84 HOBSONVILLE ROAD

BLOCK 1

Civil Infrastructure Report

Austino New Zealand Limited

DOCUMENT CONTROL RECORD

CLIENT	Austino New Zealand Limited
OWNER	Austino Hobsonville Limited
PROJECT	84 Hobsonville Road (Block 1)
HG PROJECT NO.	A2212330.01
DOCUMENT	Civil Infrastructure Report

ISSUE AND REVISION RECORD

DATE OF ISSUE	April 2024
STATUS	Final
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1.0 INTRODUCTION

This civil engineering report has been prepared by Harrison Grierson (HG) in support of a private plan change application by Austino New Zealand Limited to rezone land at 84 Hobsonville Road, Hobsonville Point for Light Industrial sub-division and development.

This report provides a high-level overview of the engineering opportunities and constraints to future site development, and includes assessment in relation to the following:

- Site topography and geotechnical characteristics.
- Earthworks.
- Site hydrology and stormwater management.
- Wastewater.
- Water.
- Public utility services.

1.2 EXISTING SITE

The site location is shown in **Figure 1** below.

FIGURE 1: SITE LOCATION (SOURCE: AUCKLAND COUNCIL GIS)

The subject site is currently identified as number 84 and is situated along the western side of Hobsonville Road in the Auckland suburb of Hobsonville. The legal description of the property is Section 1, SO 509537 and has an area of 1.7477ha.

Surrounding land is a mixture of zoning; Residential – Mixed Housing Urban / Sub-Urban to the south, Business – Light Industry to the east and Future Urban to the west.

The site is accessed off an existing public spine road, with a new intersection for future extension into the site, which was constructed under a previous consent.

1.3 PLAN CHANGE OVERVIEW

It is proposed to rezone land at 84 Hobsonville Road from Future Urban to Business – Light Industry zone. This will result in the Business – Light Industry zone applying to the entire site.

The provisions of Hobsonville Corridor sub-precinct C are proposed to be extended over the application site.

This Civil Engineering Report should be read and considered in conjunction with all of the following:

- Proposed Precinct Provisions, prepared by HG
- Stormwater Management Plan, prepared by HG
- Preliminary Geotechnical Assessment Report, prepared by CMW Geosciences (CMW)
- Detailed Site Investigation, prepared by Geosciences
- Site Management Plan, prepared by Geosciences
- Integrated Transport Assessment Report, prepared by HG
- Detailed Ecological Assessment Report, prepared by Bioreseaches (BRL)
- Archaeological Assessment report, prepared by CFG Heritage

2.0 PROPOSED DEVELOPMENT

2.1 SITE TOPOGRAPHY AND GEOLOGY

Site topography and contour is shown in **Figure 2** below.

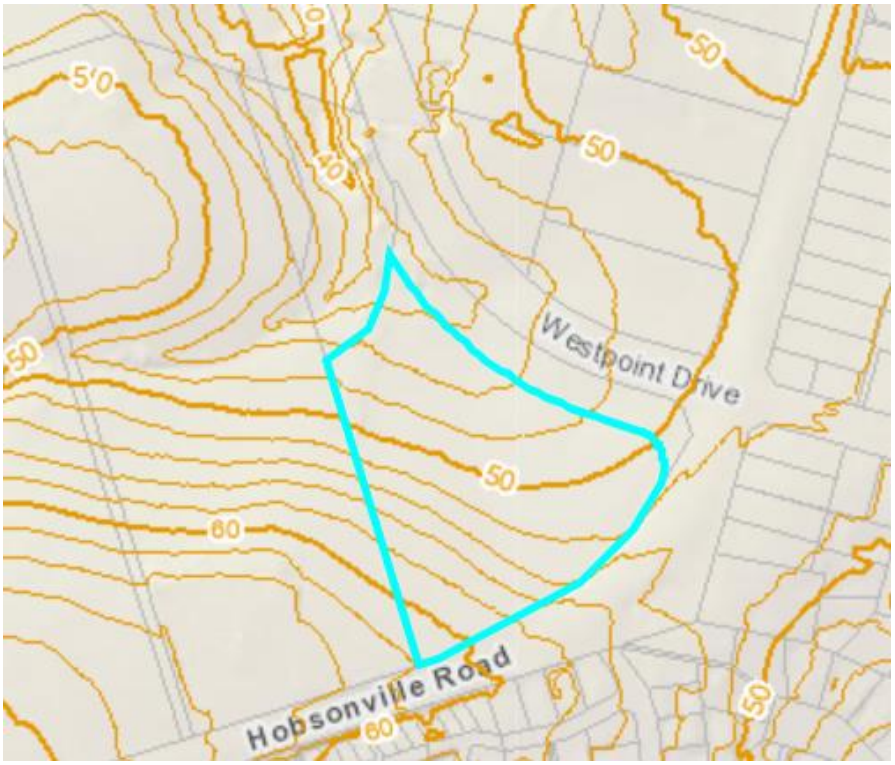

FIGURE 2: SITE CONTOUR (SOURCE: AUCKLAND COUNCIL GIS)

According to Auckland Council GIS, the site falls in a northly directions, from approximately RL61m on the southern boundary to RL43m on the northern boundary.

Previously consent earthworks in 2020-2021 have modified the landform from that shown on the Councils GIS records. Specifically, the lower-lying area to the north which was filled. The northