in close proximity to the existing, while providing improved east-west connectivity across SH1 • Note: Further investigation confirmed that sight distance on SH1 issue is able to be improved through corridor improvement works.

5.6.7 Option Summary

Following the engagement and option refinement process the Western Link - South alignment was confirmed and is illustrated below in Figure 5-27.

Figure 5-27: Western Link – South Refined Recommended Option

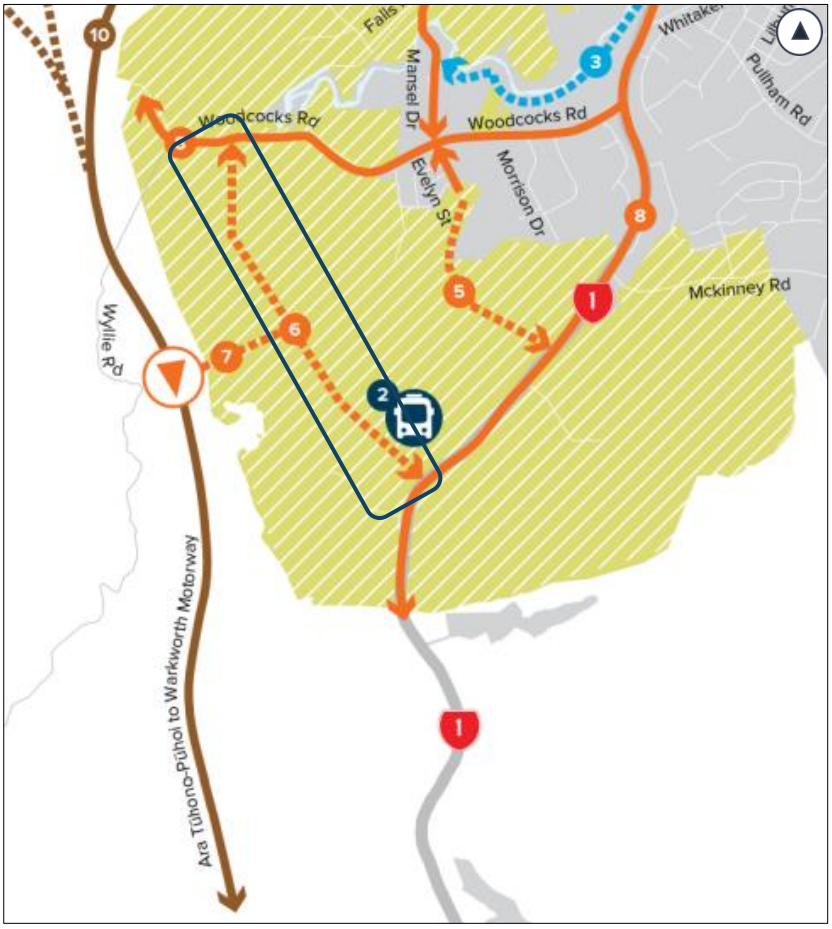


5.7 NOR 7 Wider Western Link – North

5.7.1 Corridor Overview

The IBC recommended option for the Wider Western Link including an urban arterial cross section is shown in Figure 5-28 below.

Figure 5-28: IBC Wider Western Link



The Wider Western Link is a new proposed corridor located within the southern Warkworth growth area, the corridor will provide connectivity through Warkworth from the southern growth area, improve network efficiency and resilience, in addition to integrating with and supporting planned urban growth and the future transport network in Warkworth.

5.7.2 Gap Analysis

The gap analysis recommended the Wider Western Link undergo further optioneering through the corridor assessment process and consider the following:

- Key connections to Woodcocks Road (north), the Southern Interchange (central), and the existing SH1 (south)
- Warkworth South – Draft Plan Change and proposed Wider Western Link alignment.

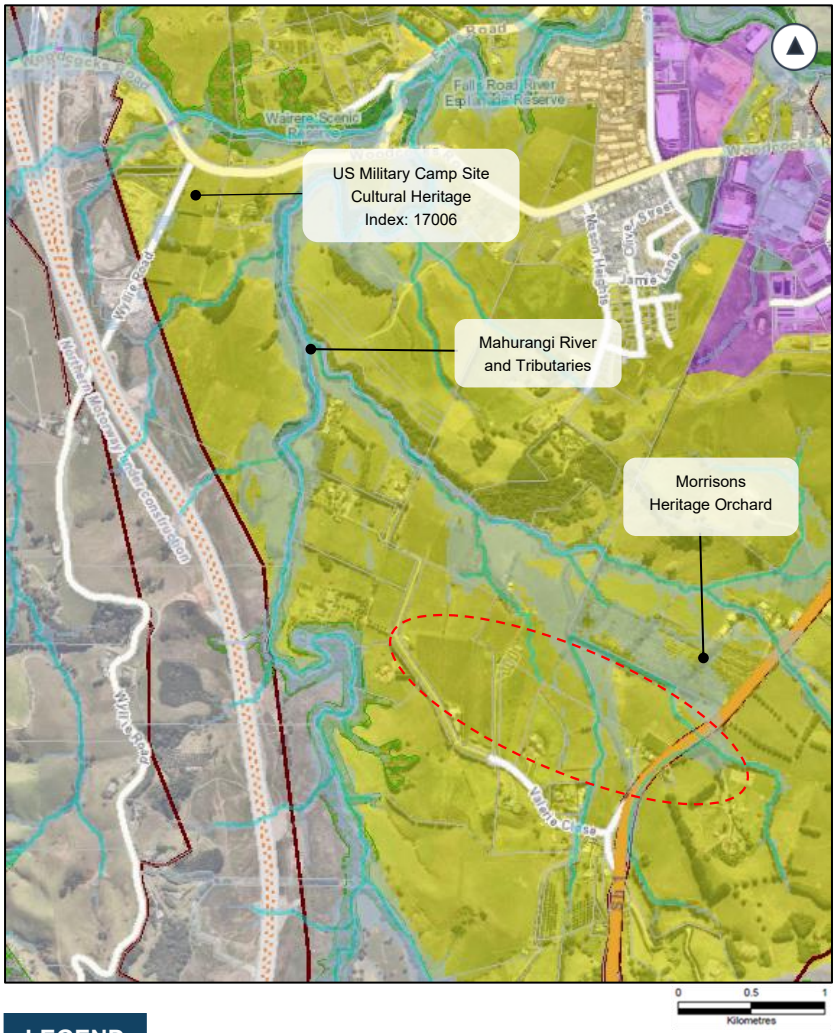
5.7.3 Route: Option Development

Options for the initial corridor assessment were developed within the corridor study area recommended by the IBC, extending from Woodcocks Road in the north to the existing SH1 in the south. For all the options developed, the form of the northern section of the alignment followed the IBC alignment as at the initial corridor assessment phase it was considered best placed to avoid the identified constraints in the north whilst achieving overall project outcomes.

In developing options, the Project Team also considered the following known key features in the area. These are mapped in Figure 5-29 below and include:

a) Cultural heritage sites in the northern section
b) Proposed draft Warkworth South Plan Change for a large area of land under individual ownership located to the south of the Mahurangi River
c) The Mahurangi River and its tributaries run through the area, in addition to riparian woodland and vegetation associated with the river and its tributaries
d) Morrison's Heritage Orchard located to the southeast of the area
e) The indicative location of the local centre and Southern PT Hub as shown in the Warkworth Structure Plan
f) Permanent streams and flood plains, including large flood plains associated with the Mahurangi River
g) The eastern portion of the study area is hilly, with majority of the land area having a variation topography.

Figure 5-29. Wider Western Link Constraints Map

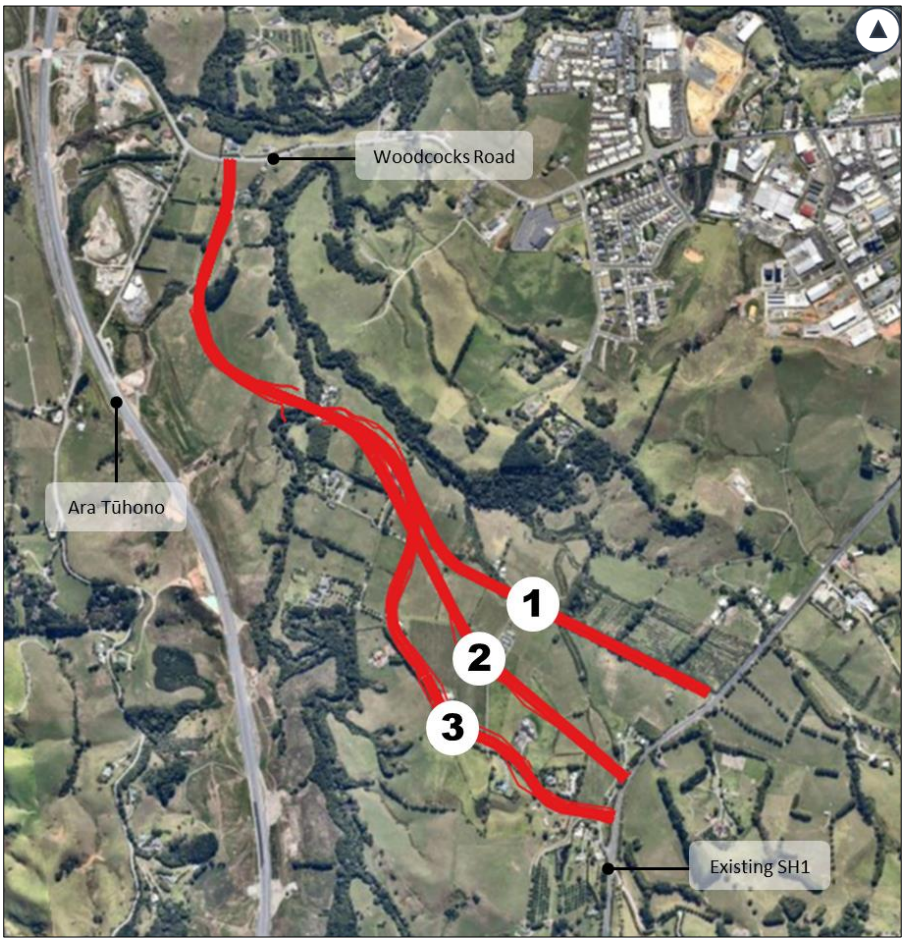


In consideration of the above factors, three options were developed for corridor assessment as outlined in Table 5-28 and Figure 5-30 below. These are discussed in the sections to follow:

Table 5-28: Wider Western Link Options

Option	Description
1	Waimanawa (Warkworth South) Concept Plan Change Alignment
2	IBC alignment
3	Connection via Valerie Close

Figure 5-30: Overview of Wider Western Link options



Alignment options further south of Option 3 were not considered by the Project team due to the challenging topography, proximity to the Mahurangi River, environmental considerations such as the SEA, and the area's distance from key Warkworth Structure Plan elements such as the local centre and Southern PT Hub.

5.7.4 Route: Option Assessment

As outlined in Section 2.3, options were assessed against the investment objectives and criteria within four well-beings, cultural, social, environmental, and economic. Technical specialists engaged in a full day MCA workshop to undertake an assessment, scoring each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green).

The following table identifies the outcomes from this assessment.

Table 5-29: Wider Western Link MCA Summary

MCA Criteria	Option 1	Option 2	Option 3
I.O.1 – Access			
I.O.2 – Integration			
I.O.3 – Travel Choice			
Heritage			
Land use			
Urban Design			
Land Requirement			
Social Cohesion			
Human health and wellbeing			
Landscape / Visual			
Stormwater			
Ecology			
Natural Hazards			
Construction impacts			
Construction disruption			
Construction cost / risk			

The Project Team reviewed and compared the options identified above and noted that all the options assessed achieved the investment objectives with Option 2 scoring less favourably compared to Option 1 and 3. In relation to adverse impacts, Option 1 had the overall highest adverse impact due to its impacts on stormwater, landscape and ecological constraints, this was followed by Option 3 which was assessed as needing a high land requirement and having more adverse construction impacts compared to the other options, along with high adverse ecological impact. Compared to Option 1 and 3, Option 2 had the least overall adverse impact. The option had a high adverse ecological impact but had lower land requirement, construction, stormwater, and landscape impacts whilst also achieving land use, urban design, and social cohesion outcomes.

Accordingly, the Project Team identified Option 2 as the preferred option for the reasons outlined in Table 5-30 below.

Table 5-30. New Wider Western Link - Preferred Option

Option	Assessment Outcomes
2	• Achieves investment objectives

Option	Assessment Outcomes
IBC alignment	• Option aligns with the Warkworth Structure Plan alignment, and it is anticipated that the alignment will integrate well with future development in the area • Provides moderate positive contributions to amenity and quality values • Increases connectivity in the western growth area, and to the southern growth area and industrial land to the north of the alignment • Has the farthest distance from potential impact on ecologically sensitive areas such as riparian margins, SEAs, and wetlands • Provides a good east – west connection across SH1. • Suggested refinements to reduce or avoid the ecological impacts (flooding, streams) of the option include the opportunity to seek a hybrid approach between Option 1 and 2.

The remaining options were discounted by the Project Team for the reasons outlined in Table 5-31 below.

Table 5-31: Assessment outcomes for the discounted Wider Western Link options

Option name	Assessment Outcomes
1 Waimanawa (Warkworth South) Concept Plan Change Alignment	• A large portion of the alignment is located within a floodplain, including the SH1 connection, the alignment additionally impacts the highest number of streams and location of stormwater treatment is difficult • Fragmentation of the Mahurangi River corridor and riparian corridor of tributaries between SEA's • Alignment has the greatest proximity to ecologically sensitive areas (riparian, corridors, SEA's, wetlands).
3 Connection via Valerie Close	• The ridgeline topography in the south of the study area limit's development potential of the local centre and Southern PT Hub • Alignment generally avoids flood plains and the location of stormwater treatment is not an issue however the option has the greatest road surface area to treat • Alignment fragments the Mahurangi River corridor and riparian corridor of tributaries between SEA's • Alignment runs within the zone of influence of the Mahurangi River and associated SEA • Adverse construction impacts on the existing road and access connections to properties on Valerie Close.

5.7.5 Engagement

Table 5-32 provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members.

Table 5-32: Wider Western Link engagement summary

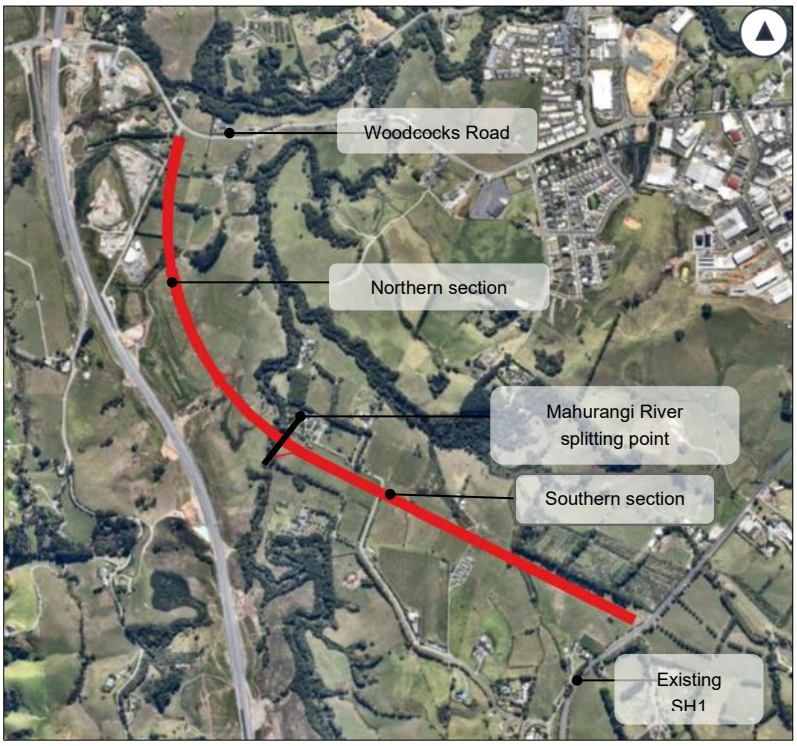
Project	Feedback
Wider Western Link	• An east-west connection over SH1 is desired, particularly for local bus connections • Consider whether the emerging preferred option's intersection location in the south achieves the best outcome, and adequately provides for the implementation of a four-way intersection • Suggestion to consider whether the northern end of the route can connect into Wyllie Road to have a single intersection with Woodcocks Road • Preference for a route which travels adjacent to the Morrison Heritage Orchard boundary • Crossings of the Mahurangi River should be minimised • Project team to be aware of environmental impacts including bats.

5.7.6 Option Refinement

Following engagement and feedback received, and to reflect the outcomes of the completed Route Protection Strategy[2] for Warkworth which recommended that different sections of the corridor be route protected utilising different mechanisms. The alignment for the Wider Western Link was split into a northern section and a southern section for the purpose of further option development and refinement. The splitting point between the two sections was the Mahurangi River, with the northern section connecting to Woodcocks Road in the north and the southern section connecting to SH1 in the south. Figure 5-31 below provides an overview of the sectioning of the Wider Western Link.

[2] Appendix L Warkworth Route Protection Strategy - Final .pdf

Figure 5-31: Overview of Wider Western Link Section Overview



5.7.6.1 Northern Section

Feedback was received relating to the use of the existing Wyllie Road corridor and the existing intersection with Woodcocks Road as the northern connection point, as well as on a potential alternative crossing point of the Mahurangi River. The project team subsequently developed an additional option for the northern alignment of the Wider Western Link and assessed this through the MCA framework alongside the northern section of the preferred option (Option 2 – IBC alignment).

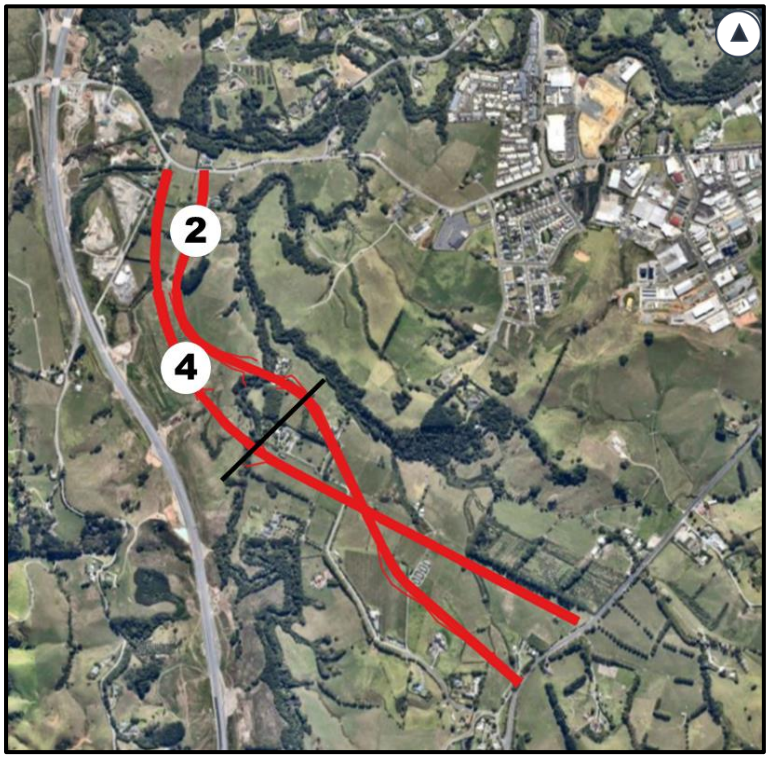
The Project team also considered a further option which connected centrally (between Options 1 and 2) to Woodcocks Road. However, this was discounted by the Project team and not taken through to MCA assessment due to an identified conflict with the existing intersection of Woodcocks Road with Wyllie Road, with operational and safety concerns resulting in the option not being viable.

Details of the additional option for the northern section are provided in Table 5-33 and Figure 5-32 below. These are discussed in the sections to follow.

Table 5-33: Post engagement additional northern section options

Option	Description
4	Wyllie Road Connection
2	IBC alignment

Figure 5-32. Wider Western Link northern section overview



The following table identifies the outcomes from this assessment.

Table 5-34: Wider Western Link northern section MCA summary

MCA Criteria	Option 4	Option 2
I.O.1 – Access		
I.O.2 – Integration		
I.O.3 – Travel Choice		
Heritage		
Land use		
Urban Design		
Land Requirement		
Social Cohesion		
Human health and wellbeing		
Landscape / Visual		
Stormwater		
Ecology		
Natural Hazards		
Construction impacts		
Construction disruption		
Construction cost / risk		

The Project Team reviewed and compared the options identified above and noted that while both the options had the same heritage, construction, and landscape outcomes, Option 4 was the generally preferred option because of its reduced land requirement and ecological impact. Compared to Option

2, Option 4 was additionally assessed as having greater land use and integration outcomes as a result Option 2 was discounted.

Accordingly, the Project Team identified Option 4 as the preferred route refinement option for the reasons specified in Table 5-35 below:

Table 5-35. Assessment outcome for the preferred option

Option	Assessment Outcome
4 Wyllie Road Connection	• Alignment requires low modification to the current topography in the area • The use of the existing (Wyllie) road reduces landowner impacts and additional property acquisition – retains large developable area for future heavy industrial land use, and is an efficient use of existing infrastructure • Mahurangi River crossing point aligns with proposed plan change alignment for the southern section • The Mahurangi River is only required to be crossed once to provide connection to southern interchange • Avoids the Open Space – Conservation Zone and the natural stream management area overlay adjacent to the Mahurangi River.

Option 2 was discounted by the Project Team for the reasons outlined in Table 5-36 below.

Table 5-36: Assessment outcomes for the discounted option

Option	Assessment Outcomes
2 IBC alignment	• Alignment crosses the Open Space – Conservation Zone and the natural stream management area overlay adjacent to the Mahurangi River • Greater landowner / property acquisition - impacts on two separate private properties • Splits future developable industrial land and result in multiple road frontages – reduced land use outcomes for future heavy industrial land use • Greater land use impact due to greater land requirement and property acquisition for additional intersection and new alignment • Results in the fragmentation of the Mahurangi River and the riparian corridor between SEAs- requirement to cross the Mahurangi River twice to achieve connection to southern interchange.

5.7.7 Option Summary

As noted above, route protection for the Wider Western Link will be through two differing processes. The northern section of the corridor will be route protected via the NOR process and the southern section of the will be protected via the Plan Change process in combination with landowner agreements. To ensure the ability to implement the full alignment should the PPC not proceed, the project team through the option development and assessment process have identified 'anchor points' including the Mahurangi River crossing point and the intersection with SH1 which will be route protected via the existing SH1 NOR and the Wider Western Link NOR respectively. The location of

the ‘anchor points’, being Mahurangi Crossing point and the SH1 intersection, reflects the outcomes of the assessment for the Wider Western Link. The SH1 intersection location aligns with the indicative (DBC) alignment of the southern section of the Wider Western Link, taking account of the constraints present in the intersection locality including permanent streams, and the Heritage Orchard site to the east. The recommended Wider Western Link – North alignment is shown in Figure 5-33 below.

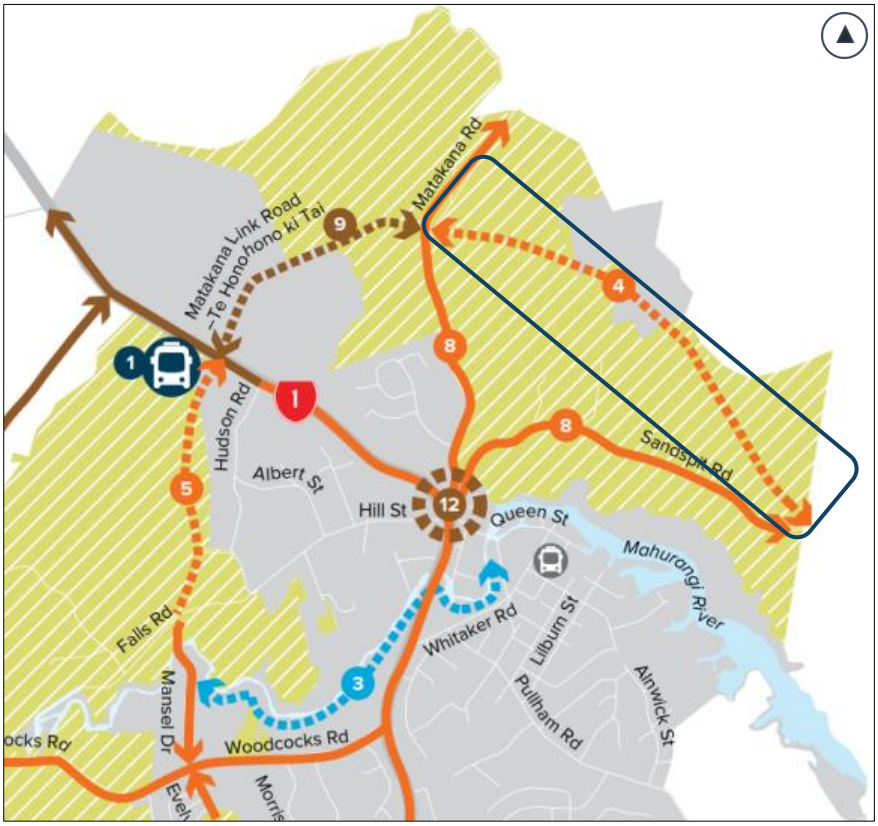
Figure 5-33. Wider Western Link - North recommended alignment

5.8 NOR 8 Sandspit Link

5.8.1 Corridor Overview

The IBC recommended option for the new Sandspit Link including an urban arterial cross section with active mode facilities is shown in Figure 5-34 below.

Figure 5-34: Indicative DBC Sandspit Link alignment



Sandspit Link is a proposed new corridor located in the northern Warkworth growth area. The purpose of the corridor is to provide local connectivity within the north-east Warkworth growth area and improve connectivity to the Kōwhai Coast and Mahurangi Peninsula.

5.8.2 Gap Analysis

The gap analysis concluded that the Sandspit Link should undergo further optioneering through the corridor assessment process and assess the following:

- Option's within and outside of the FUZ boundary in consideration of identified key constraints in the study area.
- Location of the eastern connection with Sandspit Road and whether final location aligns with the corridor purpose.

5.8.3 Route: Option development

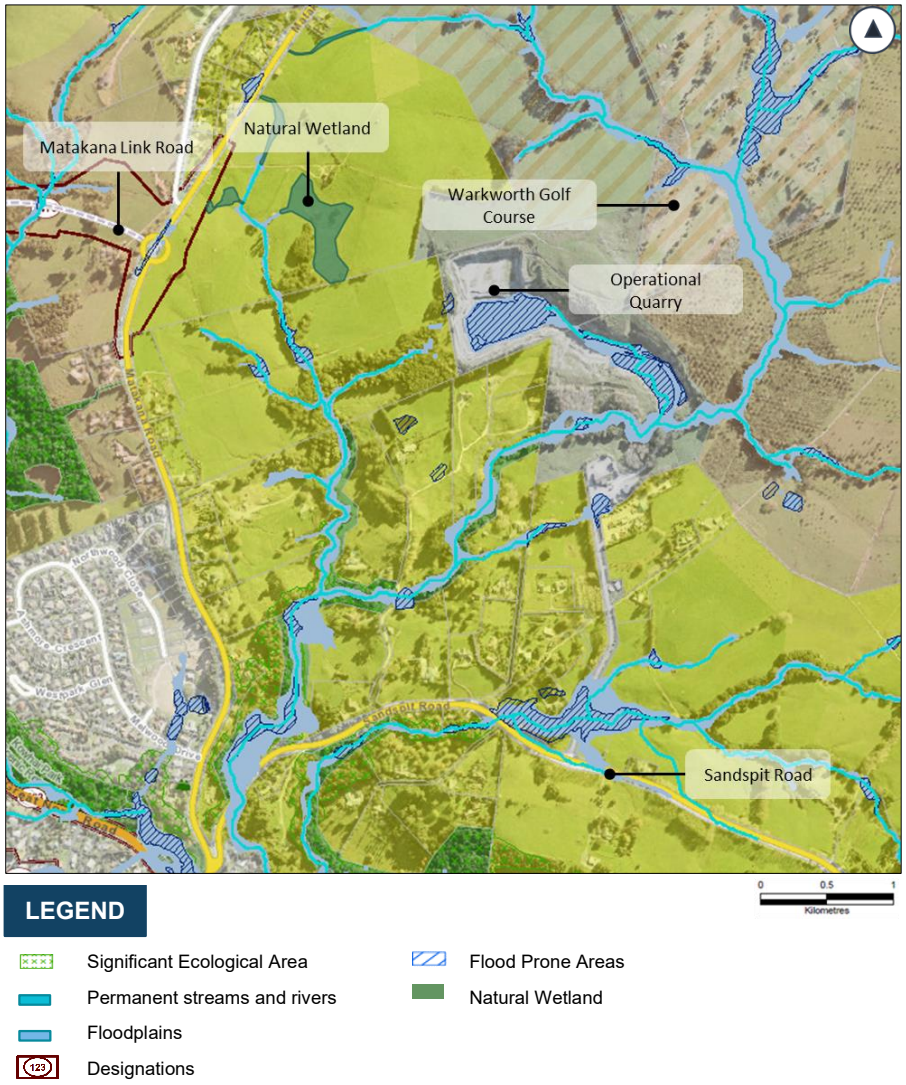
Options for the initial corridor assessment were generally limited to an area extending from Matakana Road in the north to Sandspit Road in the south for the following reasons:

a) Connection with Te Honohono ki Tai in the north
b) Warkworth Structure Plan recommendation of an alignment within the study area.

In developing options, the Project Team considered the following known key features in the area. These are mapped in Figure 5-35 below and include:

a) Permanent streams and flood plains
b) Native woody and riparian vegetation including SEA
c) Hill slope seep, valley head seeps and natural wetlands present
d) Surface ponding - avoid fragmenting potential bird corridors between nearby ponds
e) Warkworth golf course in the north of the study area
f) Matakana Link Road designation
g) Operational quarry in the northern growth area.

Figure 5-35. Sandspit Link Constraints Overview

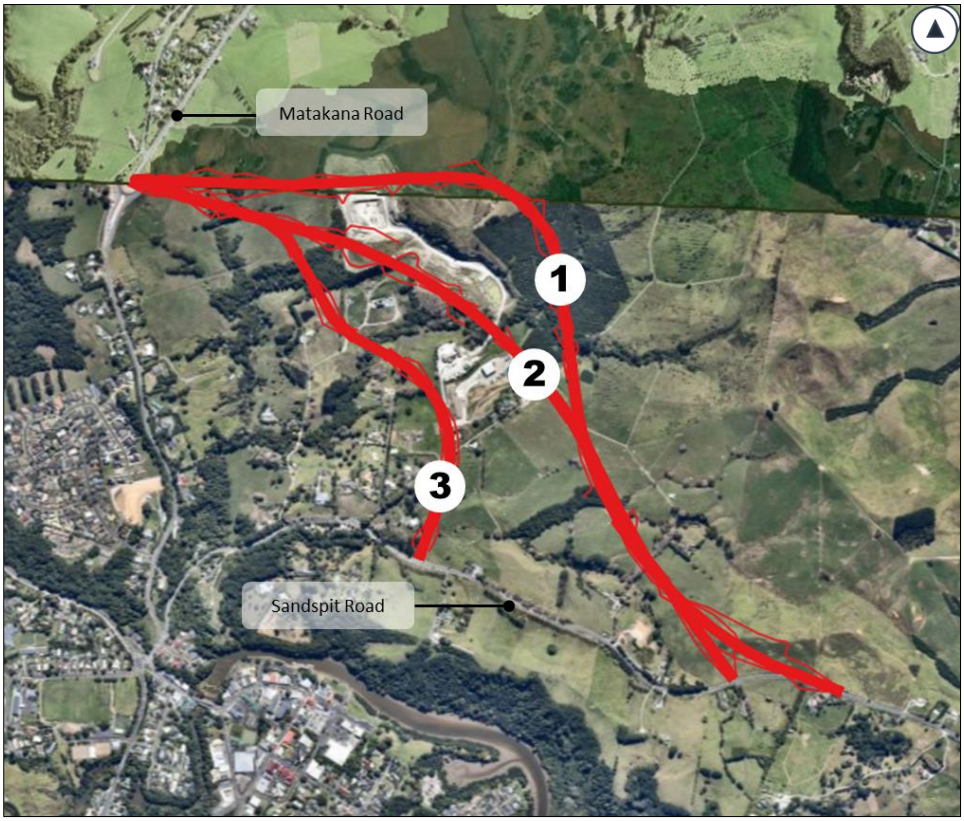


In consideration of the above factors, three options were developed for corridor assessment as outlined in Table 5-37 and Figure 5-36 below. These are discussed in the sections to follow.

Table 5-37: Sandspit Link Options

Option	Description
1	Rural alignment north of the quarry
2	IBC alignment
3	Southern alignment through FUZ

Figure 5-36: Overview of options for Sandspit Link



5.8.4 Route: Option Assessment

As outlined in Section 2, options were assessed against the Investment Objectives and criteria within four well-beings, cultural, social, environmental, and economic. Technical specialists engaged in a full day MCA workshop to undertake an assessment, scoring each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green).

The following table identifies the outcomes from this assessment.

Table 5-38: Sandspit Link MCA Summary

MCA Criteria	Option 1	Option 2	Option 3
I.O.1 – Access			
I.O.2 – Integration			
I.O.3 – Travel Choice			
I.O.4 – Resilience			
Heritage			
Land use			
Urban Design			
Land Requirement			
Social Cohesion			
Human health and wellbeing			
Landscape / Visual			
Stormwater			
Ecology			
Natural Hazards			
Construction impacts			
Construction disruption			
Construction cost / risk			

The Project Team reviewed and compared the options identified above and noted that Option 3 met the investment objectives, land use and urban design outcomes, and had the lowest adverse impacts with the exception of ecological and social cohesion outcomes whereby all options were assessed as having similar impacts. Whilst Option 2 and Option 1 had similar effects, the Project Team discounted Option 2 due to the risks associated to an alignment going directly through the centre of the quarry and the associated uncertainty around its future operations.

At this stage due to there being no clear preference between the remaining options, the Project Team identified opportunities to further refine and minimise the effects of Option 1 and Option 3 for reassessment. The suggested refinements for each option are specified in Table 5-39 below.

Table 5-39. Option 1 and 3 Refinements

Option	Suggested Refinements
1 Rural alignment north of the quarry	• Alignment to be shifted further to the south and north to avoid the Warkworth Golf Course and reduce impacts on the quarry and to reduce stream crossings / impacts through the central section • Shift the option's eastern connection with Sandspit Road to align with the FUZ boundary.
3 Southern alignment through FUZ	• Shift alignment to the north-east to minimise impact on permanent streams, vegetation and conservation zone • Shift southern intersection connection with Sandspit Road to the west to avoid streams.

Option 2 was discounted for the reasons specified in Table 5-40 below.

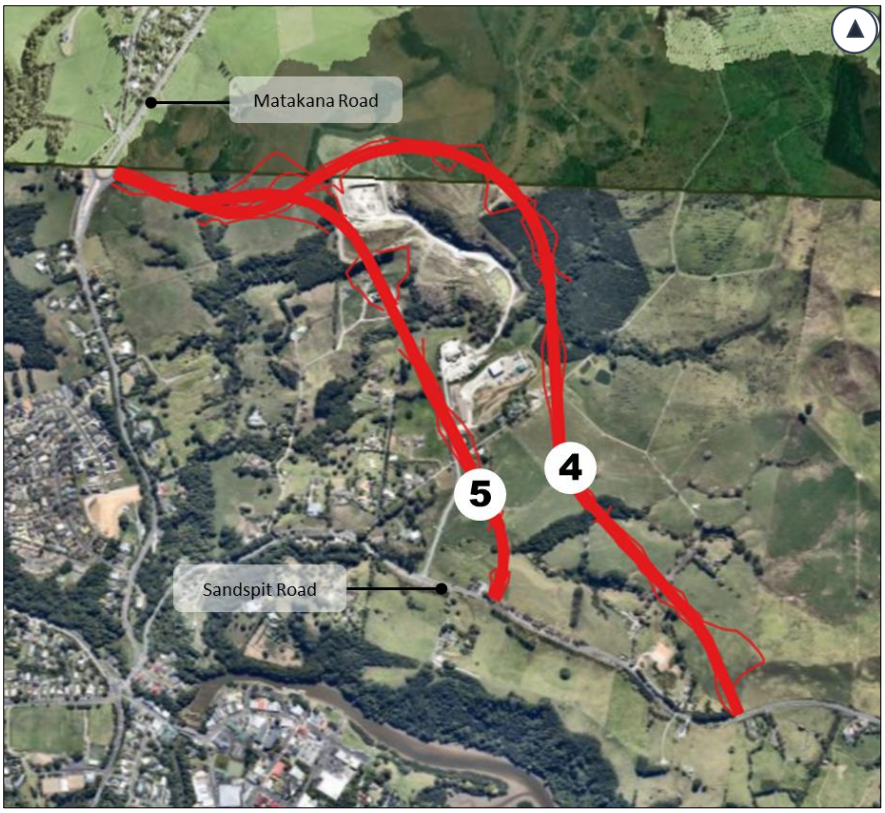
Table 5-40. Assessment outcomes for the discounted option

Option	Assessment outcome
2 IBC alignment	• The alignment is longer compared to Option 3, resulting in the requirement for greater earthworks • The option will largely be constructed on greenfields however there are some landslide features observed around slopes and streams • There is a higher construction and environmental risk associated to an alignment going through a quarry.

Following the refinements of Option 1 and 3, two new options were developed by the Project Team and are shown in Figure 5-37 below:

- **Option 4** (Refined Option 1)
- **Option 5** (Refined Option 3).

Figure 5-37: Overview of Sandspit Link refined options



Following the development of the new refined options, a second MCA workshop was conducted with the project team and technical specialists in attendance. The following table identifies the outcomes from this assessment.

Table 5-41: MCA Worksop 2 Summary

MCA Criteria	Option 4	Option 5
I.O.1 – Access		
I.O.2 – Integration		
I.O.3 – Travel Choice		
I.O.4 – Resilience		
Heritage		
Land use		
Urban Design		
Land Requirement		
Social Cohesion		
Human health and wellbeing		
Landscape / Visual		
Stormwater		
Ecology		
Natural Hazards		
Construction impacts		
Construction disruption		
Construction cost / risk		

The project team reviewed and compared the options identified above and noted that overall Option 5 was assessed as having less adverse impacts on the outlined criteria in comparison to Option 4. The key differentiators between the two options were the land use, urban design, and social cohesion impacts each option derived.

Accordingly, the Project Team identified Option 5 as the preferred route refinement option for the following reasons specified in Table 5-42 below.

Table 5-42. Assessment outcome for preferred option

Option	Assessment Outcome
5 Refined Option 3	• Option minimises impacts on the identified vegetation area and open space - conservation zone • Provides for ability to integrate with local network and future land use connections • Option will result in the smallest amount of catchment fragmentation and the smallest extent of wetland and stream impacts • Option increases connectivity between north-east Warkworth and the Mahurangi peninsula.

Option 4 was discounted by the Project Team for the reasons outlined in Table 5-43 below:

Table 5-43: Assessment outcomes for discounted Sandspit Link option

Option	Assessment Outcomes
Option 4 Refined Option 1	• Separation from the FUZ prevents good land use outcomes for future development through limited opportunities for integration and localised connections • Impacts on streams / riparian features / potential wetland minimised through refined alignment, crossing and intersection locations • Second longest route and highest earthwork cost • Option will increase potential for urban spread to occur outside of the RUB into rural land use, in line with Auckland Council feedback identifying a potential risk of future 'urban creep' into rural zones for options located outside of the current Rural Urban Boundary • Quarry creates a severance and reduces connectivity for active mode users.

5.8.5 Engagement

Table 5-44 provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members.

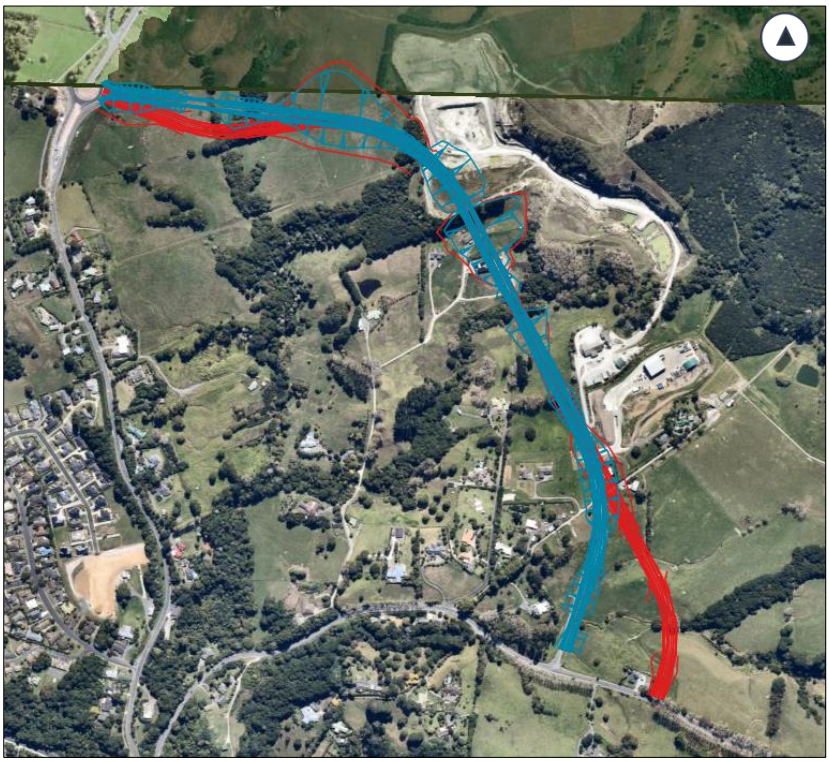
Table 5-44. Engagement Summary

Project	Feedback
Sandspit Link	• Auckland Council preference for corridor to be within the FUZ area and not extend out to the Rural Urban Boundary (RUB). Concerns that an alignment in the RUB will encourage further urban sprawl • Consider a crossing of the Mahurangi river east of the town centre • Strong support for this link, with the community members adding that the corridor was needed urgently due to congestion issues resulting from the opening of Te Honohono ki Tai (Matakana Link Road) • Community members also shared a preference for the corridor to be located closer to the RUB to provide a 'bypass function'.

5.8.6 Option Refinement

Following engagement feedback and further ecological and design investigations, the project team confirmed that the inner / southern alignment (Option 5) as the preferred option (as opposed to an outer / northern route) for the reasons previously identified at the MCA phase. An opportunity to refine the preferred option was identified to further minimise environmental impacts and utilise existing infrastructure at the southern connection point with Sandspit Road. As a result, the northern section of the option was shifted slightly north to reduce ecological vegetation impacts and the southern connection point of the emerging preferred option with Sandspit Road was shifted west to utilise the existing quarry road and intersection. This subsequently reduced the extent of permanent stream(s) impacted. Figure 5-38 below illustrates the refinement made to the emerging preferred option.

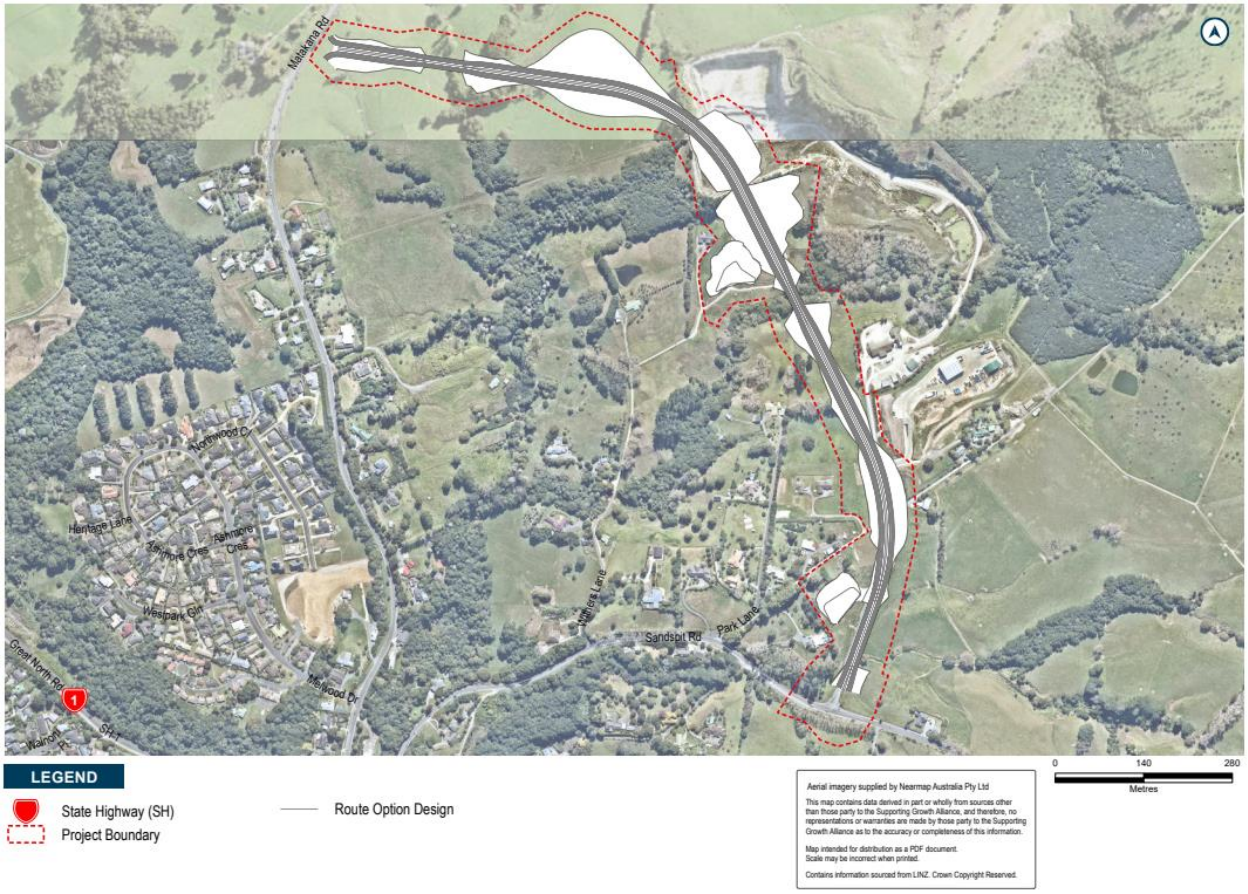
Figure 5-38. Sandspit Link Option Refinement



5.8.7 Option Summary

The recommended alignment for Sandspit Link is shown in Figure 5-39 below.

Figure 5-39. Sandspit Link recommended alignment



5.9 NOR 1 Northern Public Transport Hub and Western Link - North

5.9.1 Overview of IBC Recommendations

The IBC identified that two bus hub / interchanges were required, specifically:

- An interim bus hub / interchange in the north near the intersection of SH1 and Ara Tūhono. (Figure 5-40)
- An interim park and ride facility in north Warkworth. (Figure 5-40)
- A public transport interchange in the south near a future local centre (Figure 5-41)
- A longer-term park and ride near the southern interchange to Ara Tūhono (Figure 5-41).

Figure 5-40: IBC recommended options – Stage 1

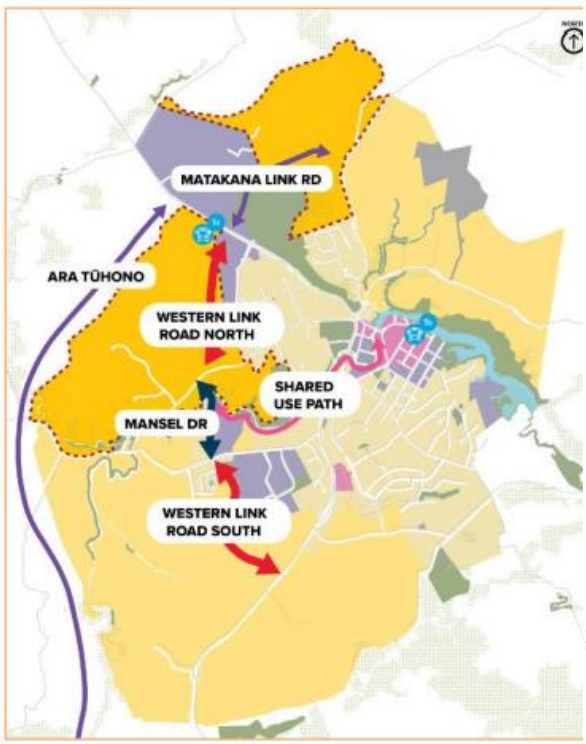


Figure 5-41: IBC recommended options – Stage 2

5.9.2 Gap Analysis

The IBC to DBC gap analysis at the start of the DBC phase, identified that changes in policy and the availability of additional guidance (identified below) since the completion of the IBC resulted in the need for the DBC to re-evaluate the IBC recommendation. These key changes are summarised below in Table 5-45.

Table 5-45: Policy and Strategic Guidance Changes from IBC to DBC

Strategic Guidance	Key Direction	Change from IBC / Impact on DBC.
Draft AT Parking Strategy (2022).	• Manage parking to encourage travel by sustainable and efficient transport modes such as PT and cycle and micro-mobility • The intent of Park and Ride facilities are to extend access to the public transport network by capturing car trips nearer to their origin, facilitating mode shift to help ease congestion and reduce emissions • Park and Rides need to be run as a premium service, consistent with their strategic role. AT will implement pricing at Park and Ride sites to: a) Encourage people to access the station by modes other than private motor vehicle b) Discourage people from using the Park and Ride to access surrounding activities (i.e. people that are not catching public transport) c) Reflect the significant costs of providing and maintaining Park and Rides • Park and Ride services will be provided to support growth by improving access to the public transport network (primarily the Rapid Transit Network) in areas where frequent local bus services connecting to the station are not available and / or widespread • Park and Rides should be supported with Cycle and Micro-mobility (CAM) parking, more connecting bus services, more / better options for walking from nearby, car share / rideshare space and kiss and ride (drop off) areas • Some Park and Rides may be downsized or removed.	• Public transport interchange facilities to be focused closer to areas of density to improve accessibility for active modes and micro-mobility • Look for opportunities for Park and Ride to have dual functions such as intercepting vehicle-based trips while also maximising active mode catchment by provision of cycle parking and other facilities to support adjacent land uses • Capture car trips closer to origin rather than being focused on access / proximity to strategic network • Park and Ride to service hinterland of Warkworth where bus services are less frequent / widespread.
Auckland Plan 2050 (2018).	• To make public transport a preferred travel choice, we need an integrated system that consists of: a) A rapid transit network that provides fast, frequent and reliable travel between major parts of Auckland b) Frequent, connector and local public transport services, often running in dedicated bus or transit lanes, that focus on more local trips and provide access to rapid transit	• No impact on DBC, IBC consistent with Auckland Plan. • No rapid transit network proposed in Warkworth. • As per updated parking strategy.

Strategic Guidance	Key Direction	Change from IBC / Impact on DBC.
	c) Walking, cycling and Park and Ride facilities that make it easy for people to access public transport d) Refers back to AT Parking strategy.	
AT Transport Design Manual (2019).	• Public transport services should be seen as a network, along with walking and cycling trips at either end • Public transport planning needs to look at the entirety of the journey undertaken by users, from door to door, not just where services are running • Permeable street grids and small block sizes around public transport stops can help contribute significantly to patronage, while poor pedestrian linkages can substantially reduce walk-up catchment • Services need to be well integrated with the local area.	• Public Transport interchange facilities required to service a broader variety of uses including being accessible to areas of residential density (origin) to maximise active mode catchment potential.
SGA Design Framework and Tool Kit (2019)	• In the right location, park-and-ride facilities attract mode shift to public transport by increasing the accessibility of stations, thereby attracting new public transport trips that would not have occurred otherwise and / or otherwise would have been made entirely by private vehicles • However, park-and-ride facilities can come at a high cost per rider, work against walkability, increased localised congestion, and compete for space on land that could be used for transit-oriented development. Accordingly, it is generally not appropriate in town centres and is best used to serve areas where there is insufficient density to support feeder buses or a walk-up catchment – e.g. rural areas and developing fringe suburbs.	• Park and Ride to service hinterland of Warkworth where bus services are less frequent / widespread • Locate Public Transport interchanges to improve walkability from point of origin.

Based on the changes and updates to the policy framework between the IBC and the DBC it was considered that a re-evaluation of the proposed public transport facilities was warranted for the Warkworth DBC via a corridor assessment process. Key influences on this decision to undertake the revaluation were the direction provided by the Draft AT Parking Strategy (2022) with a shift in focus on Park and Ride facilities extending access to the public transport network by capturing car trips nearer to their origin, while facilitating mode shift to help ease congestion and reduce emissions. Greater emphasis was also placed on managing parking to encourage travel and access to stations by sustainable and efficient transport modes such as PT and cycle and micro-mobility, other than private motor vehicle. The AT Transport Design Manual also placed greater emphasis on public transport planning looking at the entirety of the journey undertaken by users, with public transport services to also be seen as a network, along with walking and cycling trips at either end. The IBC recommendation would require users to travel through Warkworth from Ara Tūhono and Te Honohono ki Tai, to access the hub resulting in inefficiencies, with emissions and congestion considerations, and potential for less connectivity to network as a whole, and ability to facilitate mode shift.

This will ensure that the proposed public transport facilities and associated elements including park and ride are fit for purpose and are located in optimal locations to support the design outcomes identified in the above frameworks.

5.9.3 Warkworth IBC Public Transport Review

The following section provides an assessment of the IBC recommended public transport facilities. This also includes consideration of relevant Te Tupu Ngātahi Design Framework Principles which are considered to be consistent with guidance from the Auckland Transport Design Manual.

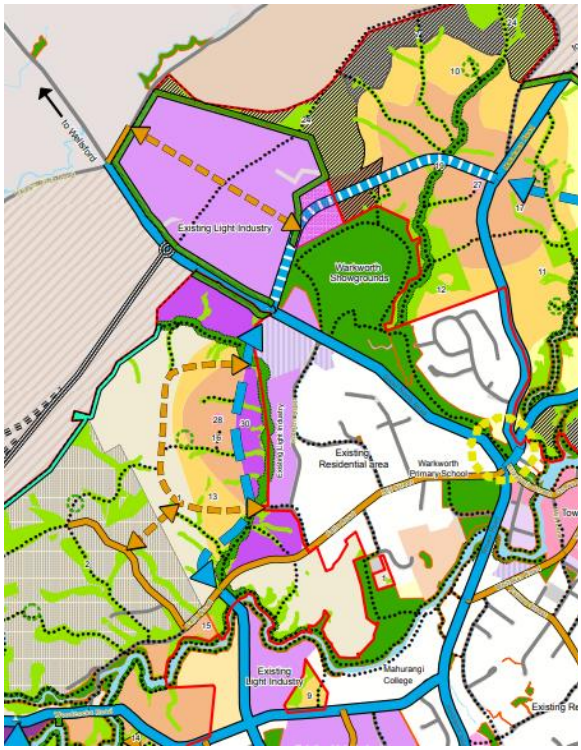
5.9.3.1 Interim Public Transport Interchange in North Warkworth

The Warkworth IBC identified that an interim northern PT hub was required in order to provide a Park and Ride facility that enabled convenient access to the 995 bus route. The IBC stated that this facility was likely to be required as an interim facility in the medium term (15 – 20 years), until such time that the southern interchange was provided, enabling access to Ara Tūhono, at which time the interim northern PT Hub would be relocated with the Park and Ride to the south.

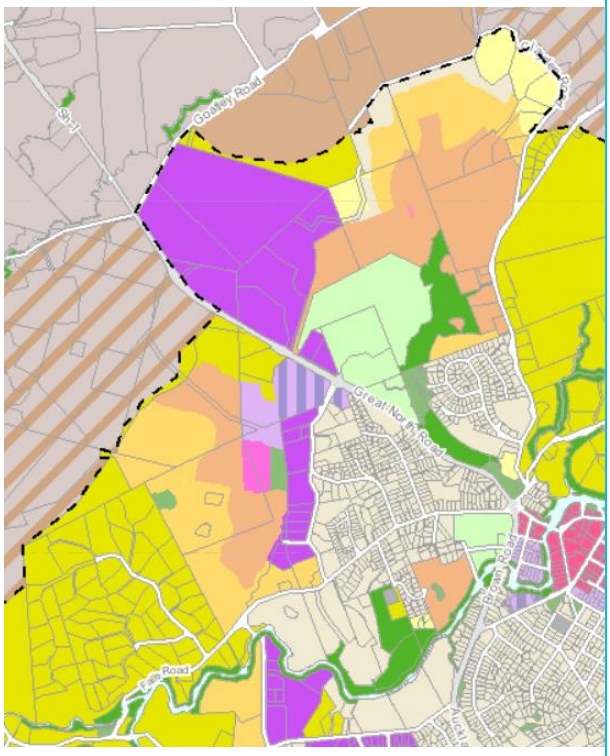
Land Use Assumptions

At the time of the Warkworth IBC, the Warkworth Structure Plan indicated that the northern area was likely to be low to medium density housing, with light industrial. The resulting land use enabled by Plan Change 25 in this area (now the Warkworth North Precinct) has seen an increased provision in medium density urban and suburban housing, business mixed use and general business zoning and a relatively large local centre that was previously not expected with the implications of this being greater density in the northern area then what was previously anticipated by the structure plan.

Warkworth North: Structure Plan



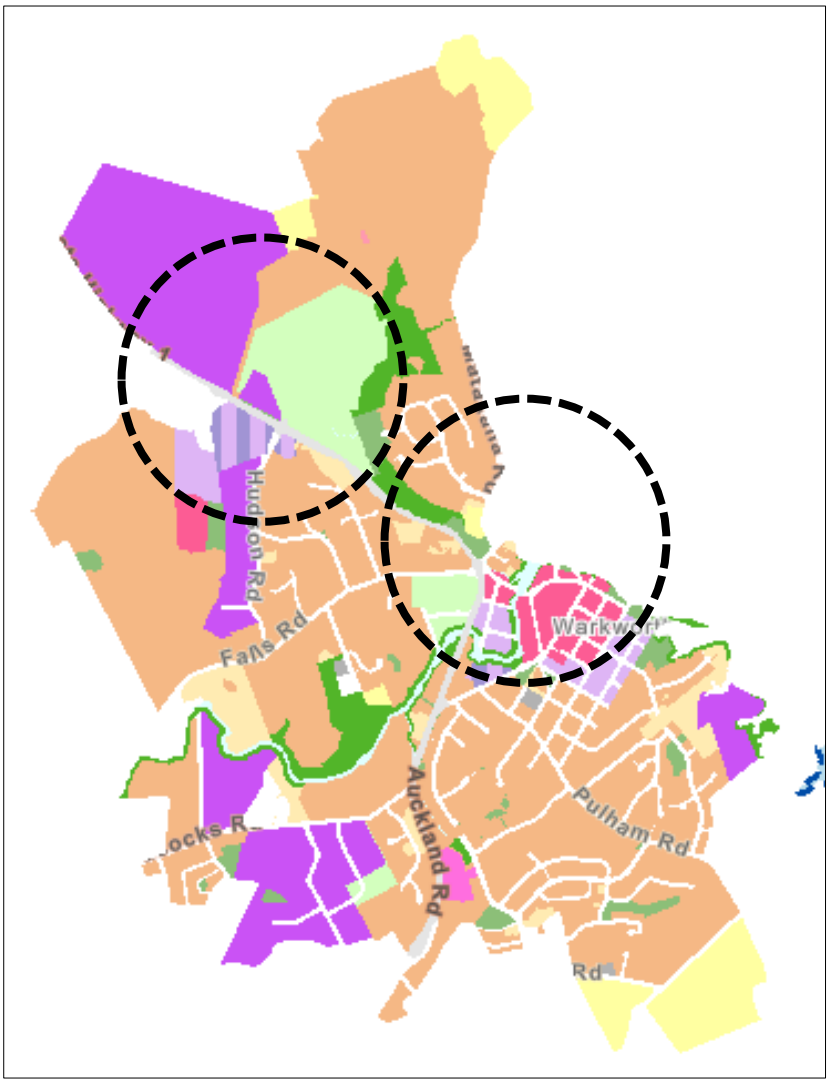
Warkworth North AUP



In addition to the Warkworth area, it is also noted the rural settlements to the north of Warkworth are also expected to experience ongoing growth. This includes in the areas of Algies Bay, Wellsford and Matakana.

The below figure shows an 800m radius within the north growth area, demonstrating the effective catchments of two public transport hubs in the north. The provision of a permanent PT Hub in the north will provide an opportunity for a strong walk-up catchment for this increasingly intensified area in Warkworth and will also provide connectivity to social infrastructure such as the Mahurangi Rugby Club and Warkworth Showgrounds.

Table 5-46: Approximate 1 Km Public Transport Catchment (PC 78 map)



Timing and Staging

The Warkworth IBC stated a preference for a long-term park and ride and public transport hub in the south near the southern interchange to access Ara Tūhono.

Further investigations through the Warkworth DBC recommended that implementation staging of the Southern Interchange be later (2048) than that assumed by the IBC (2028). This is a result of various factors including:

- *Climate Change*: the early implementation of access to Ara Tūhono is considered to potentially undermine wider mode shift objectives, and the possible delay in delivery of the interchange, while providing public transport options, may provide an opportunity to be consistent with policy objectives such as those identified in the Emissions Reduction Plan
- *Maximising Existing Assets*: the investment hierarchy drives prioritisation of investment in such a way that encourages the utilisation of existing infrastructure, and investment in new infrastructure on an 'as needed' basis. This approach to "sweat the assets" pushes the delivery of the Southern Interchange towards the end of the forecasted growth programme

- *Complex Delivery Mechanisms*: Ara Tūhono is being delivered by a public private partnership (NX2), with long term performance criteria. As such, it is considered that the implementation of the southern interchange will likely occur towards the later end of this contract period

Given the above considerations, any interim facility in the north is unlikely to be short term, but rather will be required to support the Warkworth area for a longer period then previously assumed in the IBC.

Existing Interim Facilities

The Rodney Local Board has recently provided an interim facility in the north of Warkworth consistent with the interim objectives of a northern PT interchange and park and ride in the IBC. The interim facilities include 137 parking spaces, two bus stops and a bus layover.

Figure 5-42: Warkworth Community Transport Hub

Through engagement with the Rodney Local Board, they have confirmed that they have medium to long-term development aspirations for this site, as part of wider redevelopments of Council land in the area.

While the site has been designed to support an immediate need, it is bound by SH1 and the Mahurangi River with limited opportunities to expand. As such the site is not adequate to accommodate the forecasted increase in demand for bus stops, bus layovers and likely medium to longer term park and ride demands.

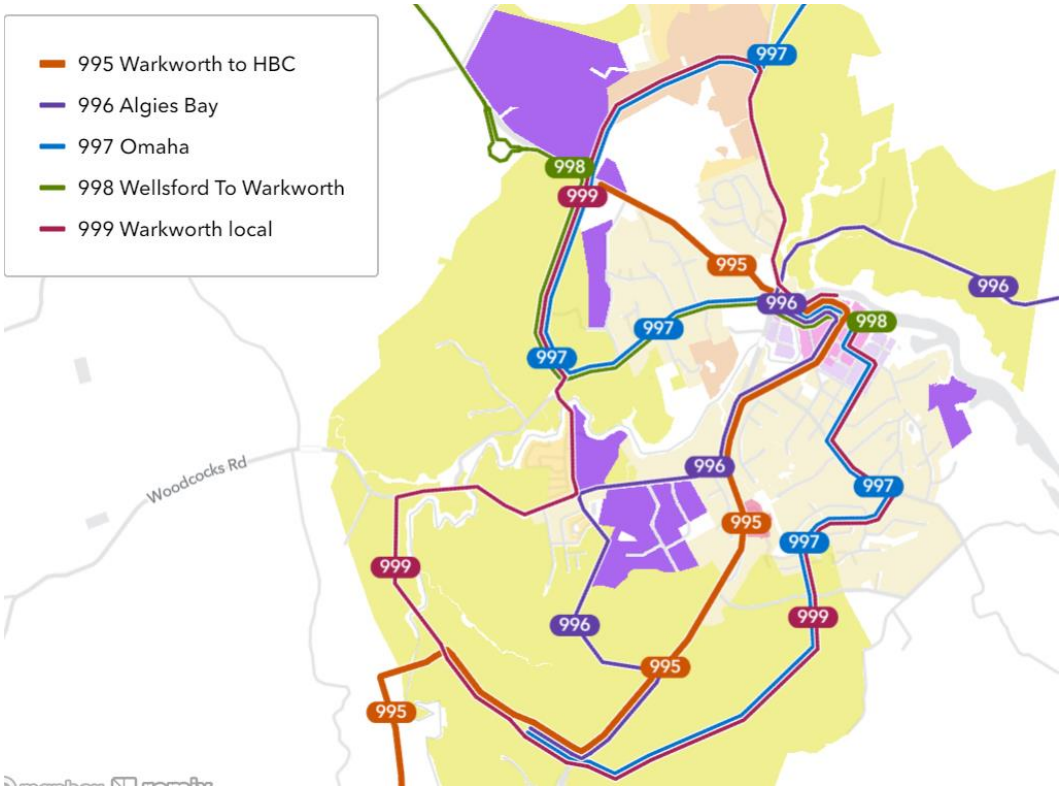
Wider Network Integration

In addition to servicing the local community, based on current travel demands, Warkworth acts as a central hub and gateway for a number of surrounding villages including Sandspit (7km), Snells Beach (8.5km), Algies Bay (10km) and Matakana (8.8km).

The indicative medium to long term network shows a confluence of routes in and around the northern Warkworth area. This presents a significant opportunity for interchange facilities in this area, enabling patrons to move between local services.

In terms of connections to the wider region, there is expected to be ongoing and increased demand for interregional bus services to townships further north such as Whangarei and Bay of Islands. These services will be able to reach Warkworth from Auckland and Whangārei via the Ara Tūhono roundabout. Given that the southern interchange is proposed to only have south facing ramps, this means that access to Auckland via Warkworth from Whangarei will continue to need to be via the northern interchange. A PT facility in the vicinity of this interchange will provide an efficient transfer location.

Figure 5-43: Indicative Public Transport Network in 2048



Overall, a long-term public transport hub facility in the northern growth areas is considered critical to achieving the wider transport outcomes for the area and should be considered a permanent facility rather than an interim facility as per the recommendations of the Warkworth IBC. In particular a northern PT interchange is considered to:

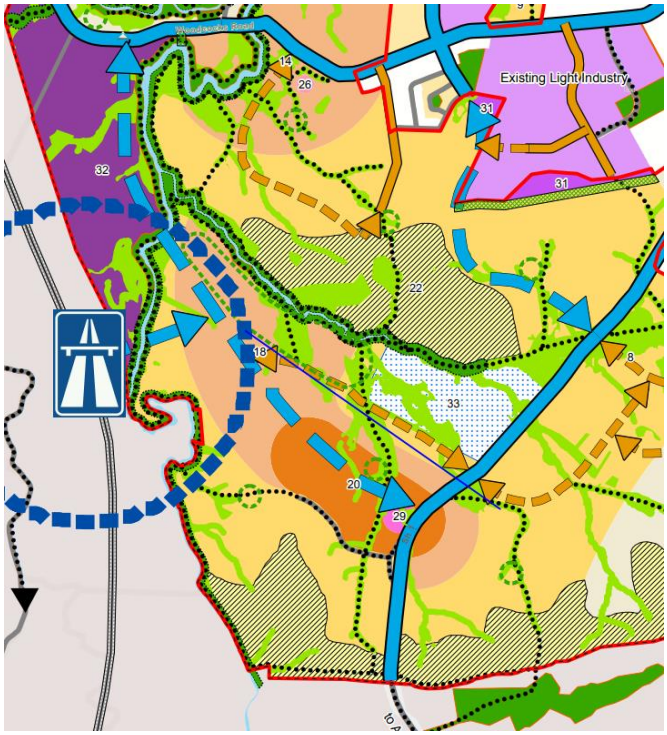
- Provide a strong long term public transport facility to support progressive development in the Northern growth area and expected brownfield development in the existing urban area in Warkworth
- Provide a facility to address Warkworth town centre constraints including a lack of layover facilities, staff facilities and limited bus stops
- Provide a key facility that can be utilised to achieve an integrated public transport connectivity without reliance on the implementation of the southern interchange with Ara Tūhono.

5.9.3.2 Southern PT Interchange

The Southern PT Interchange was identified in the IBC as being required to support the projected land use within Warkworth Structure Plan. The Warkworth Structure Plan indicated that this portion of Warkworth would include a local centre, and higher density houses, with Town House and Apartment Zoning indicated alongside the Wider Western Link.

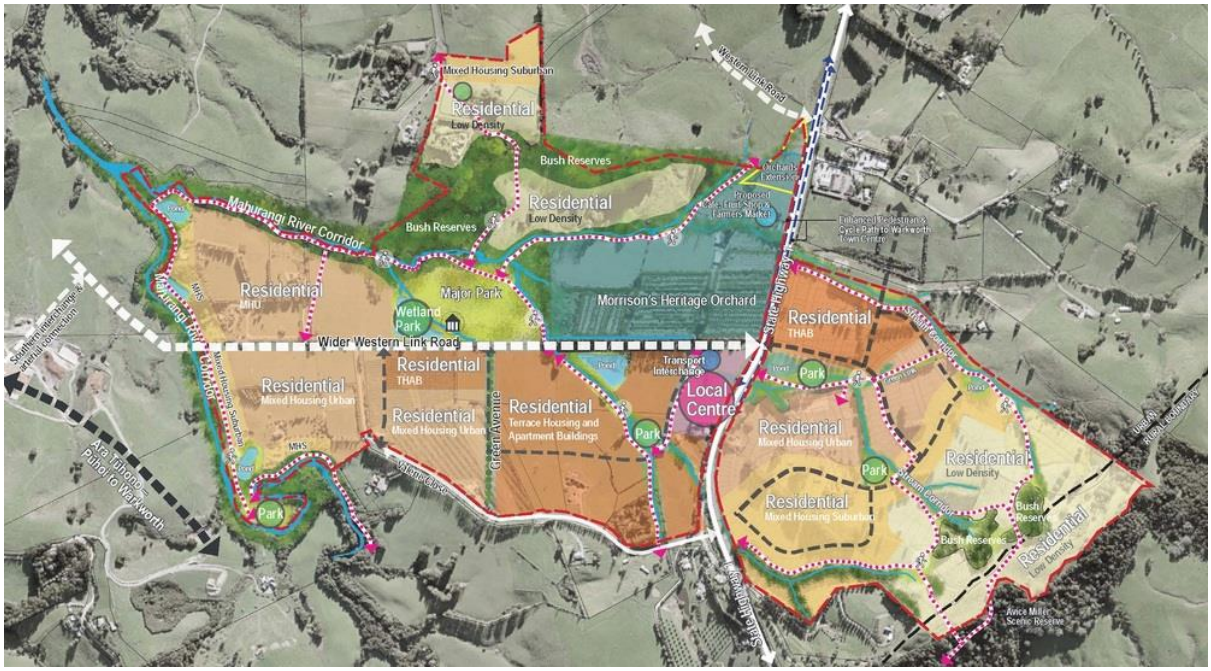
A critical element to the southern public transport interchange is the co-location of the local centre with a public transport facility. This will enable an integrated land use transport outcome for the southern growth area, which supports a walk-up catchment and offers opportunities for residents to travel efficiently within Warkworth without the requirement of a private vehicle.

Figure 5-44: Warkworth Structure Plan - Southern Growth Area



Current development plans indicate a strong land use alignment with the intention of the Warkworth Structure Plan, including a local centre co-located with a transport interchange, surrounded by high density residential land use.

Figure 5-45: Waimanawa Master Plan[3]



In the longer term, with the implementation of the southern interchange, this creates an opportunity to link regional services to Auckland with the public transport interchange, improving access for higher population areas.

Overall, a public transport interchange in the southern growth will provide significant transport and urban mobility benefits to the future southern community.

5.9.3.3 Park and Ride

A park and ride offers a significant opportunity to intercept and redirect car-based trips on to public transport – for those travelling beyond Warkworth. As identified above in Section 5.10.3.1, Warkworth acts as a central hub and gateway for a number of surrounding villages including Sandspit (7km), Snells Beach (8.5km), Algies Bay (10km) and Matakana (8.8km). Currently 2,625 people[4] travel to Warkworth from these areas and the broader hinterland for work or school, more than doubling the towns current population of 2,481[5].

Warkworth also sits 40min drive (43km) from Albany with approximately half (420)[6] of the departures from Warkworth traveling south to the Hibiscus Coast, North Shore, and Auckland City. In addition, about a quarter[7] of the people who depart from the hinterland around Warkworth also travel south to the Hibiscus Coast and beyond.

A park and ride for Warkworth is well aligned with the policy directions identified above. As a product, offering a park and ride will enable travellers from the wider area to transfer to public transport options at Warkworth, and will also support commuters from Warkworth a reliable public transport option to travel to Hibiscus Coast and beyond. Located within the fringe of Auckland, a Park and Ride in

[3] https://matakanaapp.co.nz/news/daily-news/1400-house-development-proposed-for-warkworth?id=60be929207ca64002be8742a
[4] Commuter.Waka.app
[5] 2018 census data
[6] Commuter.Waka.app
[7] Commuter.Waka.app

Warkworth supports a PT option for communities that otherwise would be difficult to service due to geography, limited populations, and network operational costs.

Park and Ride facilities are now directed through policy to provide for a broader variety of uses reflecting the significant costs of providing and maintaining park and rides. This can include functioning as an interchange for both regional and local bus trips.

The focus and role of a Park and Ride has shifted to capturing car trips closer to point of origin (people getting on the buses more efficiently) rather than maximising accessibility and proximity to a strategic network – in this case Ara Tūhono. In addition, a Park and Ride location should look to capture private vehicle trips from where bus services are less frequent / widespread but where there is still demand - in this case the hinterland and villages surrounding Warkworth.

In the right location, park-and-ride facilities attract mode shift to public transport by increasing the accessibility of stations, thereby attracting new public transport trips that would not have occurred otherwise and / or otherwise would have been made by car. Park-and-Ride's are generally not appropriate in town centres and are best used to serve areas where there is insufficient density to support feeder buses or a walk-up catchment – e.g. rural areas and developing fringe suburbs.

In this case, the Park and Ride is to serve people travelling to and from outlying settlements around Warkworth i.e. Matakana, Snells Beach who will not have a future high frequency bus service, acting as a bus interchange between multiple services, as well as supporting bus services between Warkworth and Auckland City.

The IBC recommended a park-and-ride near the southern interchange to Ara Tūhono. The location of a park and ride at the southern interchange with Ara Tūhono location does not align with updated Park and Ride policy and the principles of the Design Framework.

In particular, the implementation of the southern interchange was a key reason for shifting the park-and-ride to the south in the IBC as it would enable buses to efficiently gain access to and from the motorway route. However, the southern location fails to intercept people travelling in vehicles from outlying settlements. Park and Ride users would also need to traverse a large part of the local network contributing to additional local congestion, extra distance travelled, delay to local bus services and reduced amenity / safety for active mode users.

Based on the policy direction, principles, and travel demand profile of Warkworth the area that best addresses the Park and Ride requirements is located in the north. A Park and Ride in the north achieves the following:

- Encompasses a planned residential land use to maximise walk up catchment. This balances primarily serving the current dispersed catchment vs precluding potential users within a walk-up catchment
- Encompasses a planned local centre to connect key destinations and encourage use of the local bus network
- Captures travel to / from all major settlements is via four main corridors including SH1 (north) through to Wellsford, Tūhonohono ki Tai - Matakana Link Road, Matakana Road, and Sandspit Road. Once operational, Matakana Link Road will significantly shorten the distance to Ara Tūhono for those travelling from Matakana and beyond. Sandspit Link will also provide an alternative connection to SH1 (via Matakana Link Road) rather than through Hill Street Intersection for residents around Snell Beach. Capturing vehicles from these settlements before they traverse the local network is a key objective and aligns with the Design Framework and AT policies

- Similar to the above, a northern site is located on the edge of Warkworth at the confluence of several corridors connecting outlying settlements – therefore intercepting people in vehicles before they traverse a large area of local network
- Supports efficient bus access to Ara Tūhono in the interim and future and has the potential to widen the local catchment for the 995.

5.9.3.4 Summary of IBC Public Transport Review

The following table provides a summary of the IBC Public Transport Review:

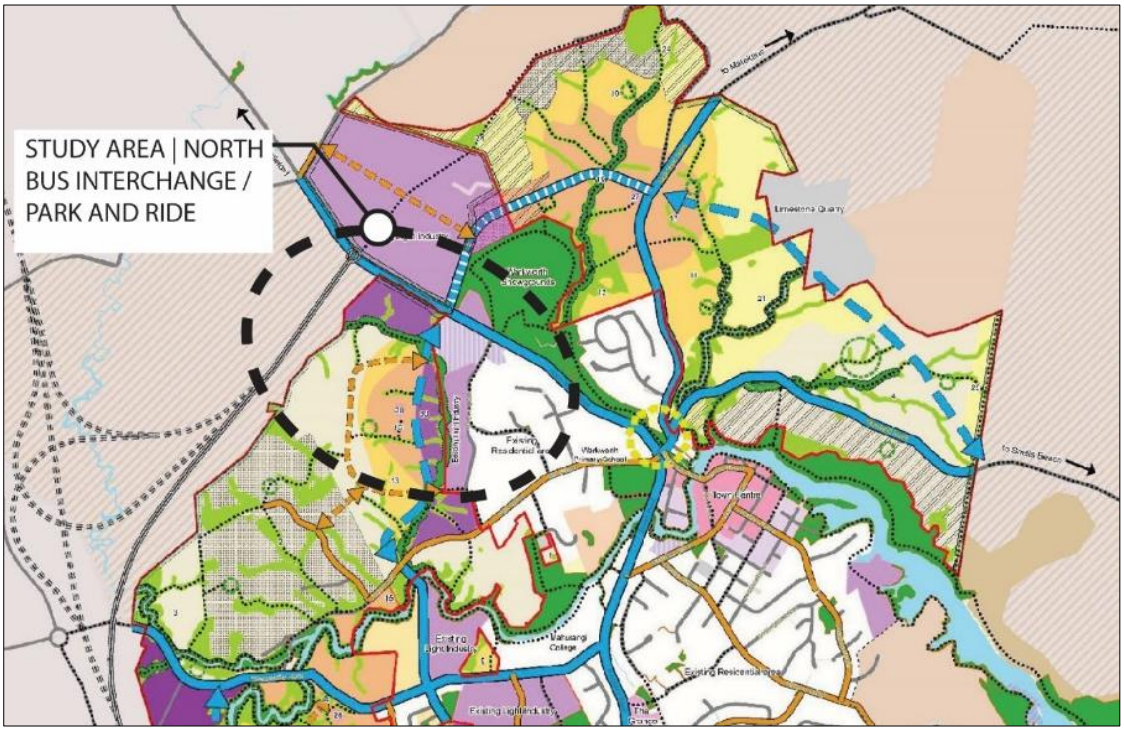
Table 5-47. Summary of the IBC Public Transport Review

Public Transport Facility	Warkworth IBC Recommendation	Warkworth DBC Recommendation
Interim Northern PT Interchange	• Provides PT access near Ara Tūhono until southern interchange is implemented • Move to the southern growth when this area is developed to support increased density • Provides support to constrained facilities in Warkworth town centre.	• Retain interim PT interchange as a long-term facility • Southern interchange timing likely to be later than previously assumed in IBC • Increased land use density in north Warkworth due to private plan changes and Council led plan changes • Interim Local Board facility insufficient to support projected growth • Continued support to constrained facilities in Warkworth town centre.
Southern PT Interchange	• Complements adjacent land uses such as the local centre and high density living • Supports an efficient public transport network and service pattern.	• Retain southern PT interchange (no change).
Park and Ride	• Appropriate facility given fringe location of Warkworth with outer rural settlements.	• Retain park and ride facility but integrate with a long term northern PT interchange.

5.9.4 Study Area for Northern PT Hub

A broad geographic study area in the north for the Northern PT Hub and Park and Ride facility is shown in Figure 5-46 below.

Figure 5-46. Recommended study area for the Northern PT Hub and Park and Ride circled in black



The recommended study area was identified for the following reasons:

a) Proximity to a planned local centre and surrounding high density living as identified in the operative Warkworth North Precinct Plan - location of a PT Hub and Park and Ride within the recommended study area would maximise the walk-up catchment to the public transport network
b) Intercepts people travelling to and from outlying settlements around Warkworth i.e. Matakana, Snells Beach with colocation of a park and ride with the PT Hub improving access to public transport for these travellers
c) Serves a dual function by intercepting vehicle-based trips and maximising accessibility to active mode catchment
d) Connects directly to a separated cycling and micro-mobility facility network
e) Supports local service interchange and potentially links to the Western Link which is an important north south corridor and key bus route in the future.

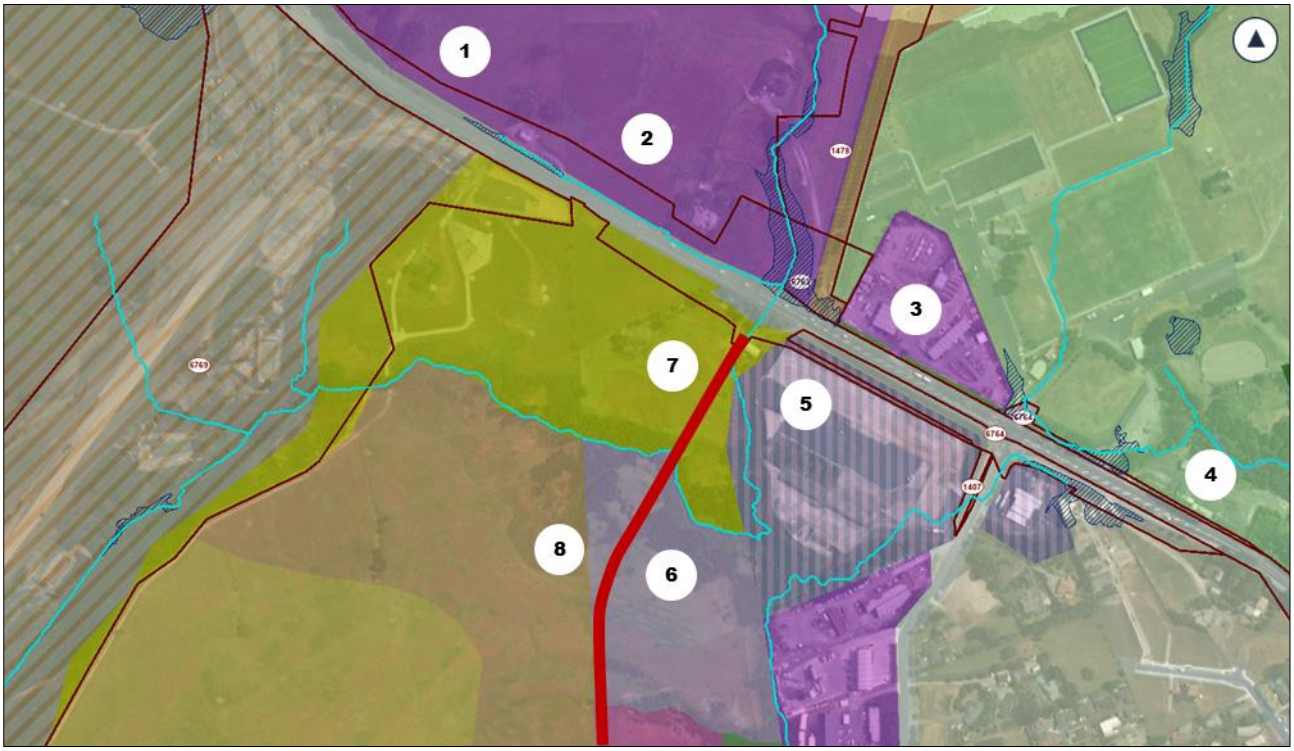
5.9.4.1 Study Area Refinement

In order to refine the proposed study area further, eight potential study areas for the Northern PT Hub and Park and Ride were developed for consideration as outlined below.

Table 5-48. Northern PT Hub and Park and Ride Study Areas

Study Area	Study Area Description
1	Adjacent to Ara Tūhono
2	West of Te Honohono ki Tai (Matakana Link Road)
3	Adjacent to the Warkworth Showgrounds
4	Interim Council PT Hub
5	South of SH1 adjacent to the Warkworth Showgrounds
6	South of Option 5
7	IBC location for interim PT Hub
8	South of Option 7

Figure 5-47: Location options for Northern PT Hub & Park and Ride



5.9.4.2 Study Area Refinement – Assessment

To refine the northern study area and sieve out sub areas that will not meet the transport and land use outcomes being sought, a principle-based transport and land use assessment was undertaken.

The potential study areas for the Northern PT Hub and Park and Ride facility were considered against criteria based on principles from the Te Tupu Ngātahi Design Framework and Tool Kit, including:

- Active mode catchments and walkability
- Local identity: Placemaking potential and local identity
- Land use and future growth: Respond and integrate with adjacent and future land use / growth, respect natural features
- Modal Priority: efficient connectivity between transport modes
- Cross corridor connectivity and accessibility to / between facilities
- Environmental: impact on the environment.

Consideration also given to constructability i.e. any construction constraints, at a workshop with the project team, technical specialists, and SME's to identify a shortlist of location options for the Northern PT Hub and Park and Ride. The assessment was also informed by the outcome of the gap analysis and the constraints map exercise which identified key features / constraints to consider within the area.

This approach was considered appropriate to sieve the site locations to those that meet the design framework in the first instance and remove potential study areas that will not achieve wider transport and design outcomes.

Feedback received from engagement with Te Tupu Ngātahi partners and stakeholders was also considered. A summary of the feedback received is shown in Table 5-49 below.

Table 5-49. Summary of engagement for Northern PT Hub

Project	Feedback
Northern PT Hub and Park and Ride facility	• Preference for park and ride facility to be in the northern location • Study areas 1,6,8 too far away for efficient bus operation.

The following table identifies the outcomes of the assessment.

Table 5-50: Northern PT Hub and Park & Ride Study Area Assessment

Design Framework Principles	Study Area 1	Study Area 2	Study Area 3	Study Area 4	Study Area 5	Study Area 6	Study Area 7	Study Area 8
Active mode connectivity								
Active mode catchment								
PT & Vehicle Access								
Land use								
Constructability (Footprint)								
Environment								

The Project Team identified Study Area 6, 7 and 8 as the preferred study areas for further consideration and option development for the reasons identified in Table 5-51 below.

Table 5-51. Northern PT Hub and Park and Ride Preferred Location Options

Location	Assessment Outcome
Study Area 6 South of Study Area 5	• Study Area connects people and modes directly to key destinations such as the future town centre, Warkworth Showgrounds, and places of employment in the industrial area • Achieves active mode catchment and connectivity outcomes • Location aligns with density in the area.
Study Area 7 IBC location for interim PT Hub	• Dual accessibility ability to SH1 (left exit only) and the Western Link - North • Indicative PT Hub location noted in PC25 / Warkworth North Precinct Plan is within this quadrant.
Study Area 8 South of Option 7	• Study Area aligns with density in the area and is in proximity to the town centre • Study Area has future redevelopment potential • Park and ride facility is located closer to the town centre.

The remaining Study Areas were discounted by the Project Team for reasons identified in Table 5-52 below.

Table 5-52. Northern PT Hub and Park and Ride Qualitative Summary - Discounted Study Areas

Study Area	Assessment Outcomes
Study Area 1 Adjacent to Ara Tūhono	• Study Area conflicts with the Ara Tūhono interchange • Within industrial zoned land and as a result reduces walk up catchment from residential and recreational land uses • Flooding outcome is more extensive in the northern area • Impacts on industrial land which is in short supply.
Study Area 2 West of Te Honohono ki Tai (Matakana Link Road)	• Reduced active mode catchment due to SH1 severance and industrial zoning in the area • Flooding outcome is more extensive in the northern area • Impacts industrial land which is in short supply • Requires a more circuitous route for local buses.
Study Area 3 Adjacent to the Warkworth Showgrounds	• Reduced active mode catchment due to SH1 severance and industrial zoning to the west • Has a potential conflict with the Te Honohono ki Tai (Matakana Link Road) intersection • Impacts on Warkworth Showgrounds and industrial land use to the west which is in short supply.
Study Area 4 Interim Council PT Hub	• The expanded footprint of the facility in this location will likely impact on the Warkworth Showgrounds • Reduced active mode catchment due to land use including the SEA and limited property access due to topography

Study Area	Assessment Outcomes
	• SEA and permanent streams are adjacent to the location.
Study Area 5 South of SH1 adjacent to the Warkworth Showgrounds	• Pak N Save development is located on the corner site between the Western Link and Te Honohono ki tai. This is currently under development and creates a constraint • Creates conflict with Te Honohono ki Tai (Matakana Link Road) and SH1 intersection causing safety concerns for active mode users.

5.9.5 Route: Option Development

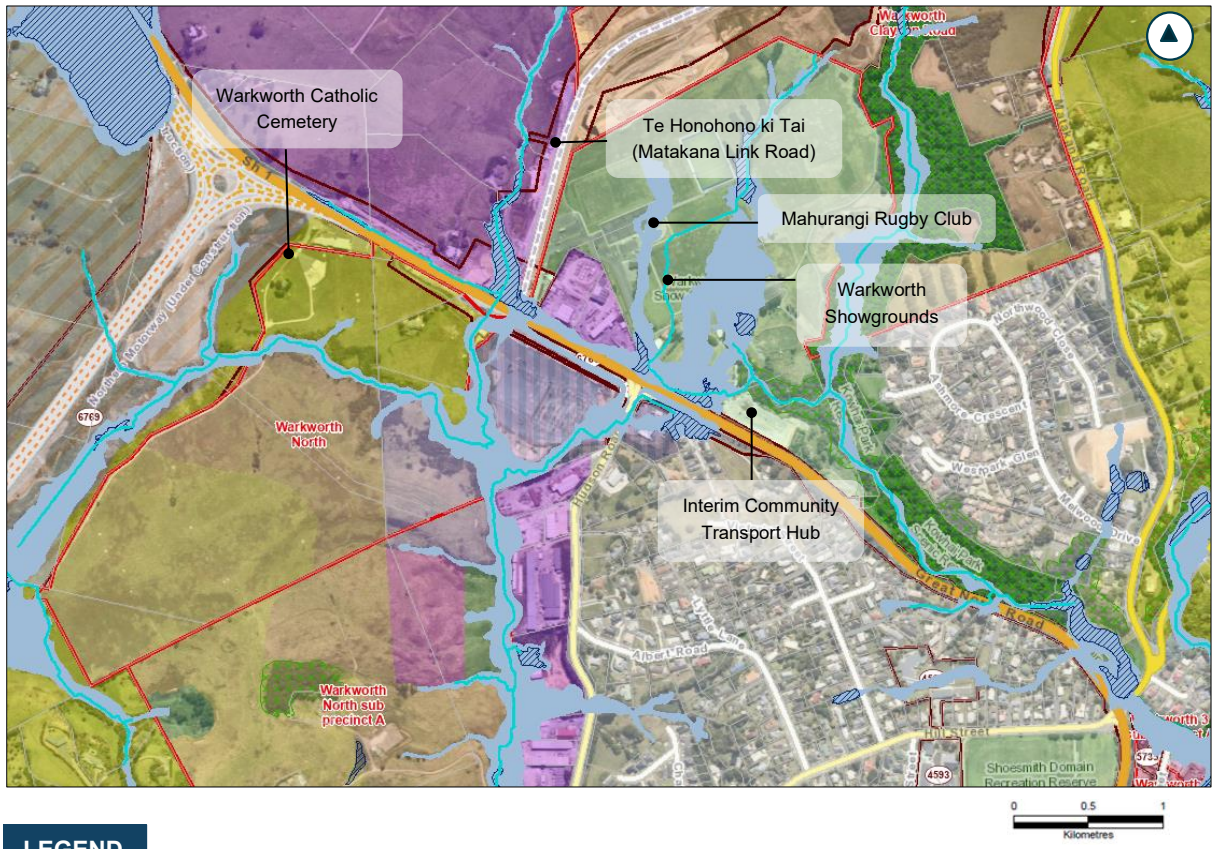
In developing options for the location of the PT Hub and Park and Ride, the Project Team also considered current and future land use in addition to known key features and constraints in the area. These are mapped below and include:

- Warkworth Catholic Cemetery in the western section
- Interim community transport hub station located adjacent to the Warkworth Showgrounds
- Floodplains particularly in the western and eastern sections
- SEA in the north-eastern section
- Permanent streams and flooding risk around the extent of Te Honohono ki Tai (Matakana Link Road)
- Warkworth Showgrounds and the Mahurangi Rugby Club located in the northern section
- Proximity to the intersection with Te Honohono ki Tai (Matakana Link Road) and the Ara Tūhono (Puhoi to Wellsford motorway) intersection in the west.

In terms of footprint assumptions for option development the following infrastructure requirements were determined through engagement with AT Subject Matter Experts. The footprint assumptions included:

- Four active bus stops
- Capacity for at least five services (terminating and through) Note: no reverse movements within the transport hub, so turning facilities to be considered in overall shape and dimensions
- Two layover spaces - includes long distance coaches to Northland
- Kiss and ride drop off facilities
- Bus Driver / Staff facilities to be provided for including a break room and a toilet which could be integrated with public toilets potentially
- Park and Ride for up to 250 spaces based on expected demand.

Figure 5-48: Northern PT Hub and Park and Ride Study area constraints mapping



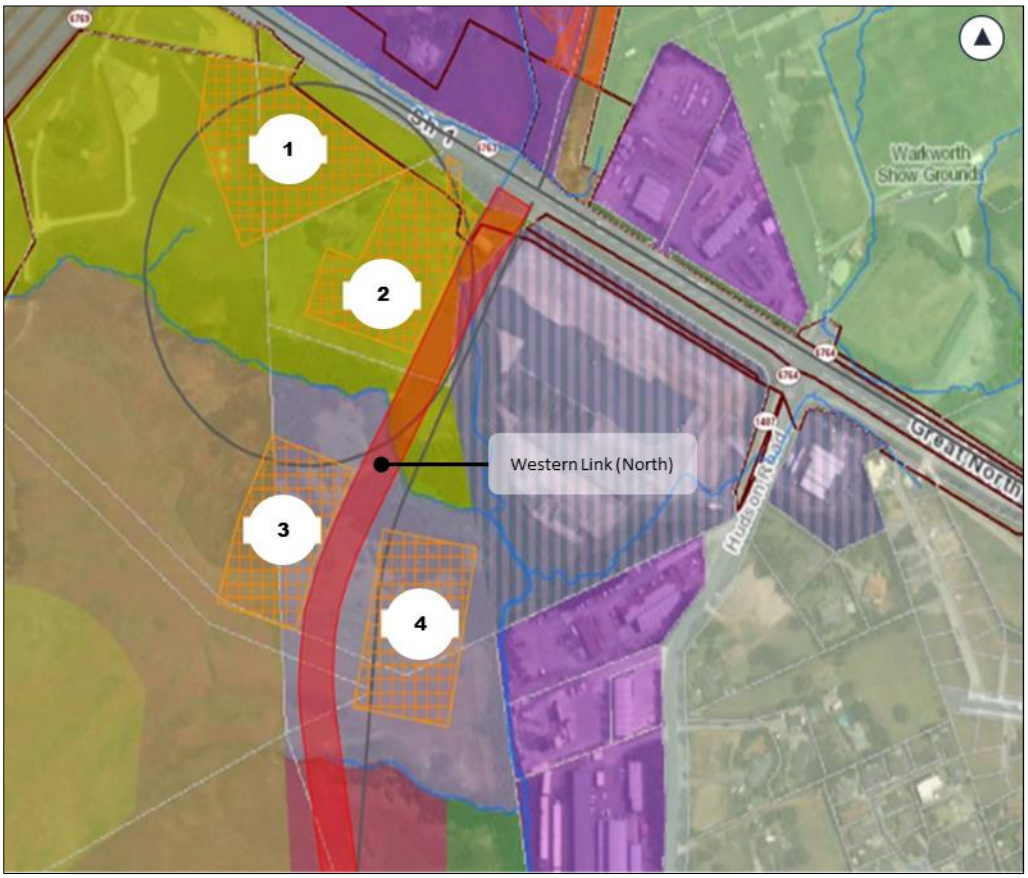
5.9.6 Route: Option Assessment

Indicative concept layouts for the four options located in the preferred Study Areas (6,7,8) were developed for assessment within the MCA Framework. These options are shown below in Table 5-53and Figure 5-49. The approximate number of carparks in each option was determined by the size and shape of each indicative concept layout.

Table 5-53: Northern PT Hub options

Option	Description
1	North-west of Western Link (approximately 238 carparks)
2	North-west (directly adjacent) to Western Link (approximately 229 carparks)
3	South-west of Western Link (approximately 214 carparks)
4	South-east of Western Link (approximately 221 carparks)

Figure 5-49: Indicative Northern PT Hub and Park & Ride options



Indicative facility concept layouts for the four options are shown in Figure 5-50, Figure 5-51, Figure 5-52, and Figure 5-53 below.

Figure 5-50: Option 1 Indicative Concept Layout

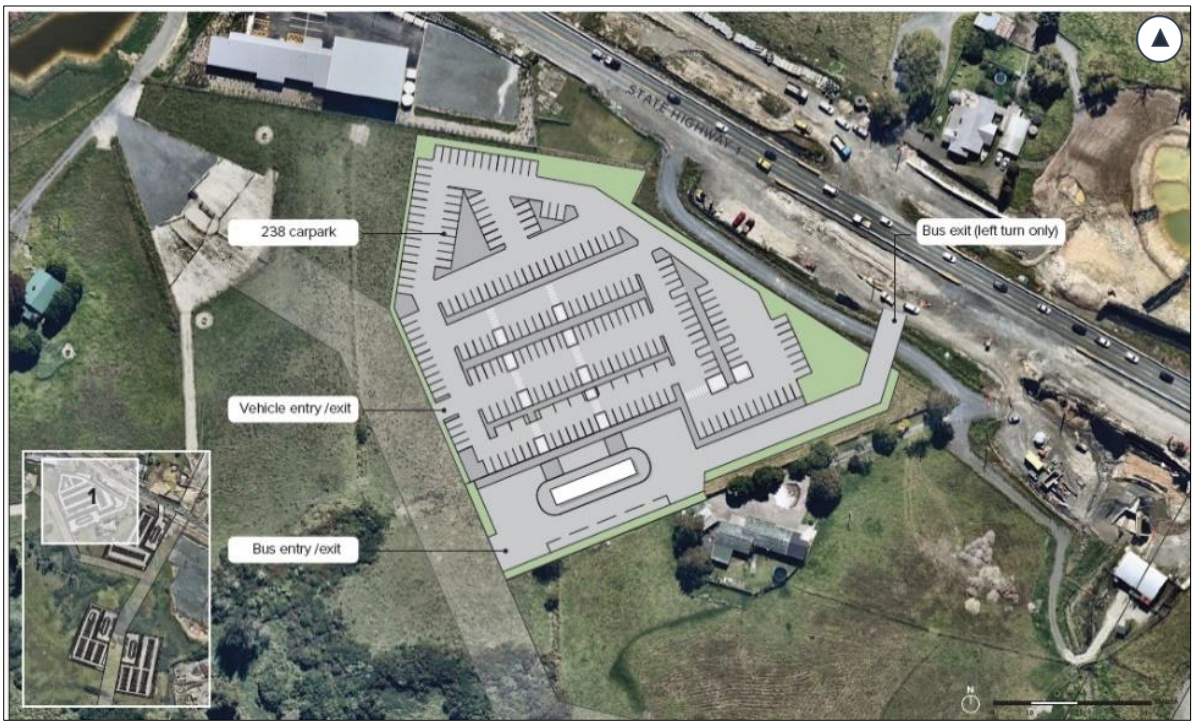


Figure 5-51. Option 2 Indicative Concept Layout

Figure 5-52. Option 3 Indicative Concept Layout

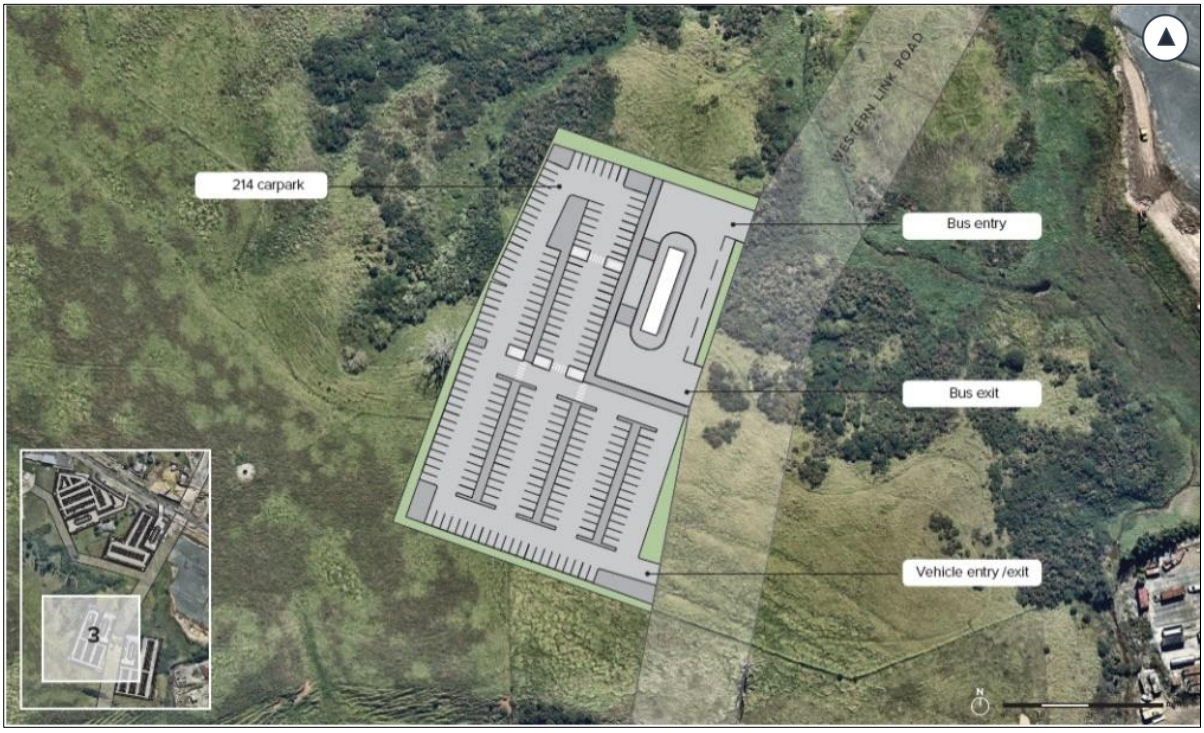


Figure 5-53: Option 4 Indicative Concept Layout

As set out in Section 5, options were assessed against the DBC investment objectives and criteria within four well-beings, cultural, social, environmental, and economic. Technical specialists engaged in a full day MCA workshop to undertake an assessment, scoring each option on a gradual scale from 'Very High Adverse Effect' (red) to 'Very High Positive Impact' (green).

The following table identifies the outcomes from this assessment.

Table 5-54: Northern PT Hub MCA workshop 1 scoring

MCA Criteria	Option 1	Option 2	Option 3	Option 4
I.O.1 – Access				
I.O.2 – Integration				
I.O.3 – Travel Choice				
Heritage				
Land use				
Urban Design				
Land Requirement				
Social Cohesion				
Human health and wellbeing				
Landscape / Visual				
Stormwater				
Ecology				
Natural Hazards				
Construction impacts				
Construction disruption				
Construction cost / risk				

The Project Team reviewed and compared the options identified above and noted that matters relating to ecology, stormwater, natural hazards, and construction were the key differentiators between options with options 1 and 3 scoring less favourably in this regard.

Accordingly, the Project Team identified Options 2 and 4 as the preferred options for further refinement and assessment for the reasons outlined in Table 5-55 below.

Table 5-55: Assessment outcomes for preferred options

Option	Assessment outcome
2 North-west (directly adjacent) to Western Link (approximately 229 carparks)	• Increased operational efficiency for buses with the facility located at the confluence of multiple bus services • Supports connectivity for services to the existing Warkworth town centre including Warkworth to Wellsford services • Facility's proximity to SH1 and Te Honohono ki Tai (Matakana Link Road) intercepts private vehicle trips from the hinterland well and the park and ride component of the facility integrates well with the surrounding commercial / industrial land use • Option has opportunity for integration with future commercial developments on adjacent General Business land.
4	• Option has an increased walking and cycling catchment due to proximity to the future local centre

Option	Assessment outcome
South-east of Western Link (approximately 221 carparks)	• High amenity values due to proximity to the local centre.

The remaining options were discounted by the Project Team for reasons outlined in Table 5-56 below.

Table 5-56: Assessment outcomes for discarded Northern PT Hub and Park & Ride options

Option	Assessment Outcome
1 North-west of Western Link (approximately 238 carparks)	• Has limited land use integration opportunities due to the distance from Western Link – North • Reduced access and connectivity for all transport modes from the northern Warkworth growth area as option is furthest from WLR-North and closer to industrial zoning north of SH1 and the Ara Tūhono intersection to the west • Has the largest footprint and land requirement.
3 South-west of Western Link (approximately 214 carparks)	• Proximity of park and ride component to residential zones will result adverse air quality and noise and vibrations effects • There is a likelihood of natural wetlands occurring within the site footprint • Location results in access barriers for public transport and town centre, access would require pedestrians and cyclists to cross the Western Link – North and PT and private vehicles to traverse the Western Link to get to the PT Hub and Park and Ride • Large extent of earthworks and a longer Western Link – North corridor is required.

5.9.7 Engagement

The following section provides a summary of the project specific feedback received from engagement with Te Tupu Ngātahi partners, stakeholders, and community members.

Project	Feedback
Northern PT Hub and Park and Ride facility	• Support for the location of the PT Hub in the north • Support for public transport options and sufficient park and ride facilities – some concern that the park and ride facility is too small • Provision for access by walking and cycling is important • Proximity and access to the Catholic cemetery is desirable • Provision of cycle and walking access including underpasses through to Warkworth town.

5.9.8 Option Refinement

Following the MCA workshop, refinements were suggested for the concept layout that may address initial concerns from the specialists regarding the stormwater and ecological impacts of Options 2 and 4, the project team completed refinements to the layout of the initial concept design, to test if this would potentially minimise their development and environmental impacts. Post refinement two further options were developed in Option 2a and Option 4a with these were then taken through the MCA process.

Table 5-57 below specifies the refinements made to Option 2 and 4 for reassessment as Option 2a and 4a.

Table 5-57. Refinements to preferred options

Option	Proposed Refinements
2	• Shift location west to avoid stormwater and ecological areas north-east of the site • Improve ability to repurpose residual land.
4	• Shift location south to avoid ecological and wetland areas to the north of the site • Redesign conceptual layout to position bus entry to the south of the facility to improve bus interface with the local town centre.

The refined concept layouts of each of the options is shown below in Figure 5-54 and Figure 5-55 below.

Figure 5-54. Option 2a - Northeast Western Link

Figure 5-55. Option 4a - Southeast Western Link

5.9.9 MCA Workshop 2

The project team and technical specialists participated in a subsequent MCA workshop after the development of refined options 2a and 4a.

The Table 5-58 below identifies the outcomes from this assessment for ease of comparison the assessment outcomes for Options 2 and 4 have also been added to the table below.

Table 5-58: Northern PT Hub MCA Workshop 2 scoring

MCA Criteria	Option 2a	Option 4a	Option 2 (for comparison only)	Option 4 (for comparison only)
I.O.1 – Access				
I.O.2 – Integration				
I.O.3 – Travel Choice				
Heritage				
Land use				
Urban Design				
Land Requirement				
Social Cohesion				
Human health and wellbeing				
Landscape / Visual				
Stormwater				
Ecology				
Natural Hazards				
Construction impacts				

MCA Criteria	Option 2a	Option 4a	Option 2 (for comparison only)	Option 4 (for comparison only)
Construction disruption				
Construction cost / risk				

The Project Team reviewed and compared the options identified above and noted that matters relating to stormwater, natural hazards, and construction were the key differentiators between options.

Accordingly, the Project Team identified Option 2a as the preferred route refinement option for the reasons identified in Table 5-59 below.

Table 5-59: Assessment outcomes for emerging preferred option

Option	Assessment Outcomes
Option 2a North-west (directly adjacent) to Western Link (approximately 228 carparks)	• Supports efficient bus operations through location of facility at the confluence of multiple services • Supports connectivity for services to the existing Warkworth town centre including Warkworth to Wellsford services • Park and ride facilities located to intercept trips from the hinterland and reduce car trips into the residential areas. Carpark located near business land use minimising impact on future urban form • Results in slightly lower walk-up catchment compared to some other options due to the adjacent industrial land use (north of SH1). However, this can be managed through improved bus services along the Western Link - North and SH1 • Option has opportunity for integration with future commercial developments on adjacent General Business land • Refined layout / location has reduced impacts on ecology and stormwater constraints • Lower extent of earthworks required compared to option 4a • Residual land to be utilised as access road to adjacent land uses.

Option 4a was discounted by the Project Team for the reasons outlined in Table 5-60 below.

Table 5-60: Assessment outcomes for the discounted option

Option	Assessment Outcomes
Option 4a South-east of Western Link (approximately 223 carparks)	• Site is located to the north of the future town centre and will take up additional space, option has a high acquisition cost compared to option 2a due to location in the mixed-use zone • Larger footprint compared to Option 2a resulting in a higher land requirement effect • Option potentially within floodplain alongside the stream • Option still borders a potential wetland • Evidence of land instability and slope creep near the park and ride location

Option	Assessment Outcomes
	• Location has steep slopes which will require large earthworks or retaining to form a level area • Option will require an additional bridge and long Western Link – North corridor.

5.9.10 Option refinement – Post stormwater design

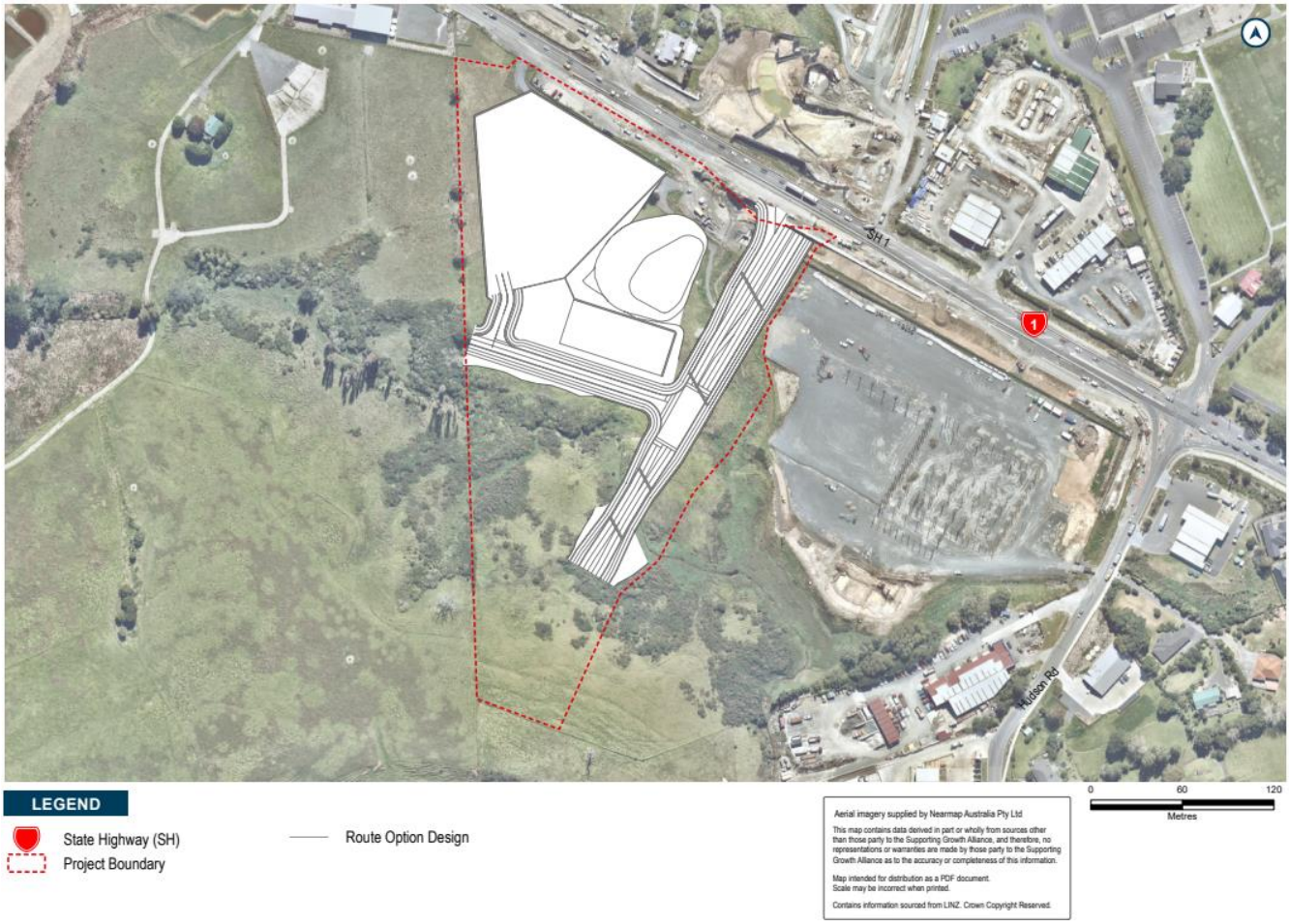
Following the identification of the emerging preferred location option (Option 2a) stormwater design works were undertaken as part of the 30 – 50% design development phase to identify the potential stormwater treatment options for the PT Hub and Park and Ride facility. These works concluded that the location of the stormwater treatment could not be provided for the Option 2a indicative layout as it currently existed, due to uneven topography in the area, and adverse construction impacts including on the planned local road connection from the WLR North. As a result, alternative facility layouts, within the general location of the emerging preferred option, were considered at a Project team workshop, which would allow for the provision of the required stormwater infrastructure in accordance with AT stormwater guidelines, while also continuing to achieve the facility outcomes achieved in this location, as well as maintaining local road access. The facility concept layout was subsequently refined, shifting the facility further to the west slightly in order to provide for the required stormwater treatment pond to be accommodated to the east of the facility, in a location that naturally dipped and operated as per the abovementioned stormwater guidelines.

As an alternative, prior to the location of Option 2a being shifted slightly west, the project team completed a design review on the second preferred option (Option 4a) to investigate whether the option would be more suitable. However, this option was dismissed due the steep topography of the area resulting in difficult stormwater wetland constructability unless earthworks or a retaining wall is provided to form a levelled area.

5.9.11 Option Summary

Following the option refinement process the preferred location for the DBC Northern PT Hub and Park & Ride facility was confirmed and is illustrated in Figure 5-55 below.

Figure 5-56. Recommended Northern PT Hub and Park and Ride Facility



6 Post DBC Option Refinement

Upon identification of the Warkworth transport network, the following refinements were made to the network.

- **NoR3 Woodcocks Road (Western Section)**
  Through a final review by the design team it was identified that implementation of the refined preferred corridor cross section (20m with walking and cycling facilities on both sides – cross section shown in Figure 6-1 below) would result in previously unidentified property and construction impacts on the existing residential area in the eastern section of the corridor as shown below in Figure 6-2. Specifically, the design extent and subsequent construction of the refined preferred option as it exists will require the demolition of an existing 2-3m retaining wall within the property boundary of the Summerset Retirement Village located to the northeast of the corridor. The existing wall would need to be replaced with a higher approximately 4-5m high retaining wall resulting in the likely need for the full acquisition of 10 residential units in order to facilitate the construction of the wall due the constrained area in this locality, and potential adverse impacts on the remaining (and future replacement) residential (retirement village) development, including amenity effects which could potentially affect the health and wellbeing of residents of the adjacent retirement village. Additionally, the Project team gave further consideration to options to limit property impacts on the existing residential (single house zone) development to the south of the corridor.

In considering an appropriate solution to address this matter the Project team noted an expressed preference from AT to avoid the use of shared paths and to retain separated active mode on each side of the corridor, as practicable. A reduced 15.9m cross section with separated cycling and walking provisions on both sides, but which excluded a berm and median strip, was subsequently identified as the preferred option for the eastern section of the corridor. This option still achieves the access, connectivity, and active mode transport outcomes for the corridor, while addressing the identified property and construction impacts on this section of the corridor. The remainder of the corridor to the west will be upgraded to a 24m wide cross section with walking and cycling provisions on both sides in accordance with the initial assessment.

Figure 6-1. Two-lane arterial 20m with cycling and walking provisions on both sides

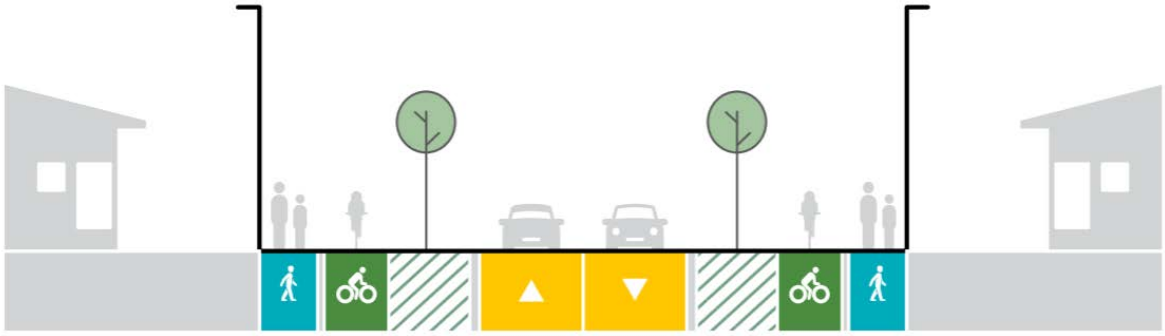


Figure 6-2. Woodcocks Road reduced cross section extent shown in orange

WAKA KOTAHI
NZ TRANSPORT AGENCY

Appendix 1: MCA Framework

1 Appendix 1: MCA framework

Well being	MCA topic	#	Criteria	Measure
Investment Objectives	**Investment Objectives**		Project specific	*Project specific (discussed in **Section 3.8.1**)*
Cultural	**1. Heritage**	1a	Heritage	*Extent of effects on:* • *Sites and places of valued heritage buildings, trees (with heritage value) and places.* • *Sites and places of archaeological value.* • *Sites and places of European cultural heritage value* • *Sites and places of significance to Manawhenua.*
Social	**2. Socio-economic impacts**	2a	Land use futures	*To what extent will the option impact on the future development of land (within the corridor, adjacent to it and impacted by it – i.e. consider all 3 scales), in relation to:* • *Underlying existing urban structure (block and street pattern)* • *Integration with the future landuse scenario (aligning housing delivery with infrastructure delivery)* • *Size and shape of potential development parcels to enable appropriate building typologies* • *Ability to consolidate residual land* • *Access that does not prevent neighbouring development.*
		2b	Urban design	*To what extent does the option support a quality urban environment (both current and future planned state)? particularly relating to:* • *Context and planned place making considerations* • *An inviting, pleasant and high amenity public realm* • *Open space integration*

Well being	MCA topic	#	Criteria	Measure
				• *Active interface between public and private realm* • *Scale of long term impact on the amenity and character of the surrounding environment.*
		2c	Land requirement	*Scale of public / private land (m2 / number of properties / special status of impacted property) required to deliver the option.*
		2d	Social cohesion	*Impact on connectivity / accessibility for the existing urban areas including access to:* • *Employment* • *Other communities or within the same community* • *Shops / services / other community and cultural facilities / 'attractors'* • *Severance of the existing community (including consented)* • *Scale of effect on existing community facilities and open space* • *Public access to the coast, rivers and lakes.*
		2e	Human Health and Wellbeing	*Will the option potentially affect any sensitive land uses nearby or consented (adjacent residential, childcare centres, hospitals, rest homes, marae and schools)? particularly relating to:* • *Air Quality* • *Contaminated Land* • *Noise and Vibration.*
Environmental	**3. Natural Environment**	3a	Landscape / visual	*Will the option have visual effects?* *Extent of effects on:* • *The natural landscape and features such as streams, coastal edges, natural vegetation and underlying topography – acknowledging planned changes to area in light of urban land use / zoning* • *Natural character and outstanding natural features / landscapes including geological features (mapped and protected features).*

Well being	MCA topic	#	Criteria	Measure
		3b	Stormwater	*Impact of operational stormwater (both quantity and quality) on the receiving environment, including:* • *Potential flooding effects of the option within the catchment* • *Extent and consequences of likely mitigation measures.*
		3c	Ecology	*Extent of effects on:* • *Significant indigenous flora* • *Significant habitats of indigenous fauna* • *Indigenous biodiversity* • *Stream / waterway ecology* • *Coastal environment (e.g. CMA).*
		3d	Natural Hazards	*Extent of effect on adverse geology; steep slopes; seismic impacts; other resilience risks (low level infrastructure near coastlines, inundation areas).*
Economic	**4. Transport**	4a	Transport system integration	*The extent to which the option achieves the following:* • *Integration with wider network and between modes* • *Resilience to operational incidents or short term life-line access disruption* • *Reduces the need to travel increase access to non-car choices.*
		4b	User Safety	*Extent of safety effects on all transport users, including:* • *People in public transport* • *People walking or cycling* • *People in private vehicles.*
	5. Construction impacts	5a	Construction impacts on utilities / infrastructure	*Requirements for relocation / design of existing infrastructure, including:* • *Consideration of safety impacts* • *Risk of continuity of service over construction* • *Engagement with utility providers* • *Opportunities for integration with other bulk infrastructure.*

Well being	MCA topic	#	Criteria	Measure
		5b	Construction Disruption	*Construction impacts on people and businesses regarding:* • *Traffic & noise* • *Earthworks related effects including dust* • *Quality of life and amenity* • *Economic impacts on businesses / community / town centres.*
	6. Cost & Construction Risk	6a	Construction costs and risk	*Assessed cost for construction of options including:* • *Complexity and risk in construction (including consideration of constructability)* • *Complexity in programme* • *Cost and complexity of safely undertaking works (including works on contaminated land).*

ATTACHMENT 27

APPENDIX B: STATUTORY ASSESSMENT

1 Statutory Assessment

Applicable notice	Key objectives and policies	Analysis
Urban growth and development capacity – Development capacity is planned and sequenced with infrastructure to meet the future needs of communities. – Urban growth and its associated infrastructure is provided for (and integrated) in appropriate locations, whilst recognising the values of highly productive rural land.		
All	NPS-UD: Objective 1 & 6, Policy 1(c)(e)(f), Policy 6. AUP:OP [RPS]: B2.2.1(1), B2.4.1(6), B2.4.2(6), B3.2.1(5), B3.3.1(1)(b), B3.3.1(1)(c), B3.3.2(4)(b), B3.3.2(5)(a), B9.2.1(2). AUP:OP [DP]: E27.2(1), E27.2(2), E27.2(5), E27.2(6). **NOR 4**	**Summary of Objectives and Policies** The NPS-UD seeks to ensure urban environments are well-functioning and enable all people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety. Within the NPS-UD Auckland is recognised as a Tier 1 urban environment and is therefore subject to a greater policy direction in terms of intensification and density of urban form. The NPS-UD directs that urban development is integrated with infrastructure planning and funding decisions and is strategic over the medium to long term. The objectives and policies of the AUP:OP seek to provide sufficient feasible development capacity for housing with set dwelling targets over the next 30 years. In order to reach these targets adequate infrastructure must be existing or provided prior to or with development. Provisions in Chapter E26 – Transport of the AUP:OP seek to ensure that land use and all modes of transport are integrated in a manner that realises the benefits of an integrated network and manages the adverse effects of traffic generation. Provisions in Chapter I552 – Warkworth Clayden Road Precinct of the AUP:OP seek to provide for urban growth in northern Warkworth while safely and efficiently integrating with the wider transport network and active modes. Provisions in Chapter I553 – Warkworth North Precinct of the AUP:OP seeks to recognise, protect and support transport corridors through the precinct which supports growth in the wider Warkworth area. **Assessment** The objectives and policies emphasise the importance of providing short, medium and long term residential and business capacity. This includes medium and long-term strategic planning for urban development. The Warkworth Package is consistent with these objectives and policies by providing for the necessary transport infrastructure to support the zoning of land in the Warkworth future urban areas and the establishment of the necessary development capacity. This is becoming increasingly important as a result of

Applicable notice	Key objectives and policies	Analysis
	I552.2(1), I552.2(4), I552.2(6), I552.3.(7), **NOR 1** I553.2(1)(a), I553.2(2), I553.2(3)(a), I553.3(2), I553.3(7), I553.3(8)	private plan changes being lodged with Auckland Council and developer interest in Warkworth identified via engagement with developers and landowners. Route protection will ensure that the necessary transport infrastructure is planned and identified in the AUP:OP to meet the feasible development capacity targets over the next 30 years. This will support integration with future land use. The NPS-UD and AUP:OP recognise the benefits of urban development where they contribute to peoples social, economic, cultural and environmental wellbeing. Of particular relevance to the Warkworth Package is the requirement that good accessibility is provided for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport. The transport corridors will ensure land is protected to contribute to the accessible, high quality, effective, efficient and safe transport routes (including public and active transport modes) that support the movement of people, goods and services for the future urban areas in Warkworth. The impact of NOR 4 on I552 – Warkworth Clayden Road precinct is limited to the Matakana Road frontage of properties within the precinct and therefore will not impact on the ability for the precinct provide for future urban growth. NOR 1 aligns with the indicative transport network of I553 – Warkworth North precinct by providing a Public Transport Hub facility and with the alignment of the Western Link – North consistent with the indicative alignment as shown on the Warkworth North Precinct Plan 2 - Multi Modal Transportation Connections and Open Space. **Conclusion** Each of the transport corridors within the Warkworth Package gives effect to these objectives and policies by protecting corridors to deliver an accessible, high quality, effective, efficient and safe transport system to positively contribute to, and support, quality, connected urban environments.
Enabling infrastructure – Infrastructure is enabled and where appropriate protected. – Benefits of infrastructure are recognised while adverse effects are avoided, remedied or mitigated.		
All	AUP:OP [RPS]: B3.2.1(1), B3.2.1(2), B3.2.1(3), B3.2.1(4) B3.2.2(1),	**Summary of Objectives and Polices** Objectives and policies in the RPS Chapter B3 of the AUP:OP recognise the importance infrastructure plays in realising Auckland's economic potential. This includes integrating the provision of infrastructure with urban growth, avoiding incompatible land uses and increasing resilience. The policy direction recognises the importance of the transport network in the movement of people, goods and services, urban form, enabling growth, and providing choices.

Applicable notice	Key objectives and policies	Analysis
	B3.2.2(3) B3.3.1(1), B3.3.2(1), B3.3.2(3). AUP:OP [DP]: E17.2(1), E17.2(3), E17.3(1), E26.2.1(1), E26.2.1(2), E26.2.1(4), E26.2.1(9), E26.2.2(4), E26.2.2(14), E26.2.2(15), E27.2(1), E27.2(2), E27.2(5). **NOR 4** I552.2(6), I552.2(8), I552.3(7). **NOR 1** I553.2(2), I553.2(3)(b), I553.2(3)(c), I553.3(7), I553.3(8),	Objectives and policies in Chapter E26 of the AUP:OP identify that infrastructure is critical to the social, economic, and cultural well-being of people and communities and the quality of the environment. The development, operation, use, repair, maintenance, upgrading and removal of infrastructure is anticipated and enabled, and the benefits infrastructure can have, as well as a range of adverse effects, are acknowledged within the objectives and policies. Provisions in Chapter I552 – Warkworth Clayden Road Precinct of the AUP:OP seek to provide for extensive walking and cycling connections, and coordinated delivery of transport infrastructure to support development of the precinct and wider transport network. In addition, a key objective for development within the precinct is to ensure mitigation and remediation of adverse effects on safe and efficient operation on transport infrastructure. Provisions in Chapter I553 – Warkworth North Precinct of the AUP:OP seek to co-ordinate delivery of transport infrastructure to provide for development within the precinct and wider transport network. Creating a safe and integrated transport system offering mode choice and measures to promote walking, cycling and public transport use is a key objective for infrastructure delivery in this precinct. In addition, a key objective for development within the precinct is to ensure mitigation and remediation of adverse effects on safe and efficient operation on transport infrastructure. **Assessment** Benefit of the Warkworth Package and Land Use Integration The Warkworth Package strongly supports and meets these objectives and policies by providing for a wide range of transport benefits for the community both individually and part of the wider integrated regional network planned for the area. The Warkworth Package will improve transport facilities for all modes, providing for a range of mode choices to support the projected growth in transport demand from urban development. The Warkworth Package will integrate well with proposed surrounding land uses and the wider transport network responding to the timing, scale and form of urban development triggers and staging of future infrastructure corridors. This will help to facilitate and unlock urban development and enable the general social and economic growth of Warkworth and the wider area. The Warkworth Package will result in improved safety for those that travel by car, active modes and public transport, as well as the movement of goods and services. The risk of death and serious injuries will be reduced. Safety and amenity for vulnerable users will be improved with the provision of segregated walking and cycling facilities including crossing facilities at all intersections. The Warkworth Package will improve corridor capacity, resulting in improved journey times and reliability for future freight and public transport demand.

Applicable notice	Key objectives and policies	Analysis
	I553.3(9), I553.3(10).	As well as the future communities in the FUZ areas the Warkworth Package is planned to serve, the positive impacts of the infrastructure upgrades will also benefit the existing communities by providing a safer, more efficient and reliable transport network and an increase in mode choice enabling the movement of people, goods and services. The RPS and district plan provide objectives and policies that seek to ensure infrastructure is provided in an integrated manner, with both land use and existing infrastructure. Te Tupu Ngātahi have been working closely with Auckland Council, Watercare, First Gas, and other providers to ensure the network is delivered in an integrated way with existing and future infrastructure. Adverse effects are avoided, remedied or mitigated Infrastructure has operational and functional needs that need to be recognised to ensure that the relevant infrastructure is effective. The Warkworth Package has sought to avoid potential adverse effects as far as practicable and where possible, demonstrated this through the upgrade of existing roads and through the alternatives assessment process. Sections **Error! Reference source not found.** - **Error! Reference source not found.** of this AEE (and the accompanying technical reports) assess the potential effects of the designations. The designations have been designed and located to avoid potential adverse effects where possible and mitigate / remedy where appropriate. Further refinement of the design will occur at the Outline Plan stage. This will be supported by the management framework which identifies key environmental outcomes and design principles that direct further design and assessment to be undertaken to provide for adaptability to the specific requirements of the future urban context. The designations provide sufficient space to enable this and to respond to effects. **Conclusion** Each NOR within the Warkworth Package achieves these objectives and policies by enabling upgrades and new transport infrastructure providing a wide range of transport benefits for the community whilst ensuring that adverse effects are avoided, remedied or mitigated.
Ngā Manawhenua – Manawhenua values are recognised and protected. – Manawhenua are to be included in resource management processes, particularly in decision making in their role as kaitiaki.		
All	NPS-UD: Objective 5, Policy 1(a)(ii).	Kaitiakitanga **Summary of Objectives and Policies**

Applicable notice	Key objectives and policies	Analysis
	AUP:OP [RPS]: B4.2.1(2), B6.2.1(1), B6.2.1(2), B6.3.1(1), B6.3.1(2), B6.3.1(3), B6.3.2(1), B6.3.2(2)(d), B6.3.2(3), B6.3.2(6), B6.5.1(1), B6.5.1(3), B6.5.1(5), B6.5.2(1), B6.5.2(4), B6.5.2(5), B6.5.2(6), B6.5.2(9), B7.4.1(6). AUP:OP [DP]: E12.3(1), E12.3(2)(c), E12.3(4). AUP:OP [RP/DP]: D9.2(3), D9.3(17).	The RPS requires recognition of and provision for the principles of Te Tiriti o Waitangi, in particular through Manawhenua participation in resource management processes. **Assessment** Recognition of Te Tiriti o, Waitangi partnerships is a key objective for Te Tupu Ngātahi and Manawhenua have been involved in the Te Tupu Ngātahi Supporting Growth Programme from the start of the early IBC works Manawhenua have since been actively involved throughout development of the early concepts, through alternatives assessment and identification of the preferred options. This partnership approach has allowed understanding and the incorporation of Manawhenua values and expression of kaitiakitanga throughout the Warkworth Package. This has included participation in identifying any opportunities for mitigation, and any opportunities for mitigation, and any opportunities for representing cultural features in the landscape Further incorporation of Manawhenua values and the expression of kaitiakitanga was enabled through regular hui with Manawhenua which included information sharing, sharing the approach and methodology for assessment of environmental effects, updates from project environmental specialists and discussing the preferred approach to cultural impact assessments (CIAs). Ngāti Manuhiri confirmed their interest in preparing a CIA. Other iwi were invited to prepare a CIA, but did not elect to provide one, however they continued to engage through regular hui AT is committed to ongoing engagement with Manawhenua which aligns closely with the RPS' long term view. Manawhenua will continue to be involved in the Warkworth Package to help maintain consistency with these objectives and policies. The designation conditions set out ongoing engagement and participation of Manawhenua in the future design and implementation of the transport corridor. These conditions have been developed in consultation with Manawhenua. <u>Māori values</u> **Summary of Objectives and Policies** The principles of the Te Tiriti o Waitangi are also recognised and provided for in the sustainable management of natural and physical resources, wāhi tapu and other taonga. Sites and places of significance to Manawhenua are recognised and provided for in the objectives and policies of the AUP:OP. **Assessment** The partnership approach that Te Tupu Ngātahi has taken with Manawhenua, means that Manawhenua values are embedded in the Warkworth Package which gives effect to the provisions of the AUP:OP. The partnership approach has meant Manawhenua have been involved in corridor development and decision-making on each of the corridor alignments and design. This has enabled the incorporation of the holistic and long-term inter-generational Māori world view.

Applicable notice	Key objectives and policies	Analysis
		In particular, the Warkworth Package has sought to avoid wāhi tapu and other taonga where possible in order to avoid potential adverse impacts on sites of significance. The Warkworth Package has generally sought to locate routes outside of Māori land and Treaty Settlement land. Te Tupu Ngātahi has also recognised Manawhenua cultural values, particularly with regards to the mauri of, and the relationships of Manawhenua with natural and physical resources including freshwater, land, air and coastal resources. Significant adverse effects on these values are required to be avoided, with lesser adverse effects avoided, remedied or mitigated as appropriate. The AUP:OP lists no Sites of Significance to Manawhenua within the designations sought for the Warkworth package. Designation conditions for each of the designations are proposed to provide for ongoing consultation with Manawhenua as well as accidental discovery protocols which require Manawhenua involvement. Appropriate actions will be taken ensuring tikanga Māori is adhered to particularly where any kōiwi are accidentally discovered. **Conclusion** It is considered that the Warkworth Package contributes to the achievement of these objectives and policies by actively involving Manawhenua in the process to identify the preferred options and by avoiding wāhi tapu and other taonga where possible in order to avoid potential adverse impacts on sites of significance.
Indigenous biodiversity and ecological values The protection and enhancement of indigenous biodiversity and ecological values (including in degraded areas) is promoted. Protect scheduled values but provide for infrastructure in sensitive areas considering: the benefits and value of providing that infrastructure the functional or operational need to locate or traverse that location whether any practicable alternatives would avoid or reduce effects on the scheduled values how the infrastructure contributes to the planned growth and intensification of Auckland.		
All	AUP:OP [RPS]: B3.2.1(1), B3.2.1(2), B3.2.1(3), B3.2.2(1), B3.3.1(1), B3.3.2(1),	**Summary of Objectives and Policies** The AUP:OP objectives and policies seek to protect and enhance ecological values across both terrestrial, freshwater and coastal environments. The primary method the AUP:OP uses to protect biodiversity is the identification of SEAs. These areas receive the highest level of protection. Biodiversity values outside SEAs need to be considered and effects on them addressed.

Applicable notice	Key objectives and policies	Analysis
	B3.3.2(3), B7.2.1(2), B7.5.1(2), B7.5.2(1)(f). AUP:OP [DP]: E12.2(1), E12.3(1), E12.3(2)(c), E15.2(1), E15.2(2), E15.3(2), E15.3(3) E15.3(4)(b), E15.3(7), E26.2.1(9), E26.2.2(4), E26.2.2(6). **NOR 1** I553.2(1)(b)	Adverse effects on biodiversity are to be avoided as far as practicable, and where avoidance is not practicable adverse effects are to be minimised. Other adverse effects on biodiversity and ecosystems should be avoided, remedied or mitigated. The provisions recognise that avoidance of areas with biodiversity values is not always practicable for infrastructure. Where biodiversity is affected, measures to protect and restore biodiversity through legal protection and active management should be considered. While the objectives and policies of the AUP:OP generally seek to recognise the benefits, functional and operational needs and value of investment in infrastructure and to enable the safe, efficient and secure provision of infrastructure where appropriate, the objectives and policies also anticipate that there may be some adverse effects as a result of the provision of such infrastructure. The objectives and policies recognise that in some instances such adverse effects may be appropriate given the necessity of, and essential services provided by, infrastructure. Provisions in I553 – Warkworth North Precinct seek to minimise the loss, or reduction of ecological values and enhance retained ecological values to achieve no net loss of biodiversity and where practical achieve a net gain. **Assessment** Although resource consents are not being sought for the Warkworth Package at this time, ecological effects arising in respect of activities that require consents have been considered to inform the alternatives assessment, transport corridor design, the assessment of effects on the environment and the designation footprints. In light of this, generally, the transport corridors within the Warkworth Package have sought to avoid or minimise impacts on a range of high value ecological areas including SEAs, wetlands and streams. This is demonstrated through the comprehensive alternatives assessment process undertaken and design refinement. **Conclusion** The transport infrastructure is critical to enable existing and future communities to provide for their social, economic, and cultural well-being. It is considered that the transport corridors contribute to the achievement of these objectives and policies by having sought to avoid or minimise impacts on high value ecological areas. The designations and management plans provide a framework for mitigation of adverse effects.

Applicable notice	Key objectives and policies	Analysis
Freshwater – The health and well-being of water bodies and freshwater ecosystems is prioritised. – The permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands are to be avoided unless, amongst other matters, it is necessary to provide for infrastructure and no practicable alternative exists.		
All	NPS-FM Objective 1, Policies 6, 7, 8, 9. AUP:OP [RPS]: B7.2.1(2), B7.3.1(3), B7.3.2(1), B7.3.2(4), B7.3.2(5), B7.3.2(6), B7.4.1(4), B7.4.1(5), B7.4.2(1)(a), B7.4.2(1)(d), B7.4.2(7)(b), B7.4.2(9). AUP:OP [DP]: E12.2(1), E12.3(1), E12.3(2)(c).	**Summary of Objectives and Policies** The National Policy Statement for Freshwater Management (NPS-FM) objective and policies seek to ensure that natural and physical resources are managed in a way that prioritises first, the health and well-being of water bodies and freshwater ecosystems followed by the health needs of people and then the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future. In particular, the NPS-FM seeks to protect natural wetlands, rivers, outstanding waterbodies and habitats of indigenous freshwater species. The relevant AUP:OP objectives and policies seek to protect and enhance ecological values in freshwater environments. The permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands are to be avoided unless, amongst other matters, it is necessary to provide for infrastructure and no practicable alternative exists. The objectives and policies seek to manage subdivision, use, development, including discharges and activities in the beds of lakes, rivers, streams, and in wetlands, to limit the establishment of structures within the beds of lakes, rivers and streams and in wetlands to those that have a functional need or operational requirement to be located there. **Assessment** The AEE is focused on district plan matters as regional resource consents and any consents required under NES are not being sought for the Warkworth Package at this time. Ecological effects arising in respect of activities that require regional consents are only relevant to the extent they inform alternatives assessment, transport corridor design and the designation footprints. However, generally, the transport corridors within the Warkworth Package have sought to avoid or minimise impacts on streams and high value wetlands. This is demonstrated through the comprehensive alternatives assessment process undertaken and design refinement. Specifically, high value wetland environment has been avoided and / or reduced where practicable, new bridge structures are proposed over high value streams. The alignment and design refinement process for each designation has sought to avoid or minimise impacts on high value natural wetlands and streams, unless there is a functional requirement for any such impacts. There will be further opportunities to minimise any impacts within the transport corridor alignment during the detailed design.

Applicable notice	Key objectives and policies	Analysis
		As discussed under the indigenous biodiversity assessment above, some freshwater environments have been impacted where there is a functional and operational need to do so. In considering the potential future effects arising from activities that may require regional consents in the future, the Assessment of Ecological Effects identified that any potential effects of the Warkworth Package on ecological features within or adjacent to the transport corridors, can be adequately managed and will be subject of future regional consent processes. There is flexibility in the designation to further minimise impacts at detailed design. **Conclusion** The transport infrastructure is critical to enable existing and future communities to provide for their social, economic, and cultural well-being. The Warkworth Package is consistent with these objectives and policies as the alignments have sought to avoid or minimise impacts on streams and wetlands unless there is a functional requirement for any such impacts. In considering the potential future effects arising from activities that may require resource consent in the future, the Assessment of Ecological Effects identified that any potential effects of the Warkworth Package on ecological features within or adjacent to the transport corridors, can be adequately managed in any future consent processes.
Natural hazards – Avoid increasing risk of adverse effects in areas subject to natural hazards (including climate change). – Where infrastructure and development are required in these areas, natural hazard risks must be managed.		
All	NPS-UD: Objective 8, Policy 1(e)(f), Policy 6(e). AUP:OP [RPS]: B2.3.1(1)(f), B10.2.1(2), B10.2.1(3), B10.2.1(5), B10.2.1(6), B10.2.2(7), B10.2.2(8),	**Summary of Objectives and Policies** The NPS-UD directs that urban environments support reductions in greenhouse gas emissions and are resilient to the current and future effects of climate change. The objectives and policies of Chapter B10 of the AUP:OP enable and recognise the importance of infrastructure to support urban growth which includes integrating the provision of resilient transport networks and infrastructure in these areas and avoiding effects in areas subject to natural hazards and risk and adapting to the effects of climate change. Specific AUP:OP objectives and policies reinforce the unique requirements of infrastructure and that it can have an operational or functional need to locate within a natural hazard area. Where infrastructure is required to locate within a hazard area significant adverse effects on people and property are sought to be first avoided, and otherwise mitigated to the extent practicable. **Assessment**

Applicable notice	Key objectives and policies	Analysis
	B10.2.2(12), B10.2.2(13). AUP:OP [DP]: E12.2(1), E12.3(5), E12.3(6), E36.2(1), E36.2(2), E36.2(4), E36.2(5), E36.2(6), E36.3(16), E36.3(18), E36.3(19), E36.3(20), E36.3(21), E36.3(23), E36.3(28), E36.3(29), E36.3(30), E36.3(33), E36.3(35).	Particular regard has been given to these objectives and policies. Te Tupu Ngātahi meets this direction set out in the objectives and policies through the selection of transport networks and in assessments of high-risk areas. The Warkworth Package seeks to address this though appropriate and sensitive design methods. The RPS and AUP:OP district plan provisions direction has guided the assessment and location of the transport networks and has taken into account the appropriateness and eventual establishment of development in new growth areas to avoid where practicable and manage the effects of climate change and natural hazard on urban communities and infrastructure. The Warkworth Package supports the direction set out in the objectives and policies. The Warkworth Package will deliver better accessibility and mode choice by providing upgrades which will support public transport on all corridors, as well as walking and cycling on all corridors, therefore reducing the reliance on low occupancy vehicles. This provides an important component to realising the regional emissions benefits of an integrated network. This shows alignment with the objectives and policies, and a positive contribution towards a reduction in greenhouse gas emissions. A number of design measures to provide resilience to flooding, inundation and climate change have been adopted across the Warkworth Package. Flood modelling undertaken for the Warkworth Package assessed the existing terrain and proposed network terrain – both using MPD 100 year ARI plus climate change rainfall considerations. In doing so, the modelling took into consideration flood hazard and risk associated with both rainfall events and climate change. The flood risk assessment has recommended outcomes to ensure at detailed design that existing flooded properties are not exacerbated, no flood prone areas are created and any increase in flood risk for existing or future habitable floor levels or access to properties are less than minor. Final measures to achieve these outcomes will be confirmed through detailed design at the Outline Plan of Works stage. The designations provide sufficient space for street tree planting that, when delivered, it is anticipated that it will contribute to reducing urban heat island effects in the future as well as contribute to the amenity of the area by providing shade and microclimatic cooling qualities. **Conclusion** Each of the corridors within the Warkworth Package is consistent with these objectives and policies by supporting modal choice, contribute to reducing urban heat island effects and providing resilient transport infrastructure that will support urban growth. The transport corridors will generally provide positive flood resilience effects and will avoid, remedy and mitigate potential adverse effects on people and property in areas subject to natural hazards and risk, adapting to the effects of climate change.
Urban form and quality design – Transport networks support a quality urban form and are designed to achieve high levels of amenity and safety for users.		

Applicable notice	Key objectives and policies	Analysis
– The place function of transport networks is balanced with the functional movement purpose.		
All	AUP:OP [RPS]: B2.2.1(1)(e), B2.3.1(3), B2.3.2(1)(d)-(f), B2.3.2(2)(b), B2.3.2(4), B3.3.1(1)(d), B3.3.2(4)(a), B3.3.2(7). AUP:OP [DP]: E12.2(1), E12.3(2). E12.3(3), E17.2(1), E17.2(2), E17.2(3), E17.3(1), E17.3(4), E24.2(1), E24.2(2), E24.3(1), E24.3(2), E25.2(1), E25.2(2), E25.3(2), E25.3(5).	**Summary of Objectives and Policies** The objectives and policies seek to create and protect urban environments that are both functional and enjoyable for people, by balancing the place and movement function of transport networks achieving high levels of amenity and safety for users. To achieve balance between place and movement, the objectives and policies recognise a necessary mode shift, minimising private vehicle travel in favour of public transport, walking and cycling. **Assessment** Each transport corridor in the Warkworth Package gives effect to the objective and policies providing for separated and safe active mode facilities and integrating transport infrastructure with existing and future urban areas to support urban development. The designation footprint enables integration with adjacent land use development and environmental features. As part of the Outline Plan of Works and Management Plan process the detailed design will be confirmed. Likewise, amenity will be considered as part of this process, and finalised at detailed design stage. An Urban and Landscape Design Management Plan (ULDMP) is proposed as a condition of the designations. The ULDMPs build on the assessments, to support integration of the permanent works of each transport corridor into the surrounding landscape and ensure that the Warkworth Package contributes to a quality urban environment and manages potential adverse landscape and visual effects. The ULDMPs will be consistent with the Bridging the Gap: NZTA Urban Design Guidelines (2013) (or later best practice iteration). Amenity of the corridors during construction has been assessed as part of this NOR. The effects will be managed appropriately through engagement with residents, the community and stakeholders, and through the construction noise and vibration, and construction management plans proposed as conditions of the designations. **Conclusion** Each transport corridor within the Warkworth Package will provide separated and safe active mode facilities and will integrate with the existing and future urban areas to support urban development. The Warkworth Package will manage adverse effects on amenity during construction and sets outcomes and further opportunities through the ULDMPs to integrate permanent works into the surrounding landscape and urban context. This will ensure that the Warkworth Package contributes to a quality urban environment and manages potential adverse landscape and visual effects.

Applicable notice	Key objectives and policies	Analysis
Historic heritage Recognises the importance of heritage to the identity of Auckland by avoiding significant adverse effects on scheduled historic heritage, where practicable, and encouraging new development to have due regard to significant historic heritage. Protect scheduled values but provide for infrastructure in sensitive areas considering: the benefits and value of providing that infrastructure the functional or operational need to locate or traverse that location whether any practicable alternatives would avoid or reduce effects on the scheduled values how the infrastructure contributes to the planned growth and intensification of Auckland.		
All	AUP:OP [RPS]: B3.2.1(1), B3.2.1(2), B3.2.1(3), B3.2.2(1), B3.3.1(1), B3.3.2(1), B3.3.2(3), B5.2.1(1), B5.2.2(6), B5.2.2(7), B5.3.1(2), B5.3.2(4)(c), B5.3.2(4)(d). AUP:OP [DP]: E26.2.1(9), E26.2.2(4), E26.2.2(6).	**Summary of Objectives and Policies** The RPS recognises the importance of heritage to the identity of Auckland, and the importance of active stewardship to protect it from inappropriate subdivision use and development. The provisions seek to avoid significant adverse effects on scheduled historic heritage, where practicable, and to encourage new development to have due regard to significant historic heritage. The policies of Chapter B3 and E26 of the AUP:OP seek to enable the development, operation and maintenance of infrastructure, even in sensitive areas that are scheduled in the AUP:OP in relation to historic heritage, provided adverse effects are avoided or managed where practicable and an operational or functional need to locate in sensitive areas arises. While the objectives and policies of the AUP:OP generally seek to recognise the benefits, functional and operational needs and value of investment in infrastructure and enable the safe, efficient and secure provision of infrastructure where appropriate, the objectives and policies also anticipate that there may be some adverse effects as a result of the provision of such infrastructure. However, the objectives and policies recognise that in some instances such adverse effects may be appropriate given the necessity of, and essential services provided by, infrastructure. **Assessment** Historic bridge material such as piles associated with Cherry's Bridge (R09/2244) at NOR 2 may potentially still be present and have the potential to be affected by work as they are situated in proximity to the existing bridge supporting the road carriageway, which is to be replaced. In addition, the site of a WWII United States Military Camp (CHI17004) is situated within the designation boundary of the proposed NOR 2.

Applicable notice	Key objectives and policies	Analysis
		Sparse scatters of highly fragmented shells were identified within the boundary of NOR 5 and are potentially associated with a historical midden. A historical dam (R009/2263) is also near to NOR 5 (located outside the designation) but is not expected to be impacted by works. A historical road bench (R09/2284) lies within the designation at NOR 6 which will likely be impacted to accommodate the new corridor. However, it is noted that this has already undergone modification as a result of previous activities on the site. Additional historic sites are also identified outside, but directly adjacent to, some designation boundaries. These include a timber cottage adjacent to NOR 4 at 190 Matakana Road, and a WWII military site adjacent to NOR 8 (CHI17006). Adjacent to NOR 2 is a historic track to the Puhinui Falls, and historic peat deposit with artefacts (which were removed as part of the construction of Ara Tūhono). These sites are outside the designation boundary and therefore are not expected to be impacted by the works. There is potential for adverse effects on historic heritage sites as a result of the project if no mitigations are put in place. The preparation of a HHMP is condition on the designations and will be prepared at detailed design before construction commences. As part of the HHMP, further research and survey of the Project area, and specific sites, will be undertaken to support a precautionary HNZPTA authority for the Project footprint. Any potential adverse effects to potential previously unrecorded archaeological deposits that are exposed during the works will be mitigated under the provisions of a precautionary HNZPTA authority, and the means of mitigation detailed in an Archaeological Management Plan prepared for the HNZPTA authority application. An authority under the HNZPTA will be sought at a later date prior to construction of the Project. **Conclusion** The Warkworth package is consistent with the policies and objectives as the designations aim to reduce impact on historical heritage sites, and where this is not possible, potential adverse impacts are managed or mitigated. The package recognises the importance of historic heritage through the implementation of the HHMP, specific mitigation measures, and a precautionary approach to the potential identification of previously unrecorded sites during construction.
Natural landscapes – Natural landscapes and features with outstanding values are to be protected from inappropriate subdivision use, and development by avoiding where practicable, and otherwise remedying or mitigating, adverse effects on those areas or features.		
All	AUP:OP [RPS]: B4.2.1(1),	**Summary of Objectives and Policies**

Applicable notice	Key objectives and policies	Analysis
	B4.2.1(3), B4.2.2(3), B4.2.2(6), B4.2.2(7), B4.2.2(8), B4.3.1(1), B4.3.1(2), B4.3.2(3), B4.5.1(1), B4.5.2(4). AUP:OP [DP]: D13.2(1), D13.3(2).	The RPS seeks to recognise and protect natural heritage. In particular, the policies of the RPS seek to identify features with outstanding natural values, evaluate and schedule those outstanding natural features, protect the physical and visual integrity of those features from inappropriate subdivision use, and development, and, where practicable and appropriate, enhance outstanding natural features. The RPS identifies that the volcanic heritage of Auckland is a particularly notable feature across the region. The RPS also indicates that notable trees are a particularly important natural feature. Therefore, the RPS seeks to protect the values of both volcanic features and notable trees. The notable trees overlay seeks to retain and protect notable trees from inappropriate use and development. Notable trees are required to be retained and protected by considering alternative methods that could result in retaining the trees, whether the values that would be lost if the tree is removed, and the extent to which removal is necessary to accommodate the efficient operation of the road network. **Assessment** There are no identified AUP:OP outstanding natural landscapes, features or characters located within the designation boundaries of the Warkworth package, nor any volcanic viewshafts affected. There are no AUP:OP notable trees within the designation boundaries. Potential adverse landscape and visual effects have been avoided through a substantive alternatives assessment process involving specialist inputs and design refinement to minimise effects and integrate the transport corridor works within the landscape. As a result, the transport corridor seeks to limit physical effects on SEAs, high value streams and wetlands and other high value landscape features within the local landscape. **Conclusion** Throughout the Warkworth package, there is generally an opportunity for natural character values to be improved. The designation conditions require the implementation of an ULDMP during the detailed design. With this in place, and through future regional consenting stages, the proposed features and scale of the transport corridors within the Warkworth package are able to be integrated into the existing and future landscape to remedy any potential adverse effects on landscapes arising from the transport corridors.
Open Space zones		

Applicable notice	Key objectives and policies	Analysis
– Enable infrastructure while protecting values of open space zones and avoiding, remedying or mitigating adverse effects on residents, communities and the environment.		
NOR 2, NOR 4, NOR 6, NOR 7, NOR 8	AUP:OP [DP]: E16.2(1), E16.2(2), E16.3(2), E16.3(3), H7.2(2), H7.4.2(1), H7.4.2(2), H7.4.3(1), H7.4.3(2), H7.4.3(3), H7.4.3(4), H7.4.3(5), H7.4.3(7), H7.5.2(1), H7.5.2(2), H7.5.3(2), H7.5.3(4), H7.5.3(5), H7.5.3(7).	**Summary of Objectives and Policies** The general objectives and policies of open space zones in the AUP:OP seek to enable infrastructure while avoiding, remedying or mitigating adverse effects on residents, communities and the environment. Objectives and policies in Chapter E16 of the AUP:OP seek to protect the cultural, amenity, landscape and ecological values of trees in open space zones and increase the quality and extent of tree cover in open space zones. **Assessment** The transport corridors within the Warkworth Package have sought to reduce adverse effects on Open Space zones and community facilities as far as practicable and this is demonstrated through the alternatives assessment process. The transport corridors have sought to reduce impact on Open Space zones where practicable. Most Open Space – Conservation Zones impacted by the designations are associated with riparian planting of rivers and streams. Open Space – Conservation zoning adjacent to the Mahurangi River is associated with NOR 2 is avoided where possible, and impacts minimised where encroachment is unavoidable. There is an existing one-way bridge supporting the road carriageway, and the designation sought is to facilitate the construction of a new bridge. There is also a small area of Open Space – Informal Recreational Zone adjacent to the existing road boundary of the NOR 2 corridor which is potentially required for construction activity and an earthworks bund for the corridor. Impact on the zone and use of the reserve is expected to be limited, and it is likely that the permanent earthworks area could be reinstated to be consistent with the unaffected reserve area after construction. Open Space – Informal Recreational zoning (Kowhai Reserve) is impacted by NOR 4 at the southern end of the designation, along the road frontage. The designation is sought to facilitate the tie and integration with the Hill Street upgrade project (not a Te Tupu Ngātahi project). Open Space – Informal Recreation zoning is impacted by a small portion of the proposed designation of NOR 6 at the north eastern extent. The designation is sought to facilitate the tie-in with Evelyn Street and Jamie Lane. The existing open space zoned land to the north predominantly functions as a stormwater wetland. Open Space – Conservation Zoning adjacent to the central stream crossing associated with NOR 7 is likely impacted by the proposed designation at an area associated with riparian planting. Efforts have been made to minimise impacts on the zone and

Applicable notice	Key objectives and policies	Analysis
		associated riparian areas, with the corridor impacting only the northern most extent of the zone, therefore avoiding fragmentation of the zone. Open Space – Conservation zoning associated with NOR 8 is likely impacted by a small section of the designation sought to facilitate the construction of a bridge over this branch of the Mahurangi River. Further detailed design and confirmation of the construction methodology for the bridge may allow for further reduction or possibly avoid impacts on the portion of Open Space – Conservation zone. Efforts have been made to minimise impacts on the zone and associated riparian areas with the designation impacting only the southernmost extent of the zone, therefore avoiding fragmentation of the zone. **Conclusion** The transport corridors are consistent with the objectives and policies by providing for infrastructure while avoiding, remedying or mitigating adverse effects on residents, communities, trees and the environment.
Residential zones – Use land efficiently to increase housing capacity and improve choice and access to public transport. – Non-residential development provides for communities' wellbeing and avoids adverse effects on residential amenity.		
NOR 2, NOR 4, NOR 6	AUP:OP [DP]: H3.2(3), H3.2(4), H3.3(7), H4.2(3), H4.2(4), H4.3(9), H4.3(10), H5.2(1), H5.2(4), H5.3(8), H5.3(10).	**Summary of Objectives and Policies** The relevant objectives and policies of the Residential – Mixed Housing Urban and Mixed Housing Suburban zones seek to ensure land is efficiently used to provide higher density urban living, increase housing capacity and improve choice and access to public transport. The relevant objectives and policies of the Residential – Single House seek to ensure non-residential activities provide for quality on-site amenity for residents and adjoining sites and the street in keeping with the scale and intensity of the zone. Specific objectives and policies also seek to recognise the functional and operational requirements for development, in particular that non-residential activities provide for communities' social, economic and cultural well-being while avoiding, remedying or mitigating adverse effects on residential amenity. **Assessment** The NORs are consistent with these objectives and policies by providing for the necessary transport infrastructure to support the residential zoning currently under development within the transport corridor areas and to increase the development capacity.

Applicable notice	Key objectives and policies	Analysis
		The NORs will ensure land is protected to contribute to the accessible, high quality, effective, efficient and safe transport routes (including public and active transport modes) that support the movement of people, goods and services for residential zoned areas enabling communities' social, economic and cultural wellbeing to be provided for. A ULDMP is proposed as a condition of the designations. The ULDMP will integrate the permanent works of each transport corridor into the surrounding landscape and urban context and ensure potential adverse landscape and visual effects are managed. Amenity of the corridors during construction will be managed appropriately through engagement with residents, the community and stakeholders, and through the construction noise and vibration, and construction management plans proposed as conditions of the designations. **Conclusion** It is considered that the NORs contribute to the achievement of these objectives and policies by providing the necessary transport infrastructure required to support the growth of these areas while avoiding, remedying or mitigating adverse effects on residential amenity.
Business zones – Positively contribute towards planned future form and quality, creating a sense of place, amenity and convenience. – Recognise requirements of development while avoiding, remedying or mitigating adverse effects.		
NOR 1, NOR 3, NOR 6, NOR 8	AUP:OP [DP]: H11.2(3), H11.2(7), H11.2(8), H11.3(3), H11.3(12), H11.3(20), H13.2(3), H13.2(9), H13.3(3), H13.3(12), H13.3(20),	**Summary of Objectives and Policies** The relevant objectives and policies for Business – Mixed Use Zone and Business - General Use Zone in the AUP:OP seek development to positively contribute towards planned future form and quality, creating a sense of place particularly with regard to streets by providing pedestrian amenity, movement, safety and convenience for people of all ages and abilities The relevant objectives and policies for the Business – Light Industry Zone in the AUP:OP seek to ensure light industry activities are able to function efficiently and ensure any adverse effects on surrounding zones are avoided, remedied or mitigated The relevant objectives and policies for the Business - Local Centre Zone in the AUP:OP seek make local centres an attractive place to live, work and visit Objectives and policies of the relevant business zones also seek to recognise the functional and operational requirements of activities and development while avoiding, remedying or mitigating adverse effects on amenity values and the natural environment of adjacent public open spaces and residential areas. **Assessment**

Applicable notice	Key objectives and policies	Analysis
	H13.3(21), H14.2(2), H14.2(3), H14.2(8), H14.3(3), H14.3(12), H14.3(21), H17.2(1), H17.2(3), H17.2(4), H17.3(4), H17.3(7).	The Warkworth Package will positively contribute towards the planned future form and quality of Warkworth. The transport corridors which make up the network will create a sense of place particularly for streets by providing improved pedestrian amenity, movement, safety and convenience for people of all ages and abilities. The transport corridors in the Warkworth Package provide a safe and reliable arterial network including walking and cycling and public transport facilities that supports growth, enables sustainable travel choice, addresses safety concerns and improves access to employment and social amenities The transport corridors will improve the reliability of the transport network enabling business zones to operate efficiently, particularly with regard to improved efficiency of freight movements and better transport connections A ULDMP is proposed as a condition of the designations. The ULDMP will integrate the permanent works of each transport corridor into the surrounding landscape and urban context and ensure potential adverse landscape and visual effects are managed Amenity of the corridors during construction will be managed appropriately through engagement with residents, the community and stakeholders (through the SCEMP), and through the construction noise and vibration, and construction management plans (in particular the CTMP) proposed as conditions of the designations. **Conclusion** It is considered that the transport corridors contribute to the achievement of these objectives and policies by positively contributing towards planned future form and quality of centre and business zones, improving the efficiency of these zones through better transport connections and reliability and mitigating adverse effects on amenity values and the natural environment of adjacent public open spaces and residential areas.
Special Purpose – Quarry Zone		

Applicable notice	Key objectives and policies	Analysis
NOR 7	H28.3(5), H28.3(6).	**Summary of Objectives and Policies** The objectives and policies associated with the Special Purpose – Quarry Zone relate to avoiding, remedying or mitigating adverse effects of mineral extraction and requiring the rehabilitation of sites following mineral extraction activities to enable land to be used for other purposes. **Assessment** A portion of NOR 7 traverses a Special Purpose – Quarry Zone. **Conclusion** There are potential opportunities for integration of corridor NOR 7 throughout the period of anticipated rehabilitation of the quarry.
Future Urban Zone – Maintain and complement rural character and amenity		
All	NPS-HPL. AUP:OP [DP]: H18.2(1), H18.2(2), H18.2(3), H18.2(4), H18.3(1), H18.3(2), H18.3(3), H18.3(4), H18.3(5), H18.3(6).	**Summary of Objectives and Policies** The relevant objectives of Chapter H18 seek for land to be developed to achieve the objectives of the Rural Production Zone until such time as it has been rezoned for urban purposes, and that urbanisation is avoided until the sites have been rezoned. The relevant policies seek to avoid use and development that may result in the efficient and effective operation of the local and wider transport network, require significant upgrades to infrastructure, inhibit the efficient provision of infrastructure or undermine the form or nature of future urban development. Further, use and development is required to maintain and complement rural character and amenity. **Assessment** The Warkworth Package traverses the FUZ, Residential Zones, Business Zones and Open Space Zones. The transport corridors will positively contribute towards the future urban form and quality. The transport corridors will enable efficient provision of infrastructure for existing activities and future urban development. In terms of maintaining rural character and amenity prior to rezoning and urbanisation, it is considered that the road upgrades and new roads will serve and improve connectivity (through new roads and active modes) for both existing rural areas and future urban areas.

Applicable notice	Key objectives and policies	Analysis
		With regards to the NPS-HPL, FUZ is a transitional zone that has been identified as suitable for urbanisation. The NPS-HPL is not applicable to FUZ land. **Conclusion** It is considered that the transport corridors contribute to the achievement of these objectives and policies by positively contributing towards planned future form of the FUZ, improving the efficiency of rural zones through better transport connections and reliability and mitigating adverse effects on rural character and amenity values.

ATTACHMENT 28

APPENDIX C: NoR 1
PROPOSED CONDITIONS

NOR 1 - Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities: (a) geotechnical investigations (including trial embankments) (b) archaeological site investigations

Acronym/Term	Definition
	(c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HH~~A~~MP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri • Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in the Auckland Unitary Plan, the probable level of development arising from zone changes.

Acronym/Term	Definition
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 20 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility.

No.	Condition
	To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan; (iii) Construction Noise and Vibration Management Plan; (iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; (c) Any material changes to the SCEMPs, are to be submitted to the Council for information.
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that:

No.	Condition
	(i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8(b) and (c) above will cease to apply if: (i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and (ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones;

No.	Condition
	(ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections; (iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements: (i) planting design details including: a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22 and 23; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and

No.	Condition
	e. Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address); (iii) the Construction Works programmes and the staging approach, and the proposed hours of work; (iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses;

No.	Condition
	(x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.
14.	**Cultural Monitoring Plan**

No.	Condition
	(a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works; (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note:** *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads;

<table>
<tr><th>No.</th><th>Condition</th></tr>
<tr><td></td><td>(vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be;
(vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads;
(viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);</td></tr>
<tr><td>16.</td><td>Construction Noise Standards
(a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:
Table 17.1: Construction noise standards
<table>
<tr><th>Day of week</th><th>Time period</th><th>$L_{Aeq(15min)}$</th><th>L_{AFmax}</th></tr>
<tr><td colspan="4">Occupied activity sensitive to noise</td></tr>
<tr><td>Weekday</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>55 dB
70 dB
65 dB
45 dB</td><td>75 dB
85 dB
80 dB
75 dB</td></tr>
<tr><td>Saturday</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>55 dB
70 dB
45 dB
45 dB</td><td>75 dB
85 dB
75 dB
75 dB</td></tr>
<tr><td>Sunday and Public Holidays</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>45 dB
55 dB
45 dB
45 dB</td><td>75 dB
85 dB
75 dB
75 dB</td></tr>
<tr><td colspan="4">Other occupied buildings</td></tr>
<tr><td>All</td><td>0730h – 1800h
1800h – 0730h</td><td>70 dB
75 dB</td><td></td></tr>
</table>
(i) Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply.</td></tr>
<tr><td>17.</td><td>Construction Vibration Standards
(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the</td></tr>
</table>

<table>
<tr><th>No.</th><th>Condition</th></tr>
<tr><td></td><td>measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria

<table>
<tr><th>Receiver</th><th>Details</th><th>Category A</th><th>Category B</th></tr>
<tr><td rowspan="2">Occupied Activities sensitive to noise</td><td>Night-time 2000h - 0630h</td><td>0.3mm/s ppv</td><td>2mm/s ppv</td></tr>
<tr><td>Daytime 0630h - 2000h</td><td>2mm/s ppv</td><td>5mm/s ppv</td></tr>
<tr><td>Other occupied buildings</td><td>Daytime 0630h - 2000h</td><td>2mm/s ppv</td><td>5mm/s ppv</td></tr>
<tr><td>All other buildings</td><td>At all other times</td><td colspan="2">Tables 1 and 3 of DIN4150-3:1999</td></tr>
</table>

*Category A criteria adopted from Rule E25.6.30.1 of the AUP

**Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime

(ii) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply.</td></tr>
<tr><td>18.</td><td>Construction Noise and Vibration Management Plan (CNVMP)

(a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work.
(b) A CNVMP shall be implemented during the Stage of Work to which it relates.
(c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 'Acoustics – Construction Noise' (NZS6803:1999) and shall as a minimum, address the following:
(i) Description of the works and anticipated equipment/processes;
(ii) Hours of operation, including times and days when construction activities would occur;
(iii) The construction noise and vibration standards for the project;
(iv) Identification of receivers where noise and vibration standards apply;
(v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable
(vi) Methods and frequency for monitoring and reporting on construction noise and vibration;
(vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints.
(viii) Contact details of the Project Liaison Person;
(ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers;
(x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be</td></tr>
</table>

No.	Condition
	practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18(c)((x)). (xii) Procedures for: a. communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 17; b. assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A vibration criteria of Condition 17, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and (xiii) Requirements for review and update of the CNVMP
19.	**Schedule to a CNVMP** (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days. (ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; (c) The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. (iii) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the

No.	Condition
	consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions; (vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project; (vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version; (viii) Methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so; (ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to: a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified

No.	Condition
	Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 0. (iv) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note****: The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. (b) If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition 22 for these areas (Confirmed Biodiversity Areas).
22.	**Ecological Management Plan (EMP)** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (ii) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable; b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:***

No.	Condition
	Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans: *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable. b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:*

No.	Condition
	(i) Stream and/or wetland restoration plans; *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	**Low Noise Road Surface** The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones). (a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
25.	**Traffic Noise** For the purposes of Conditions 26 to 38: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads;Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*; (i) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (j) Structural Mitigation – has the same meaning as in NZS 6806.
26.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 26 to 38 (all traffic noise conditions).

No.	Condition
	Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
27.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories.*
28.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
29.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.
30.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
31.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
32.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').
33.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
34.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 33 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 33 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

No.	Condition
	If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.
35.	Subject to Condition 34 above, within six months of the assessment undertaken in accordance with Conditions 33 and 34, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
36.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.
37.	Subject to Condition 34, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 36 if: (a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 34 (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
38.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 29

APPENDIX C: NoR 1
SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 30

APPENDIX C: NoR 2
PROPOSED CONDITIONS

NOR 2 - Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities: (a) geotechnical investigations (including trial embankments) (b) archaeological site investigations

Acronym/Term	Definition
	(c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HH~~A~~MP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri • Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in the Auckland Unitary Plan, the probable level of development arising from zone changes.

Acronym/Term	Definition
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. (b) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 15 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility. To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan;

No.	Condition
	(iii) Construction Noise and Vibration Management Plan; (iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; (c) Any material changes to the SCEMPs, are to be submitted to the Council for information.
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that: (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8 (b) and (c) above will cease to apply if:

No.	Condition
	(i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and (ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones; (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections; (iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and

No.	Condition
	i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements: (i) planting design details including: a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22, 23, 24 and 25; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and e. Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated

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	with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address); (iii) the Construction Works programmes and the staging approach, and the proposed hours of work; (iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses; (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.

No.	Condition
14.	**Cultural Monitoring Plan** (a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works; (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note:** *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be; (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads;

<table>
<tr><th>No.</th><th>Condition</th></tr>
<tr><td></td><td>(viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);</td></tr>
<tr><td>16.</td><td>Construction Noise Standards
(a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:
Table 17.1: Construction noise standards
<table>
<tr><th>Day of week</th><th>Time period</th><th>$L_{Aeq(15min)}$</th><th>L_{AFmax}</th></tr>
<tr><td colspan="4">Occupied activity sensitive to noise</td></tr>
<tr><td>Weekday</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>55 dB
70 dB
65 dB
45 dB</td><td>75 dB
85 dB
80 dB
75 dB</td></tr>
<tr><td>Saturday</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>55 dB
70 dB
45 dB
45 dB</td><td>75 dB
85 dB
75 dB
75 dB</td></tr>
<tr><td>Sunday and Public Holidays</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>45 dB
55 dB
45 dB
45 dB</td><td>75 dB
85 dB
75 dB
75 dB</td></tr>
<tr><td colspan="4">Other occupied buildings</td></tr>
<tr><td>All</td><td>0730h – 1800h
1800h – 0730h</td><td>70 dB
75 dB</td><td></td></tr>
</table>
(c) Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 19(c)((x)), then the methodology in Condition 19 shall apply.</td></tr>
<tr><td>17.</td><td>Construction Vibration Standards
(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.
Table CNV2 Construction vibration criteria
<table>
<tr><th>Receiver</th><th>Details</th><th>Category A</th><th>Category B</th></tr>
<tr><td rowspan="2">Occupied Activities sensitive to noise</td><td>Night-time 2000h - 0630h</td><td>0.3mm/s ppv</td><td>2mm/s ppv</td></tr>
<tr><td>Daytime 0630h - 2000h</td><td>2mm/s ppv</td><td>5mm/s ppv</td></tr>
<tr><td>Other occupied buildings</td><td>Daytime 0630h - 2000h</td><td>2mm/s ppv</td><td>5mm/s ppv</td></tr>
</table></td></tr>
</table>

No.	Condition
	<table><tr><td>All other buildings</td><td>At all other times</td><td>Tables 1 and 3 of DIN4150-3:1999</td></tr></table> **Category A criteria adopted from Rule E25.6.30.1 of the AUP* ***Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime* (b) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 19(c)((x)), then the methodology in Condition 19 shall apply
18.	**Construction Noise and Vibration Management Plan (CNVMP)** (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) A CNVMP shall be implemented during the Stage of Work to which it relates. (c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions **Error! Reference source not found.** and **Error! Reference source not fo und.** to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 *'Acoustics – Construction Noise'* (NZS6803:1999) and shall as a minimum, address the following: (i) Description of the works and anticipated equipment/processes; (ii) Hours of operation, including times and days when construction activities would occur; (iii) The construction noise and vibration standards for the project; (iv) Identification of receivers where noise and vibration standards apply; (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable (vi) Methods and frequency for monitoring and reporting on construction noise and vibration; (vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints. (viii) Contact details of the Project Liaison Person; (ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers; (x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18(c)((x)). (xii) Procedures for: a) communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 16; b) assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A~~B~~ vibration criteria of Condition 16, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and (xiii) Requirements for review and update of the CNVMP
19.	**Schedule to a CNVMP**

No.	Condition
	(a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days. (ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; (c) The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. (d) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions; (vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project;

No.	Condition
	(vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version; (viii) Methods to acknowledge cultural values identified through Condition **Error! R eference source not found.** where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so; (ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to: a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition **Error! Reference source not found.**. (c) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note:*** *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-Construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition 22 for these areas (Confirmed Biodiversity Areas).
22.	**Ecological Management Plan (EMP)** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of long tail bats, the EMP may include:

No.	Condition
	a. measures to minimise, disturbance from construction activities within the vicinity of any active long tail bat roosts (including maternity) that are discovered through survey until such roosts are confirmed to be vacant of bats. b. how the timing of any construction work in the vicinity of any maternity long tail bat roosts will be limited to outside the bat maternity period (between December and March) where reasonably practicable; c. details of areas where vegetation is to be retained where practicable for the purposes of the connectivity of long tail bats; d. details of how bat connectivity (including suitable indigenous or exotic trees or artificial alternatives) will be provided and maintained This could include: (i) identification of areas and timeframes for establishment of advance restoration / mitigation planting (including suitable indigenous or exotic trees or artificial alternatives) taking into account land ownership, accessibility and the timing of available funding, (ii) details of measures to manage the effects of light spill on bat connectivity as far as practicable. e. Where mitigation to minimise effects is not practicable, details of any offsetting proposed. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (ii) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable; b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed

No.	Condition
	Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable. b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
25.	**Tree Management Plan** (a) Prior to the Start of Construction for a Stage of Work, a Tree Management Plan shall be prepared. The objective of the Tree Management Plan is to avoid, remedy or mitigate effects of construction activities on trees identified in Schedule 3. (b) The Tree Management Plan shall: (i) confirm that the trees listed in Schedule 3 still exist; and (ii) demonstrate how the design and location of project works has avoided, remedied or mitigated any effects on any tree listed in Schedule 3. This may include: a. planting to replace trees that require removal (with reference to the ULDMP planting design details in Condition 9); b. tree protection zones and tree protection measures such as protective fencing, ground protection and physical protection of roots, trunks and branches; and

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	c. methods for work within the rootzone of trees that are to be retained in line with accepted arboricultural standards. (c) demonstrate how the tree management measures (outlined in A – C above) are consistent with conditions of any resource consents granted for the project in relation to managing construction effects on trees.
26.	**Low Noise Road Surface** The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones) (a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (d) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
27.	**Traffic Noise** For the purposes of Conditions 28 to 40: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (i) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*; (j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (k) Structural Mitigation – has the same meaning as in NZS 6806.
28.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 28 to 41 (all traffic noise conditions). Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
29.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories*.

No.	Condition
30.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
31.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.
32.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
33.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
34.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').
35.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
36.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 35 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 35 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project. If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.
37.	Subject to Condition 36 above, within six months of the assessment undertaken in accordance with Conditions 35 and 36, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
38.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.
39.	Subject to Condition 36, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 37 if:

No.	Condition
	(a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 36 (including where the owner did not respond within that period); or The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
40.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 31

APPENDIX C: NoR 2
SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 32

APPENDIX C: NoR 3
PROPOSED CONDITIONS

NOR 3 - Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities:

Acronym/Term	Definition
	(a) geotechnical investigations (including trial embankments) (b) archaeological site investigations (c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HH~~A~~MP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri • Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in

Acronym/Term	Definition
	the Auckland Unitary Plan, the probable level of development arising from zone changes.
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. (b) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 15 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility. To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan; (iii) Construction Noise and Vibration Management Plan;

No.	Condition
	(iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; (c) Any material changes to the SCEMPs, are to be submitted to the Council for information.
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that: (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8(b) and (c) above will cease to apply if: (i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and

No.	Condition
	(ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones; (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections; (iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements: (i) planting design details including:

No.	Condition
	a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22, 23 and 24; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and e. Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address); (iii) the Construction Works programmes and the staging approach, and the proposed hours of work;

No.	Condition
	(iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses; (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.
14.	**Cultural Monitoring Plan**

No.	Condition
	(a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works; (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note:** *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be; (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads; (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);
16.	**Construction Noise Standards**

<table>
<tr><th>No.</th><th>Condition</th></tr>
<tr><td></td><td>
(a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:

Table 17.1: Construction noise standards

<table>
<tr><th>Day of week</th><th>Time period</th><th>$L_{Aeq(15min)}$</th><th>L_{AFmax}</th></tr>
<tr><td colspan="4">Occupied activity sensitive to noise</td></tr>
<tr><td>Weekday</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>55 dB
70 dB
65 dB
45 dB</td><td>75 dB
85 dB
80 dB
75 dB</td></tr>
<tr><td>Saturday</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>55 dB
70 dB
45 dB
45 dB</td><td>75 dB
85 dB
75 dB
75 dB</td></tr>
<tr><td>Sunday and Public Holidays</td><td>0630h - 0730h
0730h - 1800h
1800h - 2000h
2000h - 0630h</td><td>45 dB
55 dB
45 dB
45 dB</td><td>75 dB
85 dB
75 dB
75 dB</td></tr>
<tr><td colspan="4">Other occupied buildings</td></tr>
<tr><td>All</td><td>0730h – 1800h
1800h – 0730h</td><td>70 dB
75 dB</td><td></td></tr>
</table>

Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 19(c)((x)), then the methodology in Condition 19 shall apply.
</td></tr>
<tr><td>17.</td><td>
Construction Vibration Standards

(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria

<table>
<tr><td>Receiver</td><td>Details</td><td>Category A</td><td>Category B</td></tr>
<tr><td rowspan="2">Occupied Activities sensitive to noise</td><td>Night-time 2000h - 0630h</td><td>0.3mm/s ppv</td><td>2mm/s ppv</td></tr>
<tr><td>Daytime 0630h - 2000h</td><td>2mm/s ppv</td><td>5mm/s ppv</td></tr>
<tr><td>Other occupied buildings</td><td>Daytime 0630h - 2000h</td><td>2mm/s ppv</td><td>5mm/s ppv</td></tr>
<tr><td>All other buildings</td><td>At all other times</td><td colspan="2">Tables 1 and 3 of DIN4150-3:1999</td></tr>
</table>

*Category A criteria adopted from Rule E25.6.30.1 of the AUP

**Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime
</td></tr>
</table>

No.	Condition
	(b) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 19(c)((x)), then the methodology in Condition 19 shall apply
18.	**Construction Noise and Vibration Management Plan (CNVMP)** (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) A CNVMP shall be implemented during the Stage of Work to which it relates. (c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 *'Acoustics – Construction Noise'* (NZS6803:1999) and shall as a minimum, address the following: (i) Description of the works and anticipated equipment/processes; (ii) Hours of operation, including times and days when construction activities would occur; (iii) The construction noise and vibration standards for the project; (iv) Identification of receivers where noise and vibration standards apply; (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable (vi) Methods and frequency for monitoring and reporting on construction noise and vibration; (vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints. (viii) Contact details of the Project Liaison Person; (ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers; (x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18 (c)((x)). (xii) Procedures for: a. communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 16; b. assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A~~B~~ vibration criteria of Condition 16, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and (i) Requirements for review and update of the CNVMP

No.	Condition
19.	**Schedule to a CNVMP** (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days. (ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; (c) The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. (d) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions; (vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project; (vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse

No.	Condition
	effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version; (viii) Methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so; (ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to: a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 14. (c) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note:*** *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-Construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. (b) If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition 22 for these areas (Confirmed Biodiversity Areas).
22.	**Ecological Management Plan (EMP)** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (ii) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable;

No.	Condition
	b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable. b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance

No.	Condition
	(b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of long tail bats, the EMP may include: a. measures to minimise, disturbance from construction activities within the vicinity of any active long tail bat roosts (including maternity) that are discovered through survey until such roosts are confirmed to be vacant of bats. b. how the timing of any construction work in the vicinity of any maternity long tail bat roosts will be limited to outside the bat maternity period (between December and March) where reasonably practicable; c. details of areas where vegetation is to be retained where practicable for the purposes of the connectivity of long tail bats; d. details of how bat connectivity (including suitable indigenous or exotic trees or artificial alternatives) will be provided and maintained. This could include (i) identification of areas and timeframes for establishment of advance restoration / mitigation planting (including suitable indigenous or exotic trees or artificial alternatives) taking into account land ownership, accessibility and the timing of available funding (ii) Details of measures to manage the effects of light spill on bat connectivity as far as practicable. e. Where mitigation to minimise effects is not practicable, details of any offsetting proposed. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
25.	**Low Noise Road Surface** The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones) (a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or

No.	Condition
	c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
26.	**Traffic Noise** For the purposes of Conditions 27 to 39: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (i) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*; (j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (k) Structural Mitigation – has the same meaning as in NZS 6806.
27.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 26 to 39 (all traffic noise conditions). Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
28.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories.*
29.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
30.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.
31.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
32.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
33.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').

No.	Condition
34.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
35.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 34 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 34 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project. If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.
36.	Subject to Condition 35 above, within six months of the assessment undertaken in accordance with Conditions 34 and 35, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and (c) That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
37.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.
38.	Subject to Condition 35, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 37 if: (a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 35 (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
39.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 33

APPENDIX C: NoR 3 SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 34

APPENDIX C: NoR 4
PROPOSED CONDITIONS

NOR 4 - Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities:

Acronym/Term	Definition
	(a) geotechnical investigations (including trial embankments) (b) archaeological site investigations (c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HH~~A~~MP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri • Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in

Acronym/Term	Definition
	the Auckland Unitary Plan, the probable level of development arising from zone changes.
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. (b) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 15 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility. To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan;

No.	Condition
	(iii) Construction Noise and Vibration Management Plan; (iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; (c) Any material changes to the SCEMPs, are to be submitted to the Council for information.
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that: (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8 (b) and (c) above will cease to apply if:

No.	Condition
	(i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and (ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones; (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections; (iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements:

No.	Condition
	(i) planting design details including: a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22, 23, 24 and 25; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and e. Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address);

No.	Condition
	(iii) the Construction Works programmes and the staging approach, and the proposed hours of work; (iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses; (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.
14.	**Cultural Monitoring Plan**

No.	Condition
	(a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works; (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note:** *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be; (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads; (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);
16.	**Construction Noise Standards**

No.	Condition
	(a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:

Table 17.1: Construction noise standards

Day of week	Time period	$L_{Aeq(15min)}$	L_{AFmax}
Occupied activity sensitive to noise			
Weekday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	65 dB	80 dB
	2000h - 0630h	45 dB	75 dB
Saturday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sunday and Public Holidays	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Other occupied buildings			
All	0730h – 1800h	70 dB	
	1800h – 0730h	75 dB	

(b) Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply.

17. Construction Vibration Standards

(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria

Receiver	Details	Category A	Category B
Occupied Activities sensitive to noise	Night-time 2000h - 0630h	0.3mm/s ppv	2mm/s ppv
	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times	Tables 1 and 3 of DIN4150-3:1999	

**Category A criteria adopted from Rule E25.6.30.1 of the AUP*

***Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime*

No.	Condition
	(b) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply
18.	**Construction Noise and Vibration Management Plan (CNVMP)** (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) A CNVMP shall be implemented during the Stage of Work to which it relates. (c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 *'Acoustics – Construction Noise'* (NZS6803:1999) and shall as a minimum, address the following: (i) Description of the works and anticipated equipment/processes; (ii) Hours of operation, including times and days when construction activities would occur; (iii) The construction noise and vibration standards for the project; (iv) Identification of receivers where noise and vibration standards apply; (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable (vi) Methods and frequency for monitoring and reporting on construction noise and vibration; (vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints. (viii) Contact details of the Project Liaison Person; (ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers; (x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18 (c)((x)). (xii) Procedures for: a. communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 17; b. assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A vibration criteria of Condition 17, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and **(i)** Requirements for review and update of the CNVMP
19.	**Schedule to a CNVMP** (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or

No.	Condition
	b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days. (ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; (c) The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. (d) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions; (vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project; (vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version;

No.	Condition
	(viii) Methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so; (ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to: a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 13. (c) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note:*** *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-Construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition **Error! Reference source not found.** for these areas (Confirmed Biodiversity Areas).
22.	**Ecological Management Plan (EMP)** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of long tail bats, the EMP may include: a. measures to minimise, disturbance from construction activities within the vicinity of any active long tail bat roosts (including maternity) that are discovered through survey until such roosts are confirmed to be vacant of bats. b. how the timing of any construction work in the vicinity of any maternity long tail bat roosts will be limited to outside the bat maternity period (between December and March) where reasonably practicable; c. details of areas where vegetation is to be retained where practicable for the purposes of the connectivity of long tail bats;

No.	Condition
	d. details of how bat connectivity (including suitable indigenous or exotic trees or artificial alternatives) will be provided and maintained This could include (i) identification of areas and timeframes for establishment of advance restoration / mitigation planting (including suitable indigenous or exotic trees or artificial alternatives) taking into account land ownership, accessibility and the timing of available funding (ii) Details of measures to manage the effects of light spill on bat connectivity as far as practicable. e. Where mitigation to minimise effects is not practicable, details of any offsetting proposed. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (ii) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable; b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable.

No.	Condition
	b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
25.	**Tree Management Plan** (a) Prior to the Start of Construction for a Stage of Work, a Tree Management Plan shall be prepared. The objective of the Tree Management Plan is to avoid, remedy or mitigate effects of construction activities on trees identified in Schedule 3. (b) The Tree Management Plan shall: (i) confirm that the trees listed in Schedule 3 still exist; and (ii) demonstrate how the design and location of project works has avoided, remedied or mitigated any effects on any tree listed in Schedule 3. This may include: a. planting to replace trees that require removal (with reference to the ULDMP planting design details in Condition 9); b. tree protection zones and tree protection measures such as protective fencing, ground protection and physical protection of roots, trunks and branches; and c. methods for work within the rootzone of trees that are to be retained in line with accepted arboricultural standards. (iii) demonstrate how the tree management measures (outlined in A – C above) are consistent with conditions of any resource consents granted for the project in relation to managing construction effects on trees.
26.	**Low Noise Road Surface**

No.	Condition
	The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones) (a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
27.	**Traffic Noise** For the purposes of Conditions 28 to 40: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (i) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*; (j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (k) Structural Mitigation – has the same meaning as in NZS 6806.
28.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 28 to 40 (all traffic noise conditions). Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
29.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories*.
30.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
31.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation

No.	Condition
	Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.
32.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
33.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
34.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').
35.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
36.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 35 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 35 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project. If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.
37.	Subject to Condition 36 above, within six months of the assessment undertaken in accordance with Conditions 35 and 36, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and (c) That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
38.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.
39.	Subject to Condition 36, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 38 if: (a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent

No.	Condition
	in accordance with Condition 36 (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
40.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 35

APPENDIX C: NoR 4
SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 36

APPENDIX C: NoR 5
PROPOSED CONDITIONS

NOR 5 – Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities:

Acronym/Term	Definition
	(a) geotechnical investigations (including trial embankments) (b) archaeological site investigations (c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HH~~A~~MP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri • Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in

Acronym/Term	Definition
	the Auckland Unitary Plan, the probable level of development arising from zone changes.
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. (b) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 25 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility. To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan;

No.	Condition
	(iii) Construction Noise and Vibration Management Plan; (iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; (c) Any material changes to the SCEMPs, are to be submitted to the Council for information.
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that: (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8(b) and (c) above will cease to apply if: (i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and

No.	Condition
	(ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones; (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections; (iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements: (i) planting design details including:

No.	Condition
	a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22, 23, 24 and 25; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and e. Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address);

No.	Condition
	(iii) the Construction Works programmes and the staging approach, and the proposed hours of work; (iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses; (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.
14.	**Cultural Monitoring Plan**

No.	Condition
	(a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works; (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note:** *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be; (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads; (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);
16.	**Construction Noise Standards**

No.	Condition

(a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:

Table 17.1: Construction noise standards

Day of week	Time period	$L_{Aeq(15min)}$	L_{AFmax}
Occupied activity sensitive to noise			
Weekday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	65 dB	80 dB
	2000h - 0630h	45 dB	75 dB
Saturday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sunday and Public Holidays	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Other occupied buildings			
All	0730h – 1800h	70 dB	
	1800h – 0730h	75 dB	

(b) Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply.

17. Construction Vibration Standards

(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria

Receiver	Details	Category A	Category B
Occupied Activities sensitive to noise	Night-time 2000h - 0630h	0.3mm/s ppv	2mm/s ppv
	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times	Tables 1 and 3 of DIN4150-3:1999	

**Category A criteria adopted from Rule E25.6.30.1 of the AUP*

***Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime*

No.	Condition
	(b) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply
18.	**Construction Noise and Vibration Management Plan (CNVMP)** (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) A CNVMP shall be implemented during the Stage of Work to which it relates. (c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 *'Acoustics – Construction Noise'* (NZS6803:1999) and shall as a minimum, address the following: (i) Description of the works and anticipated equipment/processes; (ii) Hours of operation, including times and days when construction activities would occur; (iii) The construction noise and vibration standards for the project; (iv) Identification of receivers where noise and vibration standards apply; (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable (vi) Methods and frequency for monitoring and reporting on construction noise and vibration; (vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints. (viii) Contact details of the Project Liaison Person; (ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers; (x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18(c)((x)). (xii) Procedures for: a. communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 16; b. assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A~~B~~ vibration criteria of Condition 16, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and **(i)** Requirements for review and update of the CNVMP
19.	**Schedule to a CNVMP** (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or

No.	Condition
	b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days. (ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; (c) The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. (d) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions; (vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project; (vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version; (viii) Methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so;

No.	Condition
	(ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to: a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 14. (c) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note:*** *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-Construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. (b) If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition **Error! Reference source not found.** for these areas (Confirmed Biodiversity Areas).
22.	**Ecological Management Plan (EMP)** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of long tail bats, the EMP may include: a. measures to minimise, disturbance from construction activities within the vicinity of any active long tail bat roosts (including maternity) that are discovered through survey until such roosts are confirmed to be vacant of bats. b. how the timing of any construction work in the vicinity of any maternity long tail bat roosts will be limited to outside the bat maternity period (between December and March) where reasonably practicable; c. details of areas where vegetation is to be retained where practicable for the purposes of the connectivity of long tail bats; d. details of how bat connectivity (including suitable indigenous or exotic trees or artificial alternatives) will be provided and maintained This could include

No.	Condition
	(i) identification of areas and timeframes for establishment of advance restoration / mitigation planting (including suitable indigenous or exotic trees or artificial alternatives) taking into account land ownership, accessibility and the timing of available funding (ii) Details of measures to manage the effects of light spill on bat connectivity as far as practicable. e. Where mitigation to minimise effects is not practicable, details of any offsetting proposed. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (ii) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable; b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable.

No.	Condition
	b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
25.	**Tree Management Plan** (a) Prior to the Start of Construction for a Stage of Work, a Tree Management Plan shall be prepared. The objective of the Tree Management Plan is to avoid, remedy or mitigate effects of construction activities on trees identified in Schedule 3. (b) The Tree Management Plan shall: (i) confirm that the trees listed in Schedule 3 still exist; and (ii) demonstrate how the design and location of project works has avoided, remedied or mitigated any effects on any tree listed in Schedule 3. This may include: a. planting to replace trees that require removal (with reference to the ULDMP planting design details in Condition 9); b. tree protection zones and tree protection measures such as protective fencing, ground protection and physical protection of roots, trunks and branches; and c. methods for work within the rootzone of trees that are to be retained in line with accepted arboricultural standards. (iii) demonstrate how the tree management measures (outlined in A – C above) are consistent with conditions of any resource consents granted for the project in relation to managing construction effects on trees.
26.	**Low Noise Road Surface** The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones)

No.	Condition
	(a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
27.	**Traffic Noise** For the purposes of Conditions 28 to 40: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (i) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*; (j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (k) Structural Mitigation – has the same meaning as in NZS 6806.
28.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 27 to 40 (all traffic noise conditions). Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
29.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories.*
30.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
31.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.

No.	Condition
32.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
33.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
34.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').
35.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
36.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 35 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 35 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project. If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.
37.	Subject to Condition 36 above, within six months of the assessment undertaken in accordance with Conditions 35 and 36, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
38.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.
39.	Subject to Condition 36, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 38 if: (a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 36 (including where the owner did not respond within that period); or

No.	Condition
	The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
40.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 37

APPENDIX C: NoR 5
SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 38

APPENDIX C: NoR 6
PROPOSED CONDITIONS

NOR 6 – Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities:

Acronym/Term	Definition
	(a) geotechnical investigations (including trial embankments) (b) archaeological site investigations (c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HH~~A~~MP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri • Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in

Acronym/Term	Definition
	the Auckland Unitary Plan, the probable level of development arising from zone changes.
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. (b) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 20 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility. To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan; (iii) Construction Noise and Vibration Management Plan;

No.	Condition
	(iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; (c) Any material changes to the SCEMPs, are to be submitted to the Council for information.
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that: (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8(b) and (c) above will cease to apply if: (i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and

No.	Condition
	(ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones; (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections; (iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements: (i) planting design details including:

No.	Condition
	a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22 and 23; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and e. Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address); (iii) the Construction Works programmes and the staging approach, and the proposed hours of work;

No.	Condition
	(iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses; (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.
14.	**Cultural Monitoring Plan**

No.	Condition
	(a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works; (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note:** *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be; (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads; (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);
16.	**Construction Noise Standards**

No.	Condition

(a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:

Table 17.1: Construction noise standards

Day of week	Time period	$L_{Aeq(15min)}$	L_{AFmax}
Occupied activity sensitive to noise			
Weekday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	65 dB	80 dB
	2000h - 0630h	45 dB	75 dB
Saturday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sunday and Public Holidays	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Other occupied buildings			
All	0730h – 1800h	70 dB	
	1800h – 0730h	75 dB	

(b) Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply.

17. **Construction Vibration Standards**

(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria

Receiver	Details	Category A	Category B
Occupied Activities sensitive to noise	Night-time 2000h - 0630h	0.3mm/s ppv	2mm/s ppv
	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times	Tables 1 and 3 of DIN4150-3:1999	

**Category A criteria adopted from Rule E25.6.30.1 of the AUP*

***Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime*

No.	Condition
	(b) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply
18.	**Construction Noise and Vibration Management Plan (CNVMP)** (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) A CNVMP shall be implemented during the Stage of Work to which it relates. (c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 *'Acoustics – Construction Noise'* (NZS6803:1999) and shall as a minimum, address the following: (i) Description of the works and anticipated equipment/processes; (ii) Hours of operation, including times and days when construction activities would occur; (iii) The construction noise and vibration standards for the project; (iv) Identification of receivers where noise and vibration standards apply; (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable (vi) Methods and frequency for monitoring and reporting on construction noise and vibration; (vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints. (viii) Contact details of the Project Liaison Person; (ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers; (x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18(c)((x)). (xii) Procedures for: a. communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 17; b. assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A~~B~~ vibration criteria of Condition 17, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and (xiii) Requirements for review and update of the CNVMP
19.	**Schedule to a CNVMP** (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days.

No.	Condition
	(ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; (c) The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. (d) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions; (vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project; (vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version; (viii) Methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so; (ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to:

No.	Condition
	a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 14. (c) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note:*** *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-Construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. (b) If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition 22 for these areas (Confirmed Biodiversity Areas).
22.	**Ecological Management Plan** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable; b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project.

No.	Condition
	Advice Note: *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable. b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	**Low Noise Road Surface**

No.	Condition
	The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones) (a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
25.	**Traffic Noise** For the purposes of Conditions 26 to 38: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (i) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*; (j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (k) Structural Mitigation – has the same meaning as in NZS 6806.
26.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 27 to 41 (all traffic noise conditions). Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
27.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories.*
28.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
29.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at

No.	Condition
	any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.
30.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
31.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
32.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').
33.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
34.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 33 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 33 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project. If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.
35.	Subject to Condition 34 above, within six months of the assessment undertaken in accordance with Conditions 33 and 34, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
36.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.

No.	Condition
37.	Subject to Condition 34, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 36 if: (a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 34 (including where the owner did not respond within that period); or The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
38.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 39

APPENDIX C: NoR 6 SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 40

APPENDIX C: NoR 7
PROPOSED CONDITIONS

NOR 7 – Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan

Acronym/Term	Definition
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities: (a) geotechnical investigations (including trial embankments) (b) archaeological site investigations (c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HHAMP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri

Acronym/Term	Definition
	• Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in the Auckland Unitary Plan, the probable level of development arising from zone changes.
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (a) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. (b) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 25 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and

No.	Condition
	(iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility. To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan; (iii) Construction Noise and Vibration Management Plan; (iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; Any material changes to the SCEMPs, are to be submitted to the Council for information.

No.	Condition
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that: (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8(b) and (c) above will cease to apply if: (i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and (ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones; (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections;

No.	Condition
	(iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements: (i) planting design details including: a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22, 23 and 24; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and **e.** Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from*

No.	Condition
	a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address); (iii) the Construction Works programmes and the staging approach, and the proposed hours of work; (iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses; (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with

No.	Condition
	throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and **(viii)** linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.
14.	**Cultural Monitoring Plan** (a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works;

No.	Condition
	(iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note**: *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be; (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads; (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);
16.	**Construction Noise Standards** (a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable: **Table 17.1: Construction noise standards**

Day of week	Time period	$L_{Aeq(15min)}$	L_{AFmax}
Occupied activity sensitive to noise			

No.	Condition

Weekday	0630h - 0730h 0730h - 1800h 1800h - 2000h 2000h - 0630h	55 dB 70 dB 65 dB 45 dB	75 dB 85 dB 80 dB 75 dB
Saturday	0630h - 0730h 0730h - 1800h 1800h - 2000h 2000h - 0630h	55 dB 70 dB 45 dB 45 dB	75 dB 85 dB 75 dB 75 dB
Sunday and Public Holidays	0630h - 0730h 0730h - 1800h 1800h - 2000h 2000h - 0630h	45 dB 55 dB 45 dB 45 dB	75 dB 85 dB 75 dB 75 dB
Other occupied buildings			
All	0730h – 1800h 1800h – 0730h	70 dB 75 dB	

(b) Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply.

17. Construction Vibration Standards

(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria

Receiver	Details	Category A	Category B
Occupied Activities sensitive to noise	Night-time 2000h - 0630h	0.3mm/s ppv	2mm/s ppv
	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times	Tables 1 and 3 of DIN4150-3:1999	

**Category A criteria adopted from Rule E25.6.30.1 of the AUP*

***Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime*

No.	Condition
	(b) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply
18.	**Construction Noise and Vibration Management Plan (CNVMP)** (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) A CNVMP shall be implemented during the Stage of Work to which it relates. (c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 *'Acoustics – Construction Noise'* (NZS6803:1999) and shall as a minimum, address the following: (i) Description of the works and anticipated equipment/processes; (ii) Hours of operation, including times and days when construction activities would occur; (iii) The construction noise and vibration standards for the project; (iv) Identification of receivers where noise and vibration standards apply; (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable (vi) Methods and frequency for monitoring and reporting on construction noise and vibration; (vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints. (viii) Contact details of the Project Liaison Person; (ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers; (x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition **Error! Reference source not found.**(c)((x)). (xii) Procedures for: (xiii) communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 17; (xiv) assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A vibration criteria of Condition 17, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and (xv) Requirements for review and update of the CNVMP

No.	Condition
19.	**Schedule to a CNVMP** (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days. (ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions;

No.	Condition
	(vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project; (vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version; (viii) Methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so; (ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to: a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 14. (c) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note:*** *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-Construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. (b) If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition 22 for these areas (Confirmed Biodiversity Areas).

No.	Condition
22.	**Ecological Management Plan (EMP)** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of long tail bats, the EMP may include: a. measures to minimise, disturbance from construction activities within the vicinity of any active long tail bat roosts (including maternity) that are discovered through survey until such roosts are confirmed to be vacant of bats. b. how the timing of any construction work in the vicinity of any maternity long tail bat roosts will be limited to outside the bat maternity period (between December and March) where reasonably practicable; c. details of areas where vegetation is to be retained where practicable for the purposes of the connectivity of long tail bats; d. details of how bat connectivity (including suitable indigenous or exotic trees or artificial alternatives) will be provided and maintained This could include (i) identification of areas and timeframes for establishment of advance restoration / mitigation planting (including suitable indigenous or exotic trees or artificial alternatives) taking into account land ownership, accessibility and the timing of available funding (ii) Details of measures to manage the effects of light spill on bat connectivity as far as practicable. e. Where mitigation to minimise effects is not practicable, details of any offsetting proposed. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable; b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present.

No.	Condition
	(b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable. b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:***

No.	Condition
	Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans: *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
25.	**Low Noise Road Surface** The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones) (a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
26.	**Traffic Noise** For the purposes of Conditions 27 to 39: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (i) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*;

No.	Condition
	(j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (k) Structural Mitigation – has the same meaning as in NZS 6806.
27.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 27 to 39 (all traffic noise conditions). Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
28.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories*
29.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
30.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.
31.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
32.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
33.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').
34.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
35.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 34 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 34 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project. If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.

No.	Condition
36.	Subject to Condition 35 above, within six months of the assessment undertaken in accordance with Conditions 34 and 35, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
37.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner
38.	Subject to Condition 35, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 37 if: (a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 35 (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
39.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 41

APPENDIX C: NoR 7
SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 42

APPENDIX C: NoR 8
PROPOSED CONDITIONS

NOR 8 - Proposed Conditions

Abbreviations and definitions

Acronym/Term	Definition
Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan.
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a plan or CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: • where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or • ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received. • five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP
Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
Enabling works	Includes, but is not limited to, the following and similar activities:

Acronym/Term	Definition
	(a) geotechnical investigations (including trial embankments) (b) archaeological site investigations (c) formation of access for geotechnical investigations (d) establishment of site yards, site entrances and fencing (e) constructing and sealing site access roads (f) demolition or removal of buildings and structures (g) relocation of services (h) establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting)
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HH~~A~~MP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga.
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of features of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: • Ngāti Manuhiri • Ngāti Maru • Ngāti Tamatera • Ngāti Whanaunga • Te Ākitai Waiohua • Ngai Tai Ki Tamaki • Ngāti Whātua o Kaipara • Ngāti Paoa Trust Board • Te Kawerau a Maki • Te Runanga o Ngāti Whātua • Te Patu Kirikiri • Ngāti Paoa Iwi Trust. **Note:** Other iwi and hapu not identified above may have an interest in the Project and should be consulted.
Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in

Acronym/Term	Definition
	the Auckland Unitary Plan, the probable level of development arising from zone changes.
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: *Acoustics – Road-traffic noise – New and altered roads.*
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan

No.	Condition
1.	**Activity in General Accordance with Plans and Information** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.
2.	**Project Information** (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on: (i) the status of the Project; (ii) anticipated construction timeframes; and (iii) contact details for enquiries. (iv) a subscription service to enable receipt of project updates by email; and (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA. (a) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.
3.	**Designation Review** (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable: (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
4.	**Lapse** In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 20 years from the date on which it is included in the AUP.
5.	**Network Utility Operators (Section 176 Approval)** (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities: (i) operation, maintenance and urgent repair works; (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations; (iii) minor works such as new service connections; and (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility. To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.
6.	**Outline Plan** (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA. (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project. (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include: (i) Construction Environmental Management Plan; (ii) Construction Traffic Management Plan;

No.	Condition
	(iii) Construction Noise and Vibration Management Plan; (iv) Urban and Landscape Design Management Plan; (v) Historic Heritage Management Plan; and (vi) Ecological Management Plan (vii) Tree Management Plan
7.	**Management Plans** (a) Any management plan shall: (i) Be prepared and implemented in accordance with the relevant management plan condition; (ii) Be prepared by a Suitably Qualified Person(s); (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates. (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have: a. Been incorporated; and b. Where not incorporated, the reasons why. (v) Be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules. (vi) Once finalised, uploaded to the Project website or equivalent virtual information source. (b) Any management plan developed in accordance with Condition 7 may: (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation. (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process. (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision; (b) Any material changes to the SCEMPs, are to be submitted to the Council for information.
8.	**Cultural Advisory Report** (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project. The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that: (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; (iii) Identifies traditional cultural practices within the area that may be impacted by the Project; (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area; (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. (b) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable. (c) Conditions 8(b) and (c) above will cease to apply if:

No.	Condition
	(i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and (ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.
9.	**Urban and Landscape Design Management Plan (ULDMP)** (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with the Cultural Advisory Report, Condition 8, (specifically subclause (c) which requires discussion of recommendations with RA on practicality of implementation may be reflected in the ULDMP. The objective of the ULDMP(s) is to: (i) Enable integration of the Project's permanent works into the surrounding landscape and urban context; and (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment. (c) The ULDMP shall be prepared in general accordance with: (i) Auckland Transport's Urban Roads and Streets Design Guide; (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version; (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version; and (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version. (d) To achieve the objective, the ULDMP(s) shall provide details of how the project: (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones; (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections; (iii) Promotes inclusive access (where appropriate); and (iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as: a. Crime Prevention Through Environmental Design (CPTED) principles; b. Safety in Design (SID) requirements; and c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures. (e) The ULDMP(s) shall include: (i) A concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals; (ii) Developed design concepts, including principles for walking and cycling facilities and public transport; and (iii) Landscape and urban design details – that cover the following: a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment; b. Roadside elements – such as lighting, fencing, wayfinding and signage; c. architectural and landscape treatment of all major structures, including bridges and retaining walls; d. Architectural and landscape treatment of noise barriers; e. Landscape treatment of permanent stormwater control wetlands and swales; f. Integration of passenger transport; g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses; h. Historic heritage places with reference to the HHMP; and i. Re-instatement of construction and site compound areas, driveways, accessways and fences. (f) The ULDMP shall also include the following planting details and maintenance requirements:

No.	Condition
	(i) planting design details including: a. Identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan. Where practicable, mature trees and native vegetation should be retained; b. Street trees, shrubs and ground cover suitable for berms; c. treatment of fill slopes to integrate with adjacent land use, streams, Riparian margins and open space zones; d. planting of stormwater wetlands; e. Identification of vegetation to be retained and any planting requirements under Conditions 21, 22, 23 and 24; f. Integration of any planting requirements required by conditions of any resource consents for the project; and g. Re-instatement planting of construction and site compound areas as appropriate. (ii) A planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and (iii) Detailed specifications relating to the following: a. Weed control and clearance; b. Pest animal management (to support plant establishment); c. Ground preparation (top soiling and decompaction); d. Mulching; and e. Plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.
	Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of "road widening". Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*
10.	**Flood Hazard** (a) The Project shall be designed to achieve the following flood risk outcomes: (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding; (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors; (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling; (iv) no new flood prone areas; and (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change). (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.
11.	**Construction Environmental Management Plan (CEMP)** (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include: (i) the roles and responsibilities of staff and contractors; (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address);

No.	Condition
	(iii) the Construction Works programmes and the staging approach, and the proposed hours of work; (iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, (v) locations of refuelling activities and construction lighting; (vi) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places; (vii) methods for providing for the health and safety of the general public; (viii) procedures for incident management; (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses; (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up; (xi) procedures for responding to complaints about Construction Works; and (xii) methods for amending and updating the CEMP as required.
12.	**Stakeholder and Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with; (v) Identification of the properties whose owners will be engaged with; (vi) Methods and timing to engage with landowners whose access is directly affected (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
13.	**Complaints Register** (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include: (i) The date, time and nature of the complaint; (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous); (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate; (iv) The outcome of the investigation into the complaint; (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally. (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.
14.	**Cultural Monitoring Plan**

No.	Condition
	(a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua. (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works. The Cultural Monitoring Plan shall include: (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua; (ii) Requirements and protocols for cultural inductions for contractors and subcontractors; (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works; (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol (c) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan. **Advice Note:** *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*
15.	**Construction Traffic Management Plan (CTMP)** (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects To achieve this objective, the CTMP shall include: (i) methods to manage the effects of temporary traffic management activities on traffic; (ii) measures to ensure the safety of all transport users; (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion; (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors; (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads; (vi) methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be; (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads; (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services);
16.	**Construction Noise Standards**

No.	Condition
	(a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:

Table 17.1: Construction noise standards

Day of week	Time period	$L_{Aeq(15min)}$	L_{AFmax}
Occupied activity sensitive to noise			
Weekday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	65 dB	80 dB
	2000h - 0630h	45 dB	75 dB
Saturday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sunday and Public Holidays	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Other occupied buildings			
All	0730h – 1800h	70 dB	
	1800h – 0730h	75 dB	

(c) Where compliance with the noise standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)((x)), then the methodology in Condition 19 shall apply.

17. Construction Vibration Standards

(a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria

Receiver	Details	Category A	Category B
Occupied Activities sensitive to noise	Night-time 2000h - 0630h	0.3mm/s ppv	2mm/s ppv
	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times	Tables 1 and 3 of DIN4150-3:1999	

**Category A criteria adopted from Rule E25.6.30.1 of the AUP*

***Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime*

No.	Condition
	(d) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 19(c)((x)), then the methodology in Condition 19 shall apply
18.	**Construction Noise and Vibration Management Plan (CNVMP)** (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) A CNVMP shall be implemented during the Stage of Work to which it relates. (c) The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 *'Acoustics – Construction Noise'* (NZS6803:1999) and shall as a minimum, address the following: (i) Description of the works and anticipated equipment/processes; (ii) Hours of operation, including times and days when construction activities would occur; (iii) The construction noise and vibration standards for the project; (iv) Identification of receivers where noise and vibration standards apply; (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable (vi) Methods and frequency for monitoring and reporting on construction noise and vibration; (vii) Procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints. (viii) Contact details of the Project Liaison Person; (ix) Procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers; (x) Identification of areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category A or Category B] will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites. (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition 16] and/or vibration standards [Condition 17 Category B] will not be practicable and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18(c)((x)). (xii) Procedures for: a. communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration criteria of Condition 17; b. assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A vibration criteria of Condition 17, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and (xiii) Requirements for review and update of the CNVMP
19.	**Schedule to a CNVMP** (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when: (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the L_{Aeq} criteria is no greater than 5 decibels and does not exceed: a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or

No.	Condition
	b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days. (ii) Construction vibration is either predicted or measured to exceed the Category B standard at the receivers in Condition 17. (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as: (i) Construction activity location, start and finish dates; (ii) The nearest neighbours to the construction activity; (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance; (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why; (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and (vi) Location, times and types of monitoring; (c) The Schedule shall be submitted to the Manager for certification at least 5 working days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP. (e) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.
20.	**Historic Heritage Management Plan (HHMP)** (a) A HHMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work. (b) The objective of the HHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HHMP shall identify: (i) Any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures; (ii) Methods for the identification and assessment of potential historic heritage places within the Designation to inform detailed design; (iii) Known historic heritage places and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted; (iv) Any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded; (v) Roles, responsibilities and contact details of Project personnel, Council and HNZPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions; (vi) Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project; (vii) The proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No.1: Investigation and Recording of Buildings and Standing Structures (November 2018), or any subsequent version;

No.	Condition
	(viii) Methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve ngā taonga tuku iho (treasures handed down by our ancestors) and where feasible and practicable to do so; (ix) Methods for avoiding, remedying or mitigation adverse effects on historic heritage places and sites within the Designation during Construction Works as far as practicable. These methods shall include, but are not limited to: a. security fencing or hoardings around historic heritage places to protect them from damage during construction or unauthorised access b. measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes such as increased public awareness and interpretation signage; and c. Training requirements and inductions for contractors and subcontractors on historic heritage places within the Designation, legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule (E11.6.1) . The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 14. (f) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring), shall be submitted to the Manager within 12 months of completion.
Accidental Discoveries ***Advice Note:*** *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items.* *The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*	
21.	**Pre-Construction Ecological Survey** (a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of the ecological management plan by: (i) Confirming whether the species of value within the Identified Biodiversity Areas recorded in the *Identified Biodiversity Area Schedule [2]* are still present*;* (ii) Confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines. (g) If the ecological survey confirms the presence of ecological features of value in accordance with condition 21(a)(i) and that effects are likely in accordance with condition 21(a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition 22 for these areas (Confirmed Biodiversity Areas).
22.	**Ecological Management Plan (EMP)** (a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of long tail bats, the EMP may include: a. measures to minimise, disturbance from construction activities within the vicinity of any active long tail bat roosts (including maternity) that are discovered through survey until such roosts are confirmed to be vacant of bats. b. how the timing of any construction work in the vicinity of any maternity long tail bat roosts will be limited to outside the bat maternity period (between December and March) where reasonably practicable; c. details of areas where vegetation is to be retained where practicable for the purposes of the connectivity of long tail bats;

No.	Condition
	d. details of how bat connectivity (including suitable indigenous or exotic trees or artificial alternatives) will be provided and maintained. This could include (i) identification of areas and timeframes for establishment of advance restoration / mitigation planting (including suitable indigenous or exotic trees or artificial alternatives) taking into account land ownership, accessibility and the timing of available funding (ii) Details of measures to manage the effects of light spill on bat connectivity as far as practicable. e. Where mitigation to minimise effects is not practicable, details of any offsetting proposed. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
23.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (ii) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk birds (excluding wetland birds): a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable; b. Where Pipit are identified as being present, how the timing of any Construction Works shall be undertaken outside of the Pipit bird breeding season (August to February) where practicable; and c. Where works are required within the area identified in the Confirmed Biodiversity Area during the bird breeding season (including Pipits), methods to minimise adverse effects on Threatened or At-Risk birds. d. Details of grass maintenance if Pipit are present. (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
24.	(a) An EMP shall be prepared for any Confirmed Biodiversity Areas (confirmed through Condition 21) prior to the Start of Construction for a Stage of Work. The objective of the EMP is to minimise effects of the Project on the ecological features of value of Confirmed Biodiversity Areas as far as practicable. The EMP shall set out the methods that will be used to achieve the objective which may include: (i) If an EMP is required in accordance with condition 21(b) for the presence of threatened or at risk wetland birds: a. How the timing of any Construction Works shall be undertaken outside of the bird breeding season (September to February) where practicable.

No.	Condition
	b. Where works are required within the Confirmed Biodiversity Area during the bird season, methods to minimise adverse effects on Threatened or At-Risk wetland birds c. undertaking a nesting bird survey of Threatened or At-Risk wetland birds prior to any Construction Works taking place within a 50m radius of any identified Wetlands (including establishment of construction areas adjacent to Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity; d. What protection and buffer measures will be provided where nesting Threatened or At-Risk wetland birds are identified within 50m of any construction area (including laydown areas). Measures could include: i. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage; ii. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging) as confirmed by a Suitably Qualified and Experienced Person; and iii. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person. iv. adopting a 10m setback where practicable, between the edge of Wetlands and construction areas (along the edge of the stockpile/laydown area). v. Minimising light spill from construction areas into Wetlands e. Details on any mitigation required to address any potential operational disturbance (b) The EMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any regional resource consents granted for the Project. ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *(i) Stream and/or wetland restoration plans;* *(ii) Vegetation restoration plans; and* *(iii) Fauna management plans (eg avifauna, herpetofauna, bats).*
25.	**Low Noise Road Surface** The following condition only applies where an upgrade or extension to an existing road is within or adjacent to urban zoning (excluding open space and special purpose zones) (a) Asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented within 12 months of Completion of Construction of the project. (b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where: (i) The volume of traffic exceeds 10,000 vehicles per day; or a. The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or b. It is in an industrial or commercial area where there is a high concentration of truck traffic; or c. It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools. (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if any of the triggers in Condition 24(b)(i) – (iv) are not met by the road or a section of it and therefore where the application of asphaltic concrete surfacing (or equivalent low

No.	Condition
	noise road surface) is no longer required on the road or a section of it. Such advice shall also indicate when any resealing is to occur.
26.	**Traffic Noise** For the purposes of Conditions 27 to 39: (a) Building-Modification Mitigation – has the same meaning as in NZS 6806; (b) Design year has the same meaning as in NZS 6806; (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed; (d) Habitable Space – has the same meaning as in NZS 6806; (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 4: Identified PPFs Noise Criteria Categories*; (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C); (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads; (i) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in green, orange or red in *Schedule 4: PPFs Noise Criteria Categories*; (j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and (k) Structural Mitigation – has the same meaning as in NZS 6806.
27.	The Noise Criteria Categories identified in *Schedule 4: PPFs Noise Criteria Categories* at each of the PPFs shall be achieved where practicable and subject to Conditions 27 to 39 (all traffic noise conditions). Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.
28.	As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on *Schedule* 4 *PPFs Noise Criteria Categories.*
29.	Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for the PPFs identified in *Schedule 4 PPFs Noise Criteria Categories*, taking into account the Selected Mitigation Options.
30.	If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.
31.	Prior to the Start of Construction, a Noise Mitigation Plan written in accordance with P40 shall be provided to the Manager for information.
32.	The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
33.	Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').
34.	Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall

No.	Condition
	instruct a Suitably Qualified Person to visit the building and assess the noise reduction performance of the existing building envelope.
35.	For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 34 above if: (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 34 above (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project. If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.
36.	Subject to Condition 35 above, within six months of the assessment undertaken in accordance with Conditions 34 and 35, the Requiring Authority shall write to the owner of each Category C Building advising: (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and (b) The options available for Building-Modification Mitigation to the building, if required; and That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
37.	Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.
38.	Subject to Condition 35, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 37 if: (a) The Requiring Authority has completed Building Modification Mitigation to the building; or (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 35 (including where the owner did not respond within that period); or (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
39.	The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable

ATTACHMENT 43

APPENDIX C: NoR 8
SUPPLEMENTARY CONDITION

Sensitivity: General

Alison Pye and Vanessa Wilkinson
Auckland Council
135 Albert Street
Auckland
Private Bag 92300,
Auckland 1142

6/06/2023

Issued via email:

Dear Alison and Vanessa,

Re: Supplementary NOR Condition for the Warkworth Te Tupu Ngātahi Package

Thank you for working with Te Tupu Ngātahi through the post-lodgement process. This letter outlines the supplementary condition the requiring authority (Auckland Transport) is requesting be added to the proposed NOR condition sets for all Warkworth NOR (NOR 1 to NOR 8).

The condition and rationale for this is outlined in Table 1.

Table 1: Supplementary conditions for Warkworth NOR package.

NOR	Condition	Rationale
All NOR	**Network Utility Management Plan (NUMP)** a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work. b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to: i. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities; ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; iii. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines; c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.	To provide greater certainty to Network Utility Operator(s) regarding the framework for protecting, relocating and working in proximity to existing network utilities/assets during construction activities associated with the implementation works.

NOR	Condition	Rationale
	d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed. e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP. f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.	

As this condition is intended to form part of the recommended conditions for the Warkworth NOR it is requested that this letter be included as part of the notified documentation available on Councils website(s) at the time of notification for all NOR.

The condition is provided in full in Appendix A below.

Yours sincerely,

Simon Titter

Lead Planner Warkworth

Appendix A – Warkworth NOR Supplementary Condition

Condition XX - Network Utility Management Plan (NUMP)

a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.

b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

   iv. Provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;

   v. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area;

   vi. Demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines;

c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.

d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.

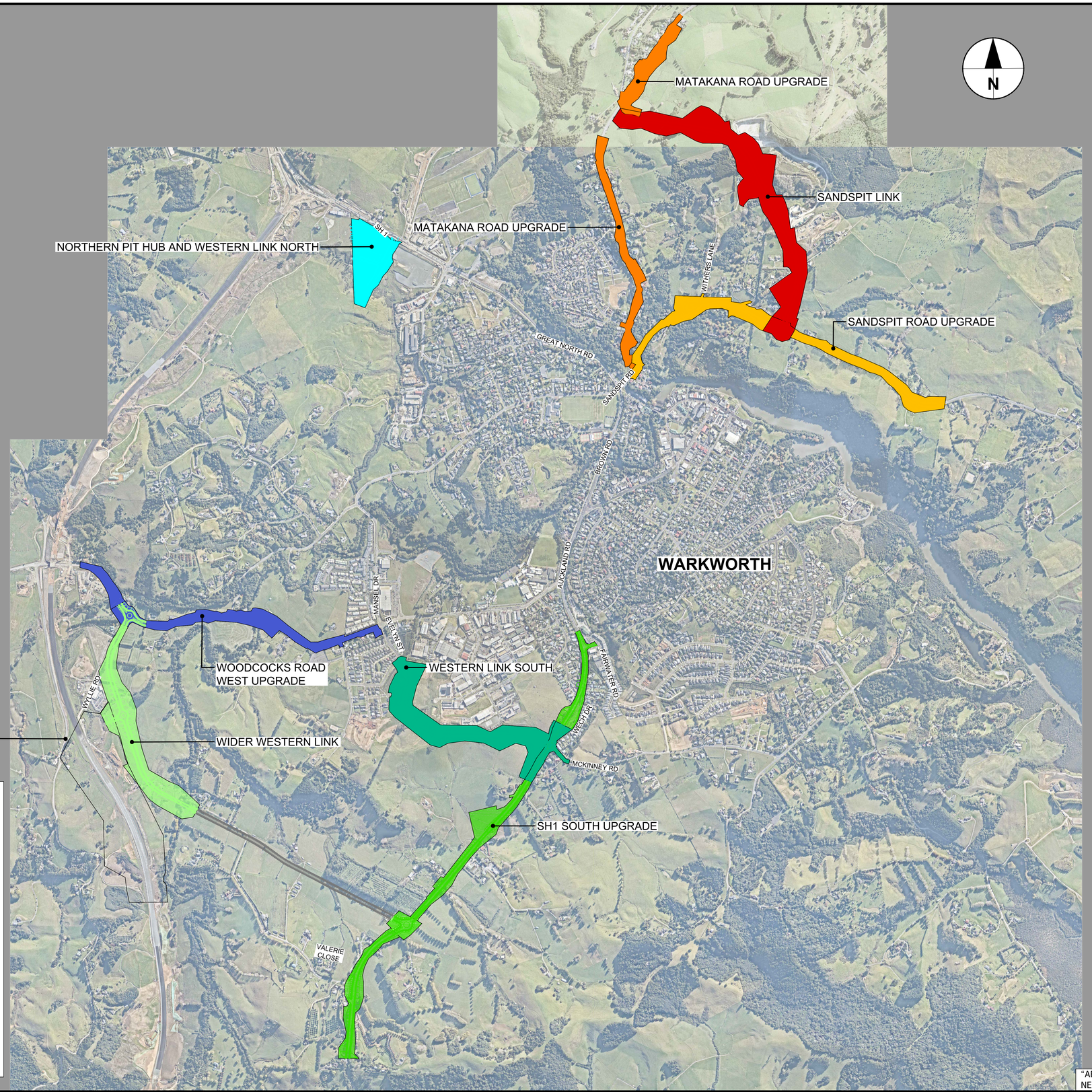
e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.

Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

ATTACHMENT 44

GENERAL ARRANGEMENT PLAN - OVERALL

C:\pwworking\aecom_ds10_au\joseph.delatorre@aecom.com\d0153530\SGA-DRG-WKW-300-GE-0001.dwn



N

LEGEND

	NORTHERN PUBLIC TRANSPORT HUB AND WESTERN LINK ROAD - NORTH	NoR 1
	WOODCOCKS ROAD	NoR 2
	STATE HIGHWAY 1 - SOUTH	NoR 3
	MATAKANA ROAD	NoR 4
	SANDSPIT ROAD	NoR 5
	WESTERN LINK ROAD - SOUTH	NoR 6
	SANDSPIT LINK ROAD	NoR 7
	WIDER WESTERN LINK ROAD - NORTH	NoR 8

"AERIAL IMAGERY SUPPLIED BY NEARMAP AUSTRALIA PTY LTD"

NOT FOR CONSTRUCTION

ORIGINAL SIZE A1

REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IM	MAR. 2023
B	ISSUED FOR APPROVAL	JDT	FEB. 2023
A	DRAFT ISSUE FOR REVIEW	IMM	25.10.2022

SURVEYED	N/A	
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	

TE TUPU NGĀTAHI Supporting Growth

WAKA KOTAHI NZ TRANSPORT AGENCY

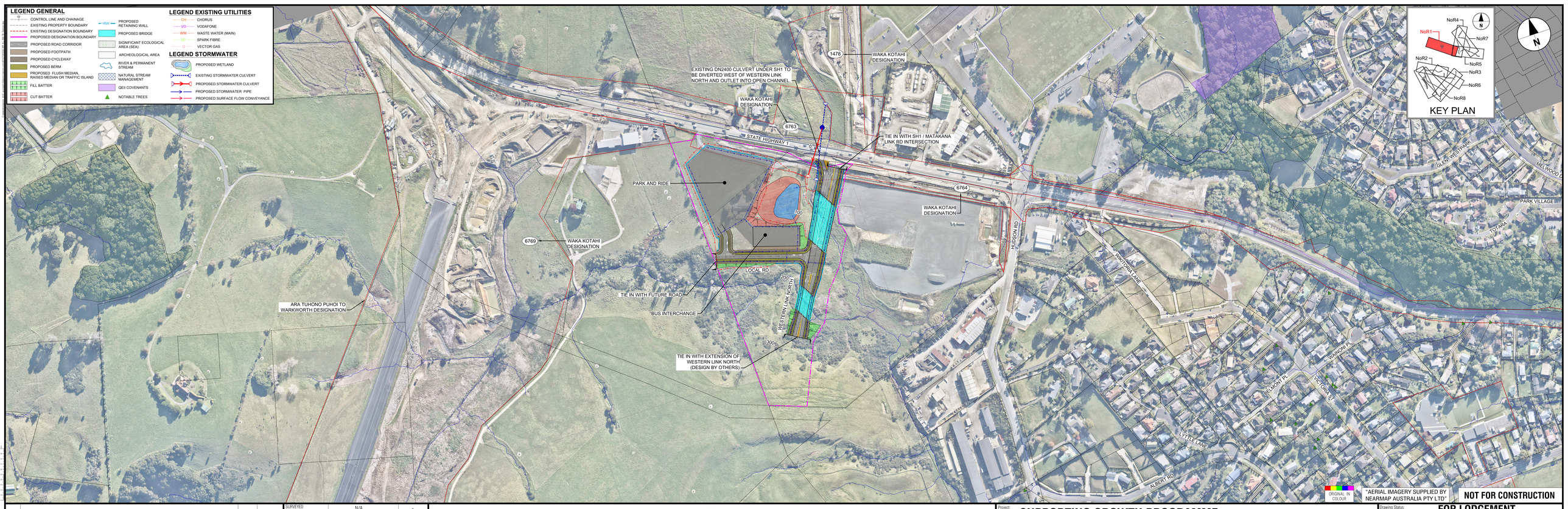
Project:
SUPPORTING GROWTH PROGRAMME
WARKWORTH

Drawing Title:
WARKWORTH OVERALL LAYOUT PLAN

Drawing Status: **FOR LODGEMENT**
Drawing Date: 25.10.2022
A1 Scales: NTS | A3 Scales: NTS
Discipline: GENERAL
Drawing No.: SGA-DRG-WKW-300-GE-0001
Revision: C

ATTACHMENT 45

NoR 1 – GENERAL ARRANGEMENT PLAN



REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IMM	MAR 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	IMM	30.11.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

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WAKA KOTAHI NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR1

Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
NORTHERN PUBLIC TRANSPORT HUB AND WESTERN LINK NORTH

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales 1:500 | A3 Scales 1:1000
Discipline GENERAL
Drawing No. SGA-DRG-WKW-300-GE-9000
Revision C

ATTACHMENT 46

NoR 1 – PROPERTY BOUNDARIES AND SCHEDULES

Date Exported: 5/04/2023 9:02

Name of Map: SGA-PA-WW-08-Western Link North

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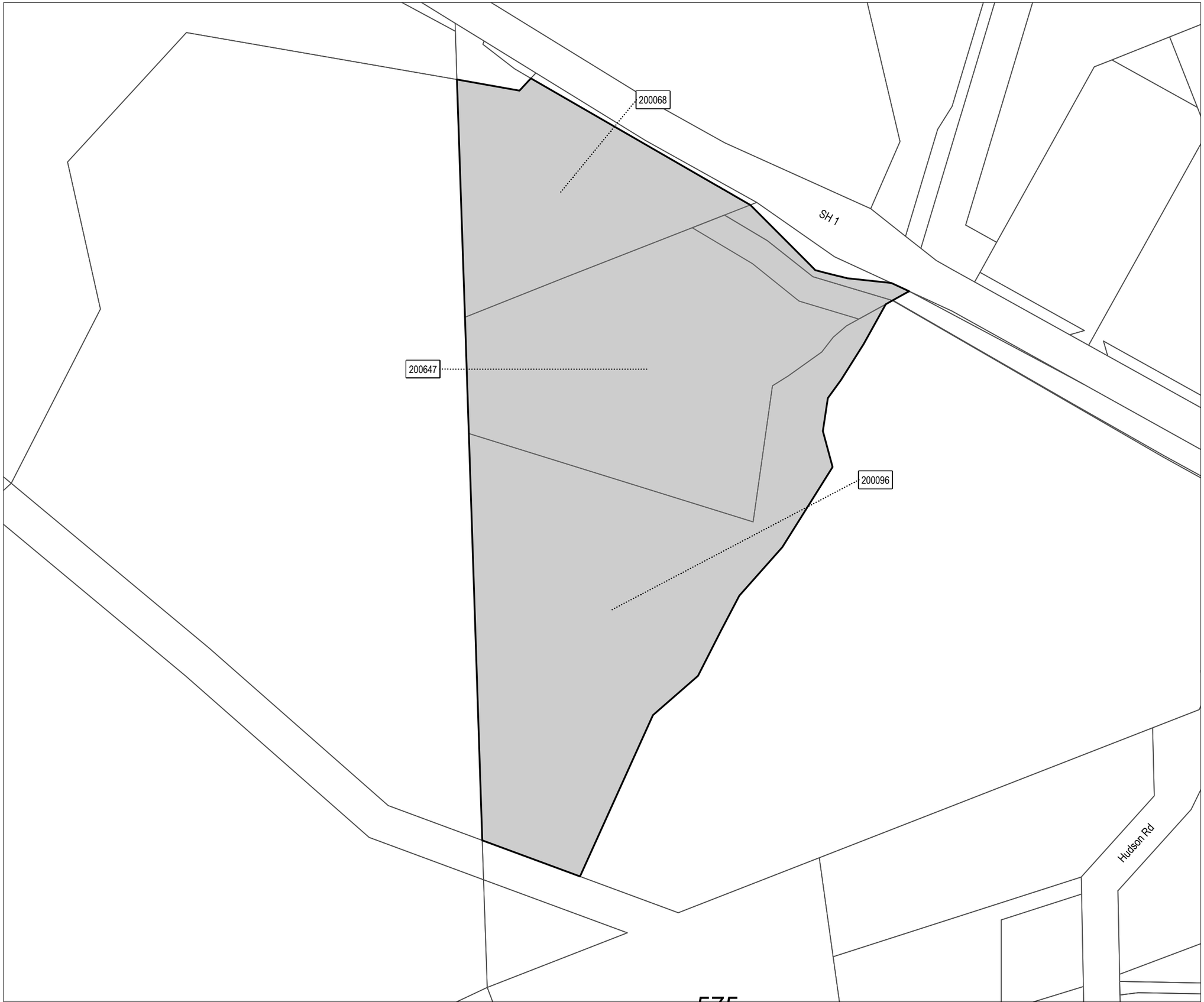

Designation Plan

Land to be Designated
Northern Public Transport Hub and
Western Link – North Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID

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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

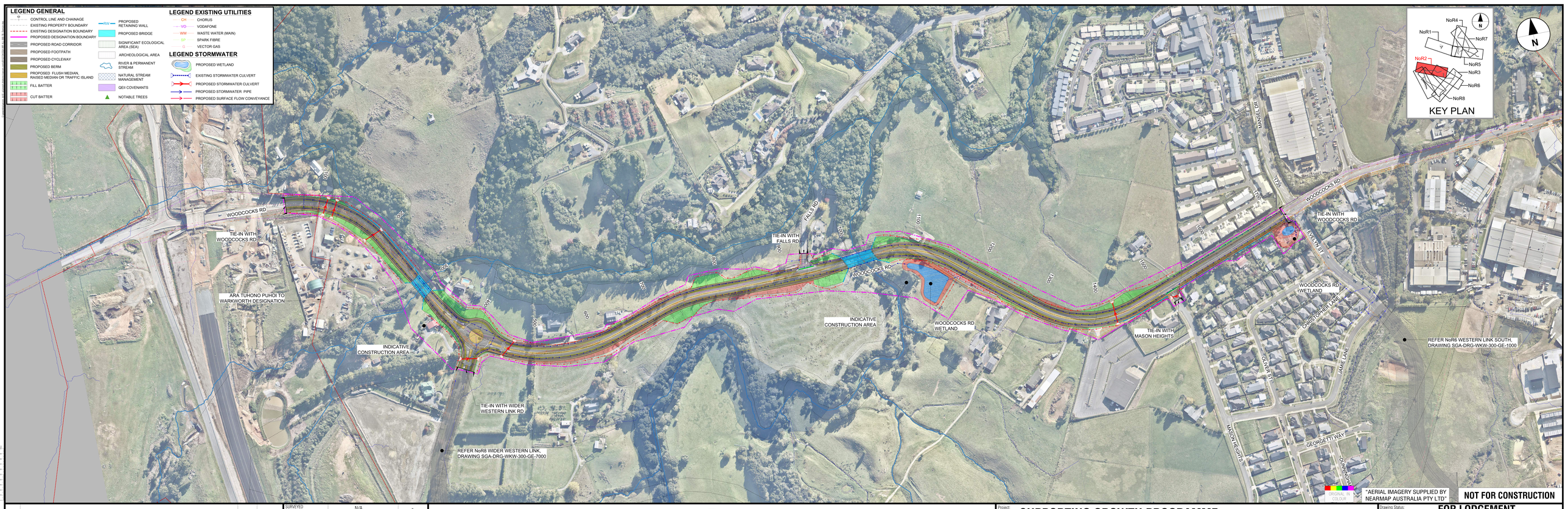
N

Client: **Auckland Transport / Waka Kotahi**	Discipline: **GIS**
Project: **Warkworth Network**	Drawing No: **SGA-PA-WW-08** Sheet No : 1 of 1

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200068	State Highway 1	NA111D/807	Pt Lot 1 DP 180823, Pt Lot 2 DP 180823	11767	1
200096	12 Hudson Road	694504	Section 4 SO 476652	28238	1
200647	27 State Highway 1	941709	Section 4 SO 532939	20752	1
200647				1599	1

ATTACHMENT 47

NoR 2 – GENERAL ARRANGEMENT PLAN



REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IM	MAR. 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	JDT	25.10.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

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WAKA KOTAHI NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR2

Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
WOODCOCKS ROAD UPGRADE

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales 1:500 | A3 Scales 1:1000
Discipline: GENERAL
Drawing No.: SGA-DRG-WKW-300-GE-3000
Revision: C

ATTACHMENT 48

NoR 2 – PROPERTY BOUNDARIES AND SCHEDULES

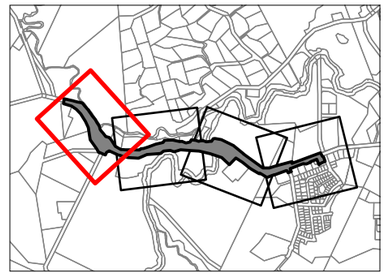
Date Exported: 5/04/2023 9:30
Name of Map: SGA-PA-WW-03-Woodcocks Road
Path: P:\381138109341TG\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Woodcocks Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-03**
Sheet No : 1 of 4

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 5/04/2023 9:30

Name of Map: SGA-PA-WW-03-Woodcocks Road

Path: P:\38\13810934\TG\I01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

200388

200513

200396

200447

Woodcocks Rd

200386

Falls Rd

200378

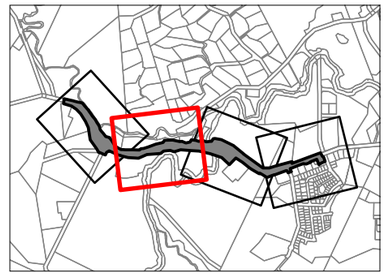
200444

Designation Plan

Land to be Designated
Woodcocks Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-03**
Sheet No : 2 of 4

Date Exported: 5/04/2023 9:30

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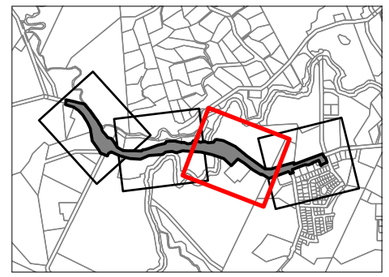
Designation Plan

Land to be Designated
Woodcocks Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-03**
Sheet No : 3 of 4

Date Exported: 5/04/2023 9:30
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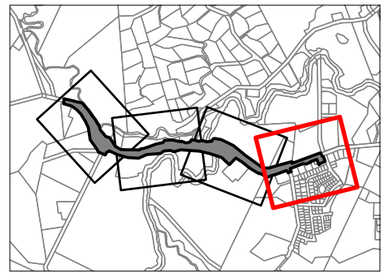
Designation Plan

Land to be Designated
Woodcocks Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-03**
Sheet No : 4 of 4

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200357	371 Woodcocks Road	852160	Lot 1 DP 527082	268	1
200360	371 Woodcocks Road	852160	Lot 2 DP 329024	4080	1
200374	346 Woodcocks Road	NA52C/802	Lot 1 DP 77097	1621	1
200375	Woodcocks Road		Lot 7 DP 122379	97	3
200378	286 Woodcocks Road	NA71A/1189	Lot 5 DP 122379	287	2
200382	110-138 Woodcocks Road	718157	Lot 2 DP 493060	6350	3
200386	Woodcocks Road	182640	Lot 2 DP 344497	316	2
200388	346 Woodcocks Road	NA52C/802	Lot 1 DP 96751	1116	1
200396	314 Woodcocks Road	182639	Lot 1 DP 344497	2721	2
200399	2 Wyllie Road	118448	Lot 3 DP 329024	5091	1
200404	433 Woodcocks Road	848090	Lot 2 DP 527082	187	1
200434	100 Woodcocks Road	NA85D/562	Lot 1 DP 144680	2954	3
200444	Woodcocks Road	581654	Lot 1 DP 437211	4117	2
200445	97 Woodcocks Road	555874	Lot 1 DP 443907	112	4
200447	317 Woodcocks Road	647897	Lot 2 DP 473567	6848	1
200451	99 Woodcocks Road	555875	Lot 2 DP 443907	86	4
200455	101-103 Woodcocks Road	NA1057/299	Lot 2 DP 40048	255	4
200465	153 Woodcocks Road	NA91C/876	Lot 1 DP 153743	166	3
200474	Woodcocks Road	647838	Lot 3 DP 437211	1269	3
200477	115 Woodcocks Road	664855	Lot 1 DP 476629	158	4
200507	127 Woodcocks Road	194126	Part Allot 62 PSH OF Mahurangi	7427	3
200513	Woodcocks Road	647898	Lot 4 DP 473567	1150	1
200919	4 Wyllie Road	NA104C/827	Lot 2 DP 171314	352	1
201456	93 Woodcocks Road	892924	Lot 2 DP 537192	604	4
201457	95 Woodcocks Road	892923	Lot 1 DP 537192	766	4

ATTACHMENT 49

NoR 3 – GENERAL ARRANGEMENT PLAN

REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IMM	MAR 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	JDT	24.11.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

TE TUPU NGĀTAHI
Supporting Growth

WAKA KOTAHI
NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR3
Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
SH1 SOUTH UPGRADE

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales: NTS | A3 Scales: NTS
Discipline: GENERAL
Drawing No.: SGA-DRG-WKW-300-GE-4000
Revision: C

ATTACHMENT 50

NoR 3 – PROPERTY BOUNDARIES AND SCHEDULES

Date Exported: 1/05/2023 4:23
Name of Map: SGA-PA-WW-06-State Highway 1
Path: P:\381138109341TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

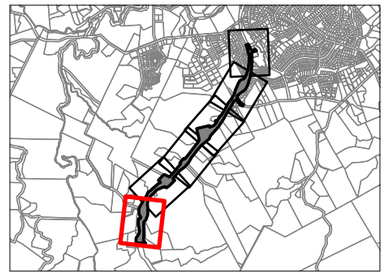
201439
200619
200622
201483
200608
200611
200614
200612
SH 1
200618
200620
SH 1
Valerie Cl

Designation Plan

Land to be Designated
State Highway 1 – South Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-06**
Sheet No : 1 of 6

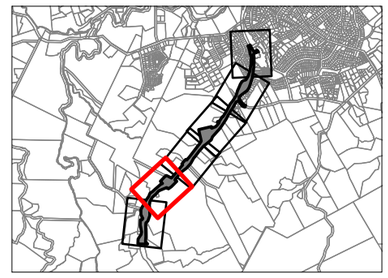
Date Exported: 1/05/2023 4:23
Name of Map: SGA-PA-WW-06-State Highway 1
Path: P:\381138109341TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
State Highway 1 – South Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-06**
Sheet No : 2 of 6

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 1/05/2023 4:23

Name of Map: SGA-PA-WW-06-State Highway 1

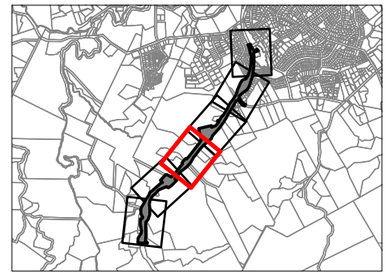
Path: P:\381\381093411\GIS\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
State Highway 1 – South Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-06**
Sheet No : 3 of 6

Date Exported: 1/05/2023 4:23

Name of Map: SGA-PA-WW-06-State Highway 1

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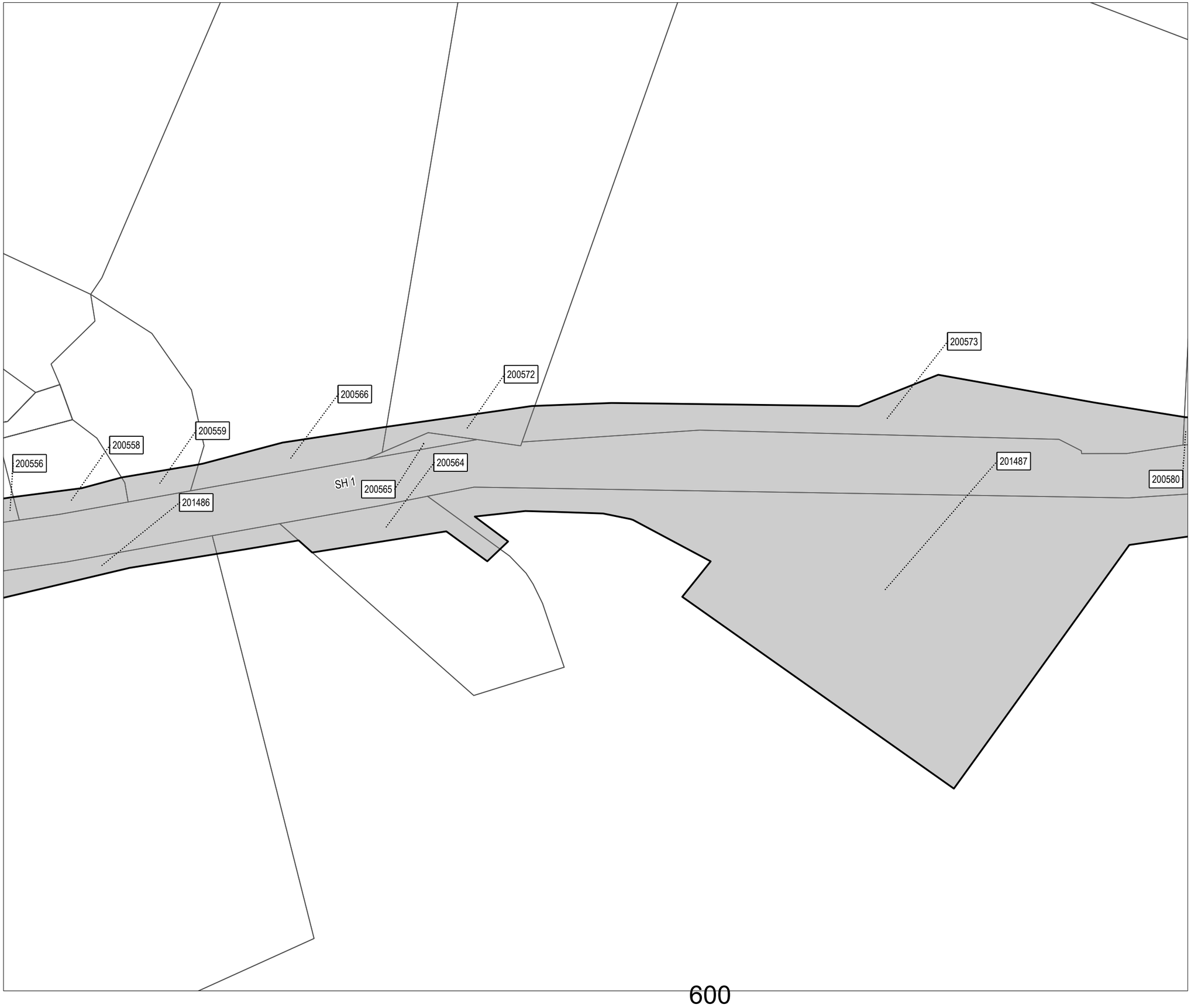
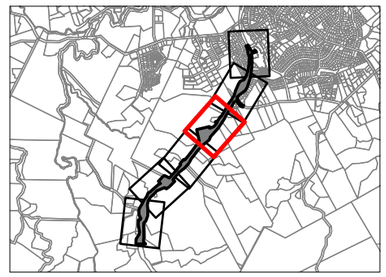


Designation Plan

Land to be Designated
State Highway 1 – South Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-06**
Sheet No : 4 of 6

Date Exported: 1/05/2023 4:23

Name of Map: SGA-PA-WW-06-State Highway 1

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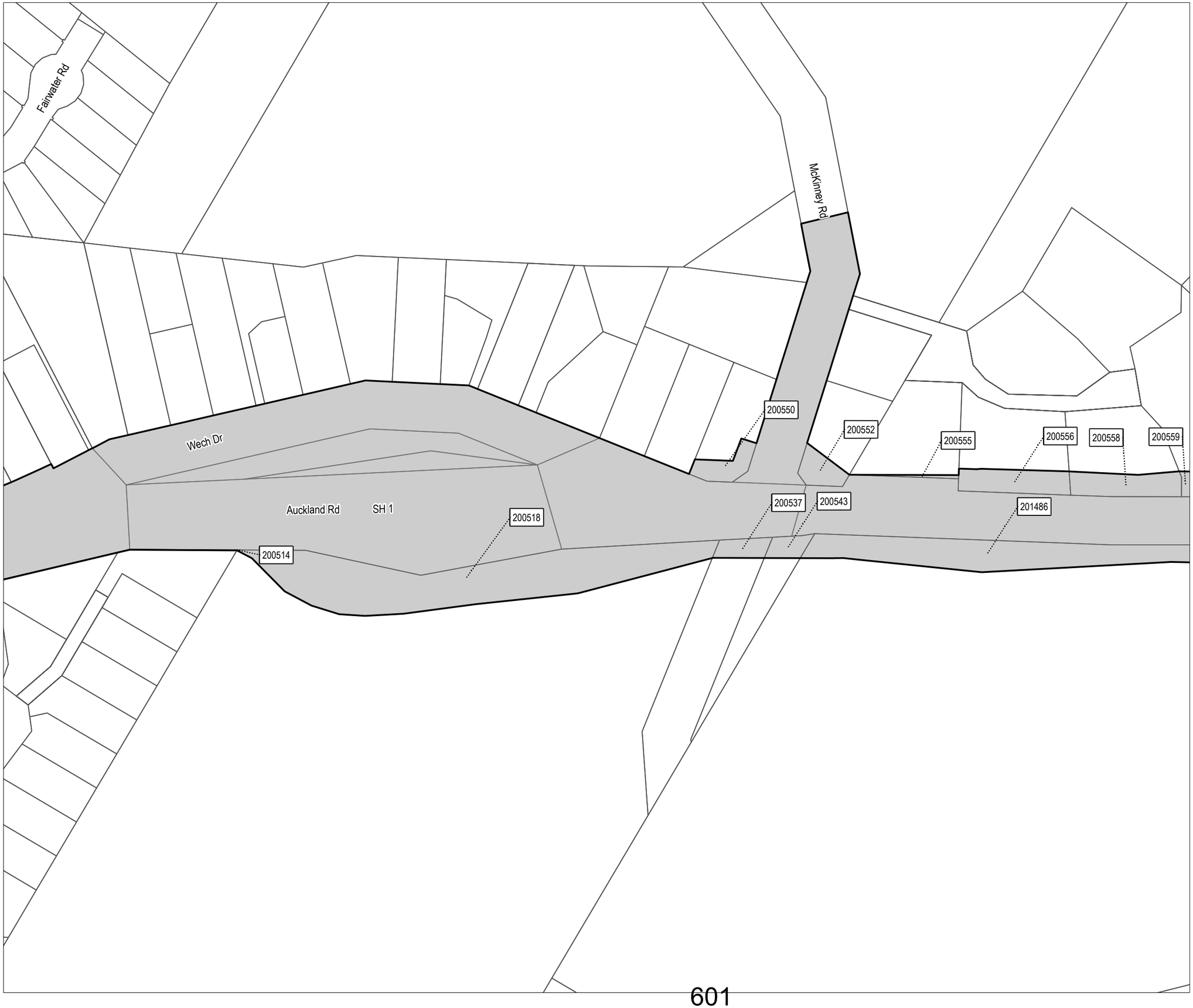
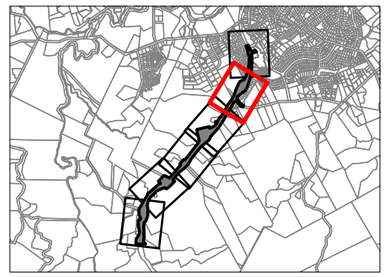


Designation Plan

Land to be Designated
State Highway 1 – South Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

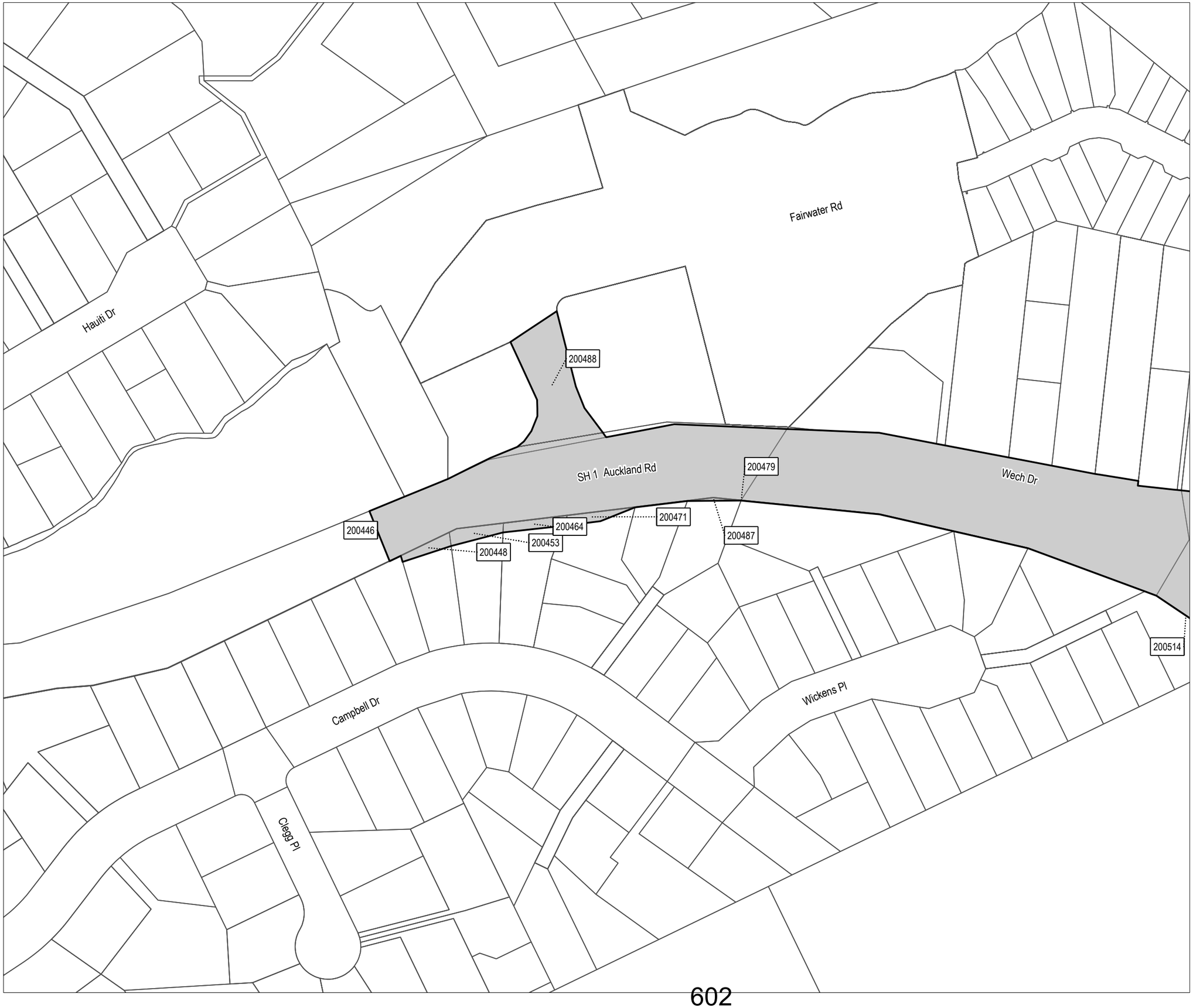
Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-06**
Sheet No : 5 of 6

Date Exported: 1/05/2023 4:23

Name of Map: SGA-PA-WW-06-State Highway 1

Path: P:\381138109341\TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

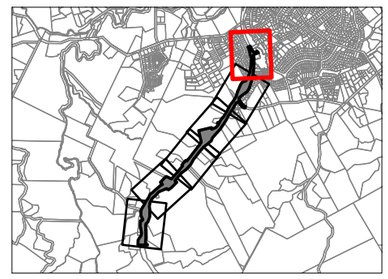


Designation Plan

Land to be Designated
State Highway 1 – South Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-06**
Sheet No : 6 of 6

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200446	Lot 63 DP 155183, Campbell Drive	NA92C/938	Lot 63 DP 155183	17	6
200448	23 Campbell Drive	NA98A/192	Lot 2 DP 162532	90	6
200453	25 Campbell Drive	NA92C/937	Lot 3 DP 155183	118	6
200464	27 Campbell Drive	NA107D/69	Lot 4 DP 162532	103	6
200464	27B Campbell Drive	NA117C/547	Lot 4 DP 162532	103	6
200471	33 Campbell Drive	NA105C/248	Lot 7 DP 172301	90	6
200479	Lot 63 DP 155183, Campbell Drive	NA105C/252	Lot 65 DP 172301	16	6
200487	37 Campbell Drive	NA105C/250	Lot 9 DP 172301	15	6
200488	8/9 Fairwater Road	735335	Lot 1 DP 488155	1037	6
200488	2/11 Fairwater Road	735339	Lot 1 DP 488155	1037	6
200488	1/9 Fairwater Road	735328	Lot 1 DP 488155	1037	6
200488		735324	Lot 1 DP 488155	1037	6
200488	3/11 Fairwater Road	735340	Lot 1 DP 488155	1037	6
200488		735345	Lot 1 DP 488155	1037	6
200488		735325	Lot 1 DP 488155	1037	6
200488		735322	Lot 1 DP 488155	1037	6
200488	8 Fairwater Road	735341	Lot 1 DP 488155	1037	6
200488	6/9 Fairwater Road	735333	Lot 1 DP 488155	1037	6
200488		735330	Lot 1 DP 488155	1037	6
200488	2/1 Fairwater Road	735320	Lot 1 DP 488155	1037	6
200488		735346	Lot 1 DP 488155	1037	6
200488		735323	Lot 1 DP 488155	1037	6
200488	5/9 Fairwater Road	735332	Lot 1 DP 488155	1037	6
200488		735343	Lot 1 DP 488155	1037	6
200488	2/4 Fairwater Road	735347	Lot 1 DP 488155	1037	6
200488	1/11 Fairwater Road	735338	Lot 1 DP 488155	1037	6
200488		735342	Lot 1 DP 488155	1037	6
200488		735327	Lot 1 DP 488155	1037	6
200488	1/3 Fairwater Road	735321	Lot 1 DP 488155	1037	6
200488		735319	Lot 1 DP 488155	1037	6
200488	10/9 Fairwater Road	735337	Lot 1 DP 488155	1037	6

200488		735344	Lot 1 DP 488155	1037	6
200488	65 Auckland Road	740906	Lot 1 DP 488155	1037	6
200488	9/9 Fairwater Road	735336	Lot 1 DP 488155	1037	6
200488	2/9 Fairwater Road	735329	Lot 1 DP 488155	1037	6
200488	2/5 Fairwater Road	735326	Lot 1 DP 488155	1037	6
200488	4/9 Fairwater Road	735331	Lot 1 DP 488155	1037	6
200488	7/9 Fairwater Road	735334	Lot 1 DP 488155	1037	6
200514	Lot 63 DP 155183, Campbell Drive	NA122A/633	Lot 65 DP 192345	45	5
200518	State Highway 1	NA86B/111	Lot 57 DP 145377	3200	5
200537	Pt Allot 65A SO 1150E, State Highway 1	NA55/91	Part Allot 65A PSH OF Mahurangi	175	5
200543	Lot 57 DP 145377, State Highway 1	NA86B/111	Lot 58 DP 145377	148	5
200550	23 Wech Drive	NA1B/883	Lot 26 DP 40634	251	5
200552	McKinney Road	NA1129/266	Lot 27 DP 40634	229	5
200555	1848 State Highway 1	NA2B/1219	Lot 1 DP 49419	36	5
200556	8F McKinney Road	161175	Lot 1 DP 339170	451	4
200558	8E McKinney Road	161176	Lot 2 DP 339170	453	4
200559	8D McKinney Road	161177	Lot 3 DP 339170	305	4
200564	1829 State Highway 1	NA33B/146	Lot 1 DP 76750	1103	4
200565	1830 State Highway 1	NA658/124	Allot 264 PSH OF Mahurangi	153	4
200566	1838 State Highway 1	70665	Lot 7 DP 318057	966	4
200572	1830 State Highway 1	NA984/120	Part Allot 64 PSH OF Mahurangi	590	4
200573	1794 State Highway 1	NA91B/381	Lot 2 DP 152920	4373	3
200575	Pt Allot 228 SO 26171, Toovey Road	NA643/67	Allot 228 PSH OF Mahurangi	19	3
200579	7 Toovey Road	NA129B/533	Lot 3 DP 201410	470	3
200580	Toovey Road	NA129B/531	Lot 1 DP 201410	72	3
200581	8 Toovey Road	443141	Lot 1 DP 411602	492	3
200590	Toovey Road	443142	Lot 2 DP 411602	1662	3
200594	1768 State Highway 1	NA1008/250	Part Allot 64 PSH OF Mahurangi	483	3
200599	1728 State Highway 1	NA66D/111	Lot 1 DP 117343	365	2

200608	Pt Allot 72 SO 42999, State Highway 1	NA35D/118	Part Allot 72 PSH OF Mahurangi	591	1
200611	Pt Allot 72 SO 42999, State Highway 1	NA35D/118	Part Allot 73 PSH OF Mahurangi	331	1
200612	1693 State Highway 1	NA35C/565	Part Allot 219 PSH OF Mahurangi	468	1
200614	1693 State Highway 1	NA35C/565	Part Allot 221 PSH OF Mahurangi	1895	1
200618	1673 State Highway 1	NA46B/583	Lot 1 DP 67379	169	1
200619	1684A State Highway 1	NA68C/987	Lot 2 DP 119449	213	1
200620	1659 State Highway 1	NA102C/186	Lot 3 DP 99453	2105	1
200622	1684 State Highway 1	NA68C/986	Lot 1 DP 119449	3069	1
201439	1738 State Highway 1	1029181	Lot 1 DP 568727	13864	1
201480	40 Valerie Close	902781	Lot 3 DP 539629	1371	2
201482	1723 State Highway 1	902780	Lot 2 DP 539629	6107	2
201483	1711 State Highway 1	902779	Lot 1 DP 539629	293	1
201484	1770 State Highway 1	930521	Lot 2 DP 545378	488	3
201486	25 Gumfield Drive	1109253	Lot 2 DP 583685	1881	4
201487	81 Morrison Drive	1109252	Lot 1 DP 583685	17331	3
201488	1765 State Highway 1	1000429	Lot 2 DP 563173	5956	2

ATTACHMENT 51

NoR 4 – GENERAL ARRANGEMENT PLAN

REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IM	MAR. 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	JDT	04.11.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

TE TUPU NGĀTAHI Supporting Growth

WAKA KOTAHI NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR4

Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
MATAKANA ROAD UPGRADE

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales 1:500 | A3 Scales 1:1000
Discipline: GENERAL
Drawing No: SGA-DRG-WKW-300-GE-2000
Revision: C

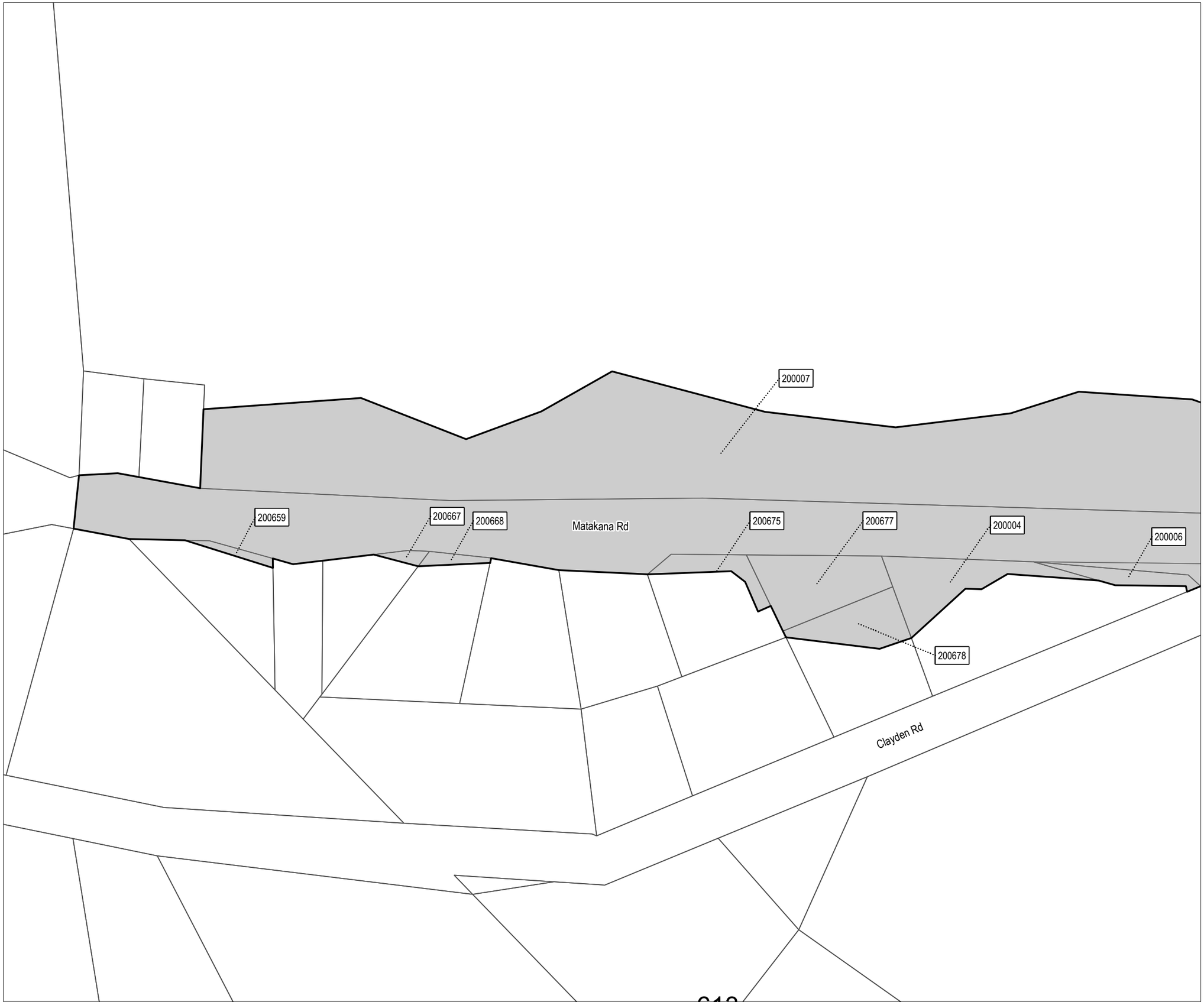
ATTACHMENT 52

NoR 4 – PROPERTY BOUNDARIES AND SCHEDULES

Date Exported: 1/05/2023 3:31

Name of Map: SGA-PA-WW-05-Matakana Road

Path: P:\38113810934\TG\I01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx



Designation Plan

Land to be Designated
Matakana Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID

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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**	Discipline: **GIS**
Project: **Warkworth Network**	Drawing No: **SGA-PA-WW-05** Sheet No : 1 of 5

Date Exported: 1/05/2023 3:31

Name of Map: SGA-PA-WW-05-Matakana Road

Path: P:\381\381093411\GIS\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Matakana Road Upgrade

Legend

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Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**	Discipline: **GIS**
Project: **Warkworth Network**	Drawing No: **SGA-PA-WW-05** Sheet No : 2 of 5

Date Exported: 1/05/2023 3:31
Name of Map: SGA-PA-WW-05-Matakana Road
Path: P:\38113810934\TG\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

200034 200040 200045 200055 200056 200073 200081 200088

200029 200036 200044 Matakana Rd 200048 200059 200064

200041

200032

Northwood Cl

Designation Plan

Land to be Designated
Matakana Road Upgrade

Legend

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- Parcel Boundary
- 507729 Property ID

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Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-05**
Sheet No : 3 of 5

Date Exported: 1/05/2023 3:31

Name of Map: SGA-PA-WW-05-Matakana Road

Path: P:\381\381093417GI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Matakana Road Upgrade

Legend

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- Parcel Boundary
- 507729 Property ID

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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-05**
Sheet No : 4 of 5

Date Exported: 1/05/2023 3:31
Name of Map: SGA-PA-WW-05-Matakana Road
Path: P:\381138109341TG\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Matakana Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID

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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

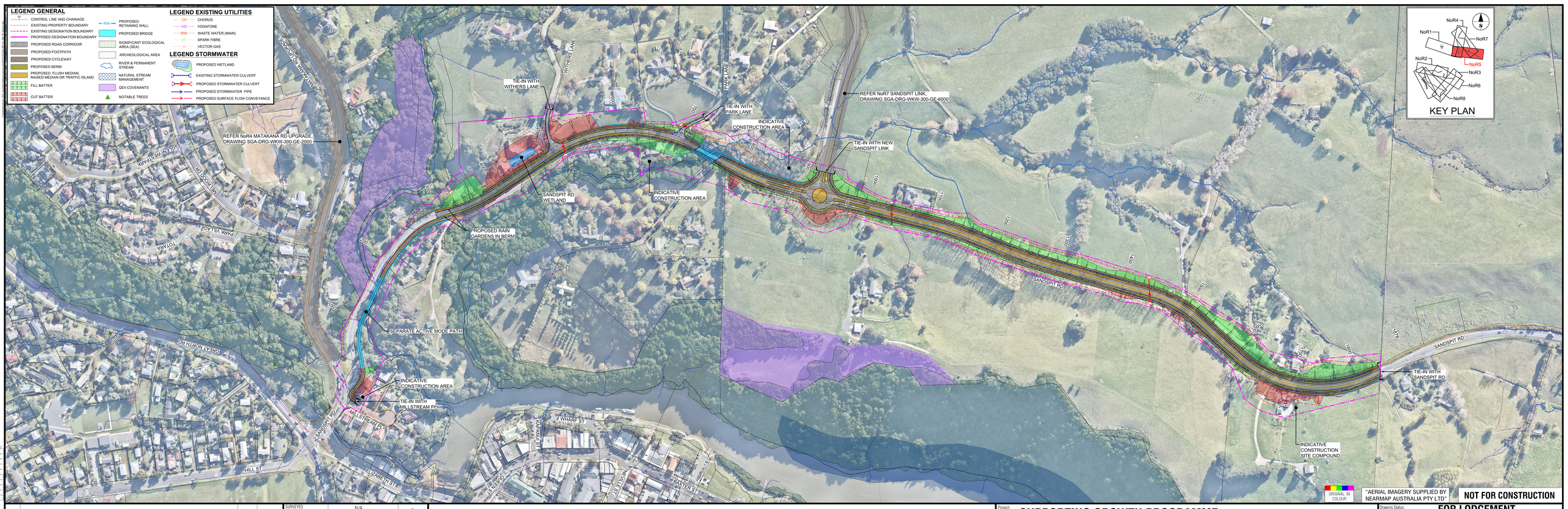
Client: Auckland Transport / Waka Kotahi	Discipline: GIS
Project: Warkworth Network	Drawing No: SGA-PA-WW-05 Sheet No : 5 of 5

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200004	2 Clayden Road	NA1022/40	Part Allot 175 PSH OF Mahurangi	1033	1
200006	2 Clayden Road	892018	Section 2 SO 532548	311	1
200007	Lot 3 DP 76450, Matakana Road	303754	Lot 1 DP 375478	23388	1
200015	245 Matakana Road	NA57B/189	Lot 1 DP 101758	842	2
200029	211 Matakana Road	NA768/145	Part Allot 101 PSH OF Mahurangi	285	2
200032	207 Matakana Road	NA79D/813	Lot 5 DP 135480	45	2
200034	190 Matakana Road	NA118C/41	Lot 1 DP 188363	2464	2
200036	185 Matakana Road	NA79D/812	Lot 4 DP 135480	648	2
200040	170 Matakana Road	NA126A/930	Lot 1 DP 198517	481	3
200041	Lot 8 DP 135480, Matakana Road	353190	Lot 8 DP 135480	46	2
200041	157 Matakana Road	NA79D/810	Lot 8 DP 135480	46	2
200041	185 Matakana Road	NA79D/812	Lot 8 DP 135480	46	2
200041	207 Matakana Road	NA79D/813	Lot 8 DP 135480	46	2
200044	171 Matakana Road	353189	Lot 3 DP 135480	388	3
200045	160 Matakana Road	NA126A/931	Lot 2 DP 198517	991	3
200048	165 Matakana Road	NA79D/814	Lot 6 DP 135480	711	3
200055	154 Matakana Road	714311	Lot 2 DP 492082	81	3
200056	140 Matakana Road	714310	Lot 1 DP 492082	487	3
200059	157 Matakana Road	NA79D/810	Lot 2 DP 135480	57	3
200064	19 Northwood Close	671299	Lot 126 DP 480443	196	3
200073	130 Matakana Road	NA131A/934	Lot 2 DP 204359	605	3
200081	120 Matakana Road	NA131A/935	Lot 3 DP 204359	1078	3
200088	98 Matakana Road	NA31B/930	Lot 7 DP 703	3255	3
200107	96 Matakana Road	521422	Lot 1 DP 431389	1212	4

200112	76 Matakana Road	521423	Lot 2 DP 431389	4384	4
200132	3 Melwood Drive		Lot 4 DP 146485	7	4
200136	5 Matakana Road	NA82D/248	Lot 2 DP 146485	157	4
200142	3 Matakana Road	NA20B/883	Part Lot 1 DP 55475	840	4
200166	1A Matakana Road	NA30A/1109	Lot 2 DP 55475	384	5
200659	303 Matakana Road	NA15D/728	Lot 1 DP 51416	106	1
200667	299 Matakana Road	NA15D/730	Lot 3 DP 51416	80	1
200668	297 Matakana Road	325215	Lot 1 DP 381150	116	1
200675	291 Matakana Road	NA1060/30	Part Allot 175 PSH OF Mahurangi	379	1
200677	289 Matakana Road	NA1149/35	Part Allot 175 PSH OF Mahurangi	1210	1
200678	4 Clayden Road	NA1149/36	Part Allot 175 PSH OF Mahurangi	737	1
201449	49 Matakana Road	967828	Lot 135 DP 541388	2558	4

ATTACHMENT 53

NoR 5 – GENERAL ARRANGEMENT PLAN



REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IM	MAR 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	IMM	02.12.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

TE TUPU NGĀTAHI Supporting Growth

WAKA KOTAHI NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR5

Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
SANDSPIT ROAD UPGRADE

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales 1:500 | A3 Scales 1:1000
Discipline: GENERAL
Drawing No.: SGA-DRG-WKW-300-GE-5000
Revision: C

ATTACHMENT 54

NoR 5 – PROPERTY BOUNDARIES AND SCHEDULES

Date Exported: 1/05/2023 7:23

Name of Map: SGA-PA-WW-07-Sandspit Road

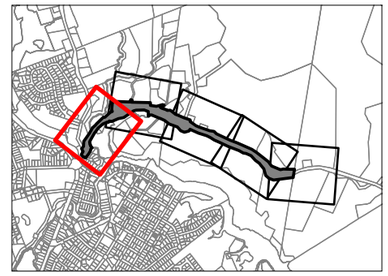
Path: P:\381\381093411TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Sandspit Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-07**
Sheet No : 1 of 5

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 1/05/2023 7:23

Name of Map: SGA-PA-WW-07-Sandspit Road

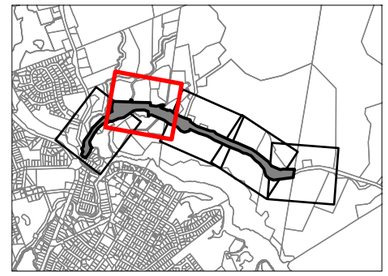
Path: P:\381\381093\4\TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Sandspit Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-07**
Sheet No : 2 of 5

Date Exported: 1/05/2023 7:23

Name of Map: SGA-PA-WW-07-Sandspit Road

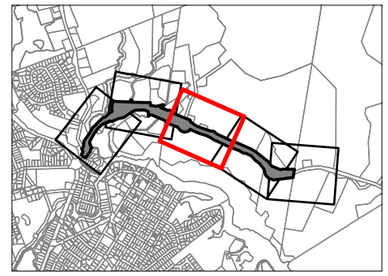
Path: P:\38113810934\TG\I01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Sandspit Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-07**
Sheet No : 3 of 5

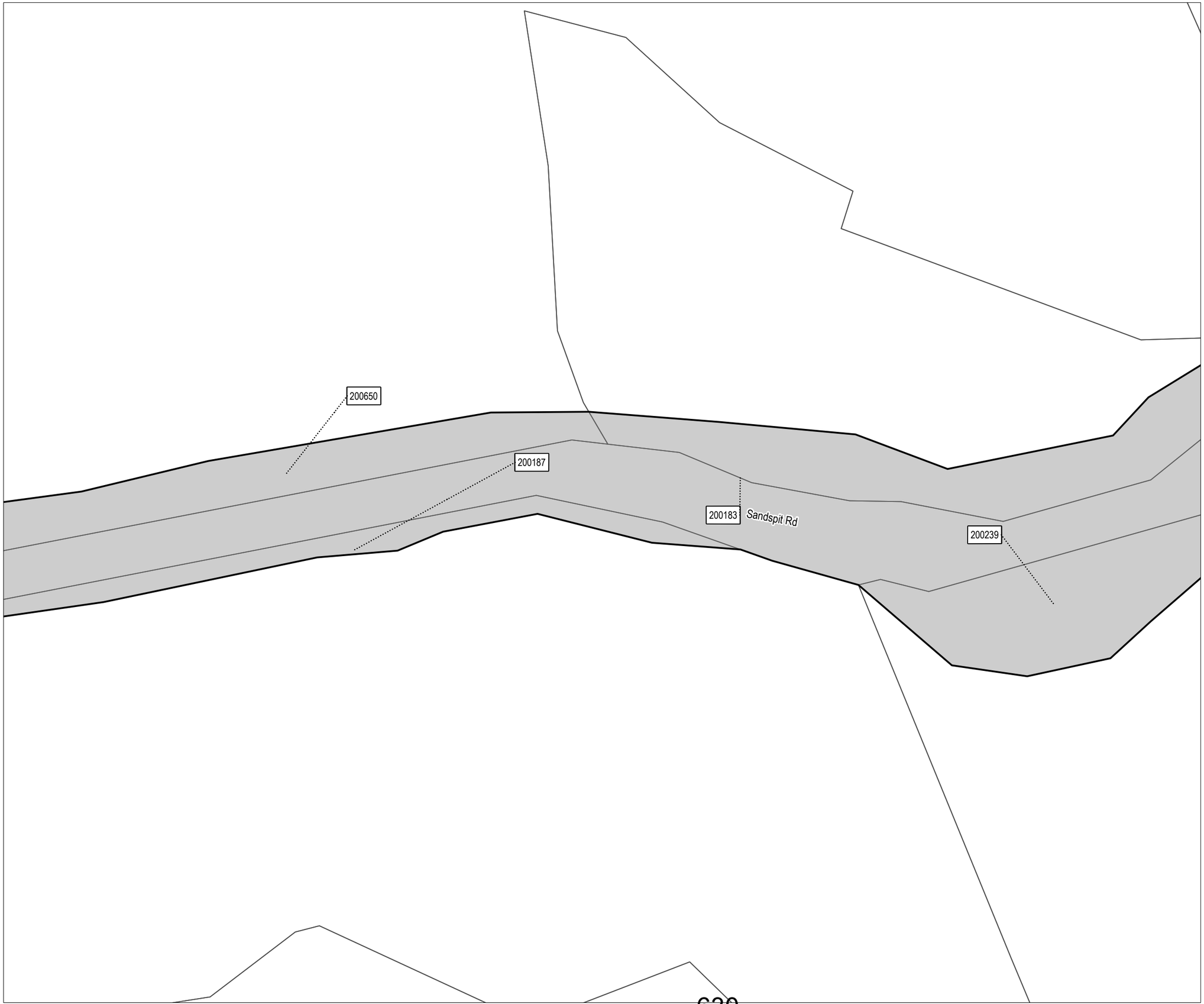
WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 1/05/2023 7:23

Name of Map: SGA-PA-WW-07-Sandspit Road

Path: P:\38113810934\TG\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

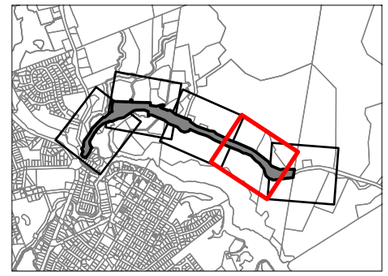


Designation Plan

Land to be Designated
Sandspit Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**	Discipline: **GIS**
Project: **Warkworth Network**	Drawing No: **SGA-PA-WW-07** Sheet No : 4 of 5

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 1/05/2023 7:23

Name of Map: SGA-PA-WW-07-Sandspit Road

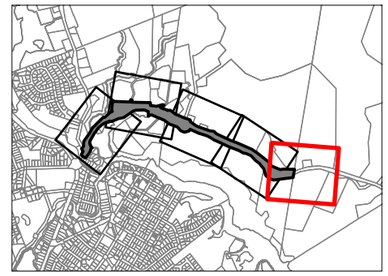
Path: P:\381\381093411\GIS\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Sandspit Road Upgrade

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

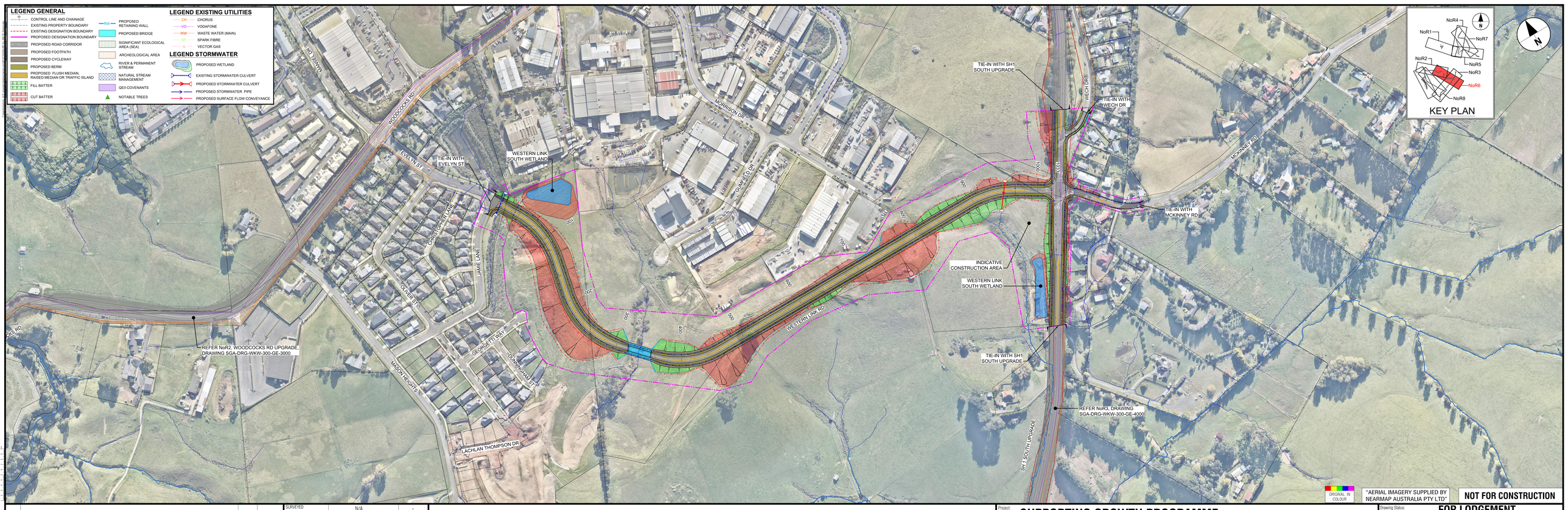
Drawing No: **SGA-PA-WW-07**
Sheet No : 5 of 5

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200037	179 Sandspit Road	NA96C/126	Lot 2 DP 67324	733	3
200053	93 Sandspit Road	NA80C/826	Lot 5 DP 129293	1052	2
200058	131 Sandspit Road	NA96C/81	Lot 5 DP 160517	363	2
200098	89A Sandspit Road	NA118A/962	Lot 2 DP 188322	1686	1
200100	99 Sandspit Road	NA104D/220	Lot 1 DP 171446	5411	2
200102	135 Sandspit Road	462123	Lot 1 DP 415996	118	2
200106	109 Sandspit Road	NA92D/198	Lot 2 DP 155310	710	2
200108	137 Sandspit Road	NA78B/354	Lot 1 DP 132925	333	2
200109	89 Sandspit Road	NA118A/961	Lot 1 DP 188322	10022	1
200111	126 Sandspit Road	NA42B/768	Part Lot 20 DP 703	2827	2
200113	108 Sandspit Road	NA48C/465	Lot 21 DP 703	174	2
200122	163 Sandspit Road	794109	Lot 1 DP 513584	3649	2
200126	130 Sandspit Road	NA82B/224	Lot 1 DP 138902	966	2
200129	130 Sandspit Road	NA82B/224	Lot 6 DP 138902	310	2
200129	134 Sandspit Road	NA82B/225	Lot 6 DP 138902	310	2
200129	138 Sandspit Road	NA82B/226	Lot 6 DP 138902	310	2
200129	142 Sandspit Road	NA82B/227	Lot 6 DP 138902	310	2
200129	146 Sandspit Road	NA82B/228	Lot 6 DP 138902	310	2
200133	209 Sandspit Road	NA962/269	Part Allot 47 PSH OF Mahurangi	520	3
200134	36 Sandspit Road	NA35C/479	Lot 1 DP 39534	2024	1
200135	146 Sandspit Road	NA82B/228	Lot 5 DP 138902	784	2
200139	34 Sandspit Road	NA35C/478	Lot 1 DP 66360	270	1
200155	36 Sandspit Road	NA35C/479	Part Lot 51 DP 703	2244	1

200170	2 Millstream Place	NA14C/1216	Lot 13 DP 59673	830	1
200183	325 Sandspit Road	329225	Lot 1 DP 382328	6584	4
200187	198 Sandspit Road	NA92C/593	Lot 1 DP 155020	10603	2
200239	360 Sandspit Road	NA92C/594	Lot 2 DP 155020	6433	4
200640	187 Sandspit Road	894531	Section 2 SO 526430	1527	3
200650	265 Sandspit Road	894530	Section 1 SO 526430	8236	3

ATTACHMENT 55

NoR 6 – GENERAL ARRANGEMENT PLAN



REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IM	MAR 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	IMM	25.10.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

TE TUPU NGĀTAHI
Supporting Growth

WAKA KOTAHI
NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR6

Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
WESTERN LINK SOUTH

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales 1:500 | A3 Scales 1:1000
Discipline: GENERAL
Drawing No: SGA-DRG-WKW-300-GE-1000
Revision: C

ATTACHMENT 56

NoR 6 – PROPERTY BOUNDARIES AND SCHEDULES

Date Exported: 1/05/2023 4:36
Name of Map: SGA-PA-WW-02-Western Link South
Path: P:\38113810934\TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Western Link – South Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID

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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client:	Discipline:
Auckland Transport / Waka Kotahi	GIS
Project: Warkworth Network	**Drawing No:** SGA-PA-WW-02 Sheet No : 1 of 3

Date Exported: 1/05/2023 4:36

Name of Map: SGA-PA-WW-02-Western Link South

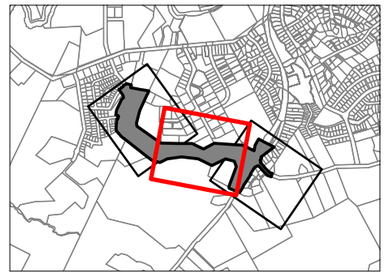
Path: P:\38113810934\TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Western Link – South Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-02**
Sheet No : 2 of 3

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 1/05/2023 4:36

Name of Map: SGA-PA-WW-02-Western Link South

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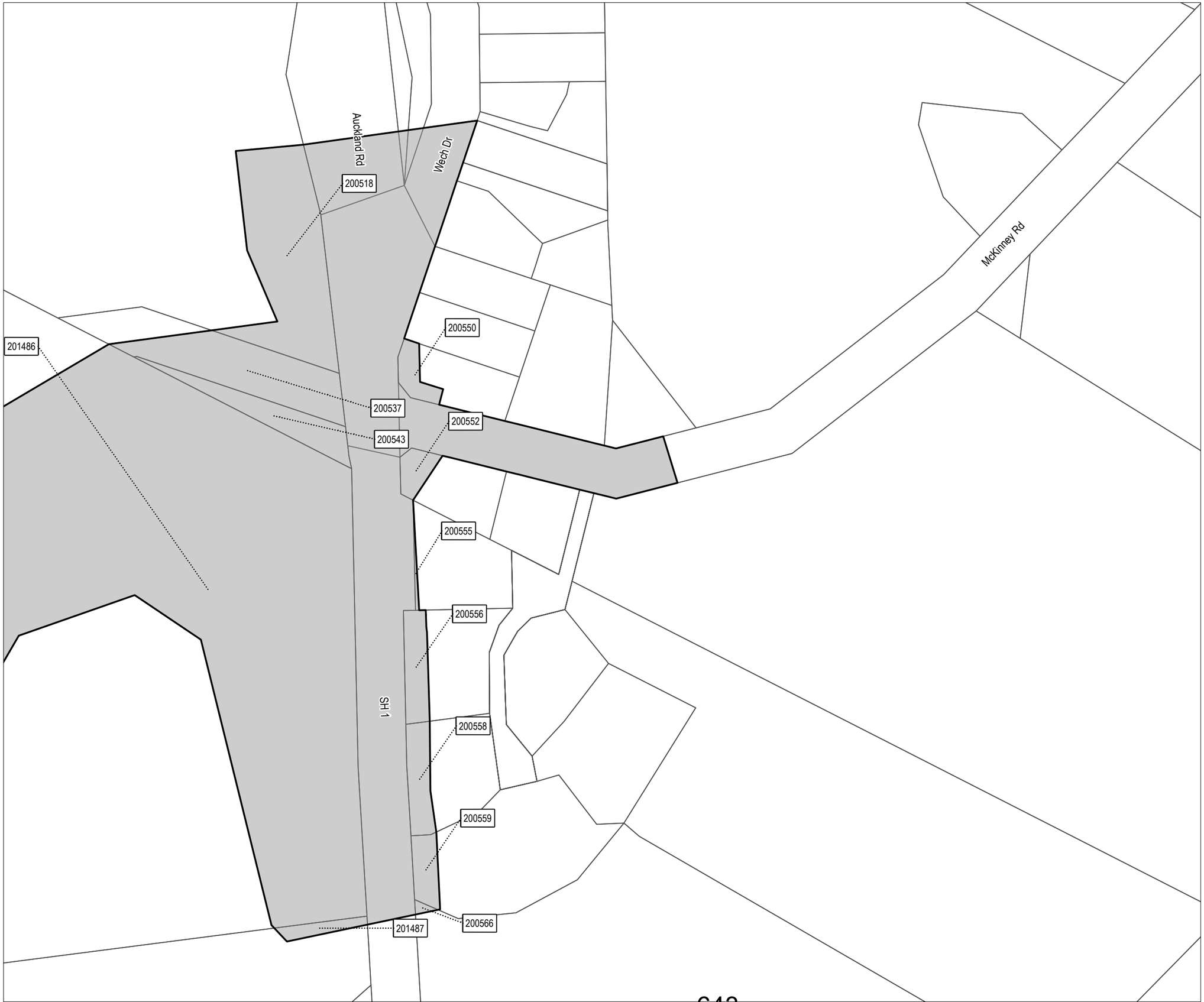
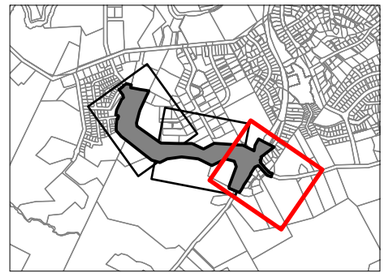


Designation Plan

Land to be Designated
Western Link – South Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

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Metre

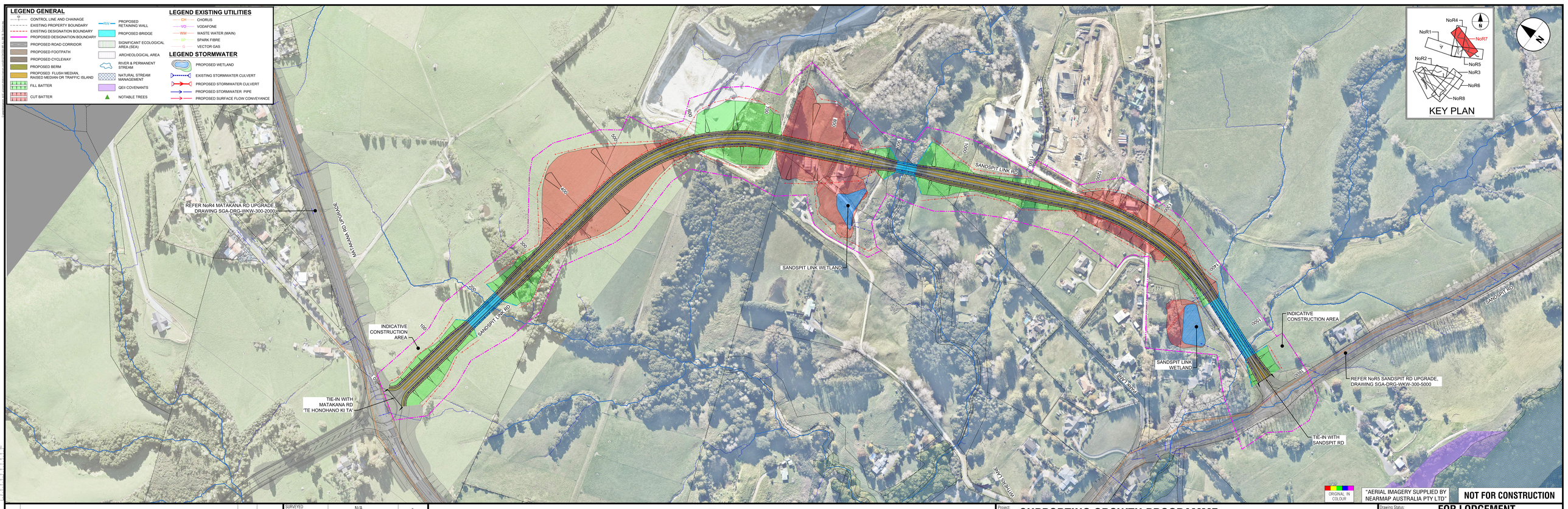
Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client: **Auckland Transport / Waka Kotahi**	Discipline: **GIS**
Project: **Warkworth Network**	Drawing No: **SGA-PA-WW-02** Sheet No : 3 of 3

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200463	Lot 700 DP 447445, Woodcocks Road	565575	Lot 700 DP 447445	375	1
200482	Lot 702 DP 447445, Woodcocks Road	570258	Lot 702 DP 447445	7	1
200494	Lot 604 DP 447445, Woodcocks Road	565574	Lot 604 DP 447445	245	1
200500	Lot 132 DP 447445, Woodcocks Road	564695	Lot 132 DP 447445	615	1
200518	Lot 57 DP 145377, State Highway 1	NA86B/111	Lot 57 DP 145377	2713	3
200537	Pt Allot 65A SO 1150E, State Highway 1	NA55/91	Part Allot 65A PSH OF Mahurangi	1620	2
200543	Lot 57 DP 145377, State Highway 1	NA86B/111	Lot 58 DP 145377	752	2
200550	23 Wech Drive	NA1B/883	Lot 26 DP 40634	251	3
200552	Lot 27 DP 40634, McKinney Road	NA1129/266	Lot 27 DP 40634	270	3
200555	1848 State Highway 1	NA2B/1219	Lot 1 DP 49419	171	3
200556	8F McKinney Road	161175	Lot 1 DP 339170	451	3
200558	8E McKinney Road	161176	Lot 2 DP 339170	453	3
200559	8D McKinney Road	161177	Lot 3 DP 339170	305	3
200566	1838 State Highway 1	70665	Lot 7 DP 318057	30	3
200646	15 Jamie Lane	896310	Lot 400 DP 530566	481	1
201469	6 Lachlan Thompson Drive	1004655	Lot 500 DP 563550	29583	1
201486	25 Gumfield Drive	1109253	Lot 2 DP 583685	67300	1
201487	81 Morrison Drive	1109252	Lot 1 DP 583685	11058	1

ATTACHMENT 57

NoR 7 – GENERAL ARRANGEMENT PLAN



REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IMM	MAR. 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	JDT	25.10.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

TE TUPU NGĀTAHI Supporting Growth

WAKA KOTAHI NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR7

Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
SANDSPIT LINK

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales 1:500 | A3 Scales 1:1000
Discipline: GENERAL
Drawing No.: SGA-DRG-WKW-300-GE-6000
Revision: C

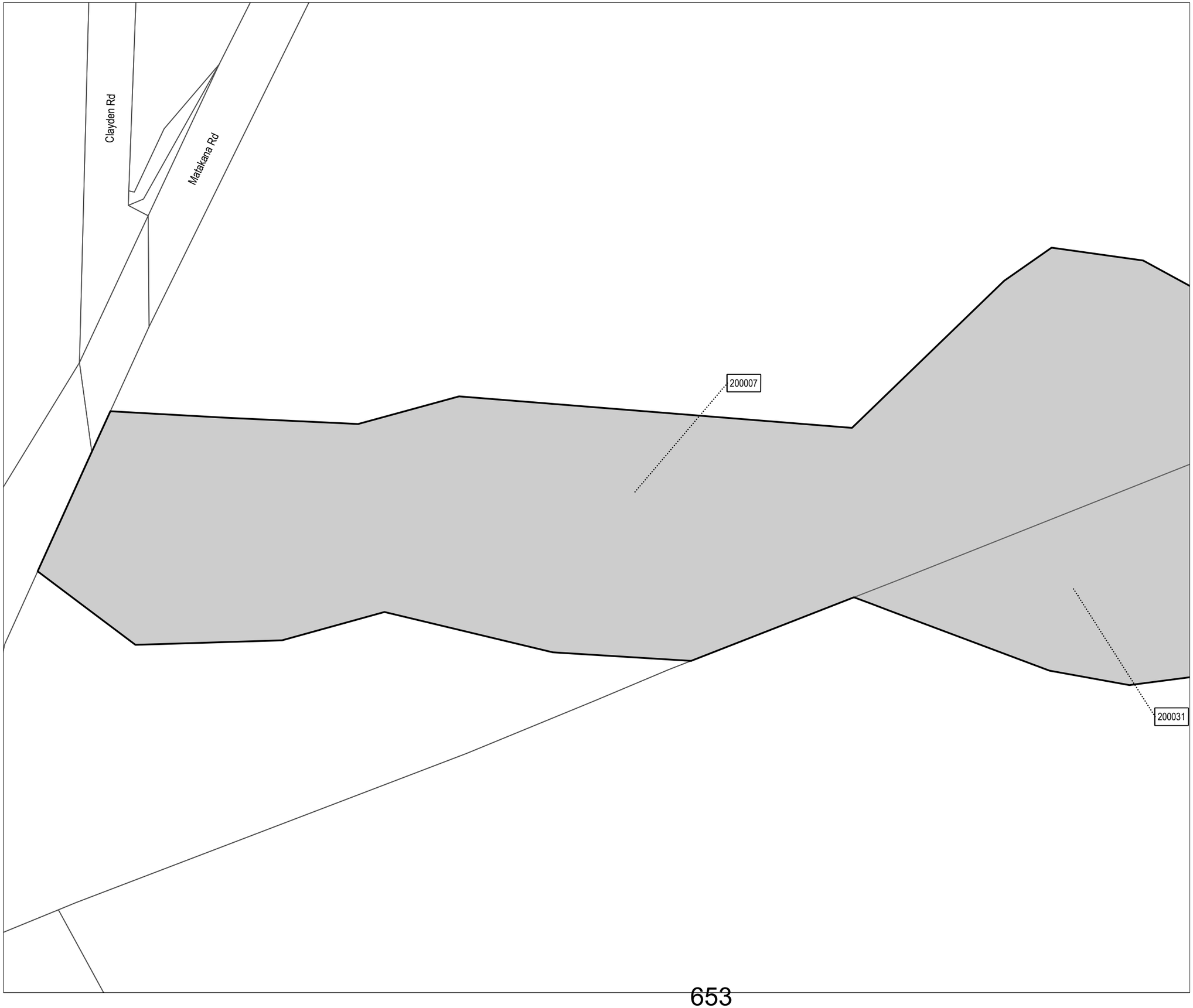
ATTACHMENT 58

NoR 7 – PROPERTY BOUNDARIES AND SCHEDULES

Date Exported: 1/05/2023 6:24

Name of Map: SGA-PA-WW-01-SandspitLinkRoad

Path: P:\38113810934\TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

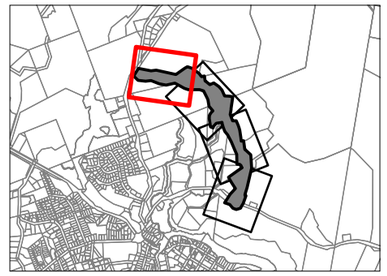


Designation Plan

Land to be Designated
Sandspit Link Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-01**
Sheet No : 1 of 4

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 1/05/2023 6:24

Name of Map: SGA-PA-WW-01-SandspitLinkRoad

Path: P:\381\381109341\TGI\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

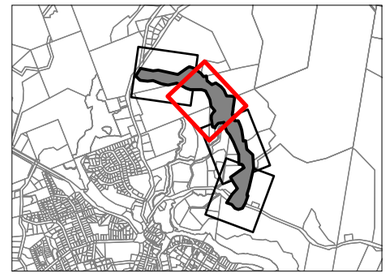
200020
200007
200013
200031
200033
200039
200037
200049
200065
200042

Designation Plan

Land to be Designated
Sandspit Link Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-01**
Sheet No : 2 of 4

WAKA KOTAHI NZ TRANSPORT AGENCY

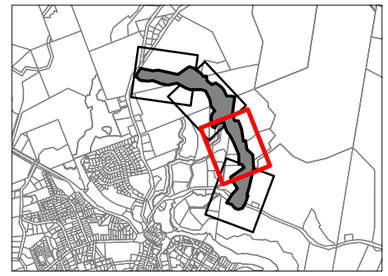
New Zealand Government

Designation Plan

Land to be Designated
Sandspit Link Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-01**
Sheet No : 3 of 4

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 1/05/2023 6:24

Name of Map: SGA-PA-WW-01-SandspitLinkRoad

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Date Exported: 1/05/2023 6:24

Name of Map: SGA-PA-WW-01-SandspitLinkRoad

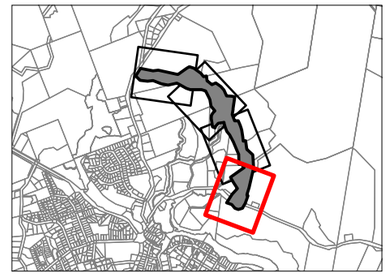
Path: P:\381381093\4\TG\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Sandspit Link Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

0 25 50
Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	01/05/2023

Client:	Discipline:
Auckland Transport / Waka Kotahi	GIS
Project: Warkworth Network	**Drawing No:** SGA-PA-WW-01 Sheet No : 4 of 4

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200007	Lot 3 DP 76450, Matakana Road	303754	Lot 1 DP 375478	46041	1
200013	179 Sandspit Road	NA96C/126	Lot 1 DP 160546	423	2
200020	179 Sandspit Road	NA96C/126	Lot 1 DP 95620	21292	2
200027		NA754/96	Lot 2 DP 426537	4566	3
200027	185 Sandspit Road	504461	Lot 2 DP 426537	4566	3
200031	Lot 2 DP 188363, Matakana Road	NA118C/42	Lot 2 DP 188363	19375	1
200033	97A Sandspit Road	650217	Lot 3 DP 474241	10561	2
200037	179 Sandspit Road	NA96C/126	Lot 2 DP 67324	19098	2
200039	97 Sandspit Road	650216	Lot 2 DP 474241	9824	2
200042	95 Sandspit Road	650215	Lot 1 DP 474241	8934	2
200049	131A Sandspit Road	650218	Lot 4 DP 474241	1333	2
200058	131 Sandspit Road	NA96C/81	Lot 5 DP 160517	1932	3
200065	Lot 3 DP 208832, Sandspit Road	NA92D/201	Lot 5 DP 155310	1058	2
200066	169 Sandspit Road	794111	Lot 3 DP 513584	23308	3
200070	183 Sandspit Road	NA71A/570	Lot 1 DP 122100	2283	3
200102	135 Sandspit Road	462123	Lot 1 DP 415996	4625	3
200122	163 Sandspit Road	794109	Lot 1 DP 513584	8899	3
200187	198 Sandspit Road	NA92C/593	Lot 1 DP 155020	3667	4
200640	187 Sandspit Road	894531	Section 2 SO 526430	3754	4
200650	265 Sandspit Road	894530	Section 1 SO 526430	7662	3

ATTACHMENT 59

NoR 8 – GENERAL ARRANGEMENT PLAN

REV	REVISIONS	DRAWN	DATE
C	ISSUED FOR NOTICE OF REQUIREMENT LODGEMENT	IMM	MAR 2023
B	ISSUED FOR APPROVAL	JDT	FEB 2023
A	DRAFT ISSUE FOR REVIEW	IMM	24.11.2022

SURVEYED	N/A	-
DRAWN	I. MILLER	02.09.2022
DRAWING CHECK	J. DELA TORRE	02.09.2022
DESIGN	R. BELTRAN / P. HADWIN	02.09.2022
DESIGN REVIEW	K. WANG	02.09.2022
APPROVED	B. BUSNARDO	-

TE TUPU NGĀTAHI
Supporting Growth

WAKA KOTAHI
NZ TRANSPORT AGENCY

Project: **SUPPORTING GROWTH PROGRAMME**
WARKWORTH NoR8

Drawing Title: GENERAL ARRANGEMENT LAYOUT PLAN
WIDER WESTERN LINK

Drawing Status: **FOR LODGEMENT**
Drawing Date: 27.03.2023
A1 Scales 1:500 A3 Scales 1:1000
Discipline GENERAL
Drawing No: SGA-DRG-WKW-300-GE-7000
Revision C

ATTACHMENT 60

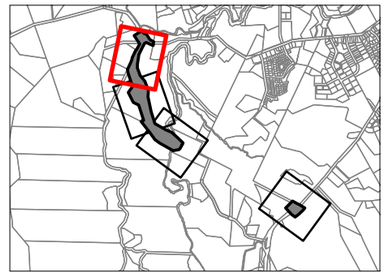
NoR 8 – PROPERTY BOUNDARIES AND SCHEDULES

Designation Plan

Land to be Designated
Wider Western Link – North Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

Client: Auckland Transport / Waka Kotahi	Discipline: GIS
Project: Warkworth Network	Drawing No: SGA-PA-WW-04 Sheet No : 1 of 4

WAKA KOTAHI NZ TRANSPORT AGENCY

New Zealand Government

Date Exported: 5/04/2023 9:10

Name of Map: SGA-PA-WW-04-Western Link Road

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Date Exported: 5/04/2023 9:10

Name of Map: SGA-PA-WW-04-Western Link Road

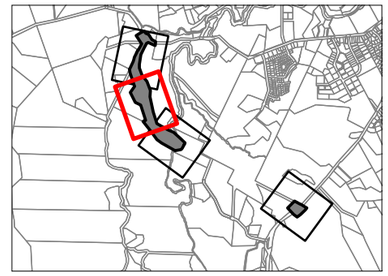
Path: P:\38138109341TG\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Wider Western Link – North Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Map Scale @ A3: 1:1,500

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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

N

Client: **Auckland Transport / Waka Kotahi**	Discipline: **GIS**
Project: **Warkworth Network**	Drawing No: **SGA-PA-WW-04** Sheet No : 2 of 4

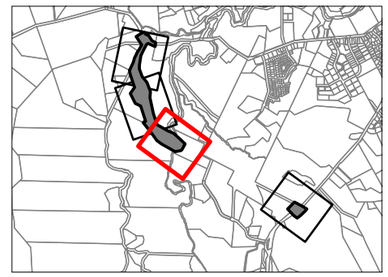
Date Exported: 5/04/2023 9:10
Name of Map: SGA-PA-WW-04-Western Link Road
Path: P:\381138109341TG\01 Map\06 ArcGIS Pro\01 Warkworth\SGA_Pro_WW_Designation_Plan_Deliverable.aprx

Designation Plan

Land to be Designated
Wider Western Link – North Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

N

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-04**
Sheet No : 3 of 4

Date Exported: 5/04/2023 9:10

Name of Map: SGA-PA-WW-04-Western Link Road

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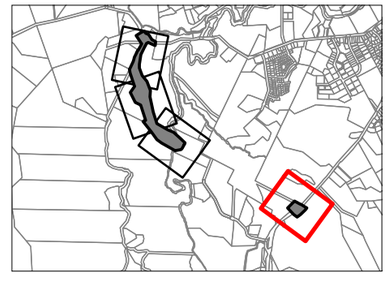
Designation Plan

Land to be Designated
Wider Western Link – North Arterial

Legend

- Proposed Designation
- Parcel Boundary
- 507729 Property ID



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Metre

Revision	Author	Verified	Approved	Date
1	BAP	RJL	ST	06/04/2023

Client: **Auckland Transport / Waka Kotahi**

Discipline: **GIS**

Project: **Warkworth Network**

Drawing No: **SGA-PA-WW-04**
Sheet No : 4 of 4

Property ID	Address	Title Number	Legal Description	Approx. additional land to be designated (m^2)	Sheet No.
200374	346 Woodcocks Road	NA52C/802	Lot 1 DP 77097	1331	1
200388	346 Woodcocks Road	NA52C/802	Lot 1 DP 96751	1110	1
200399	2 Wyllie Road	118448	Lot 3 DP 329024	3199	1
200474	Lot 3 DP 437211, Woodcocks Road	647838	Lot 3 DP 437211	829	3
200513	Lot 4 DP 473567, Woodcocks Road	647898	Lot 4 DP 473567	73220	1
200562	75 Wyllie Road	NA35B/681	Lot 1 DP 587	24445	2
200569	123 Valerie Close	NA92D/745	Lot 6 DP 155544	6934	3
200906	12 Wyllie Road	NA80C/879	Lot 3 DP 136923	299	1
200919	4 Wyllie Road	NA104C/827	Lot 2 DP 171314	352	1
201430	Lot 1 DP 168411, Wyllie Road	NA102B/939	Lot 1 DP 168411	833	1
201439	1738 State Highway 1	1029181	Lot 1 DP 568727	4885	4
201480	40 Valerie Close	902781	Lot 3 DP 539629	1371	4
201482	1723 State Highway 1	902780	Lot 2 DP 539629	4107	4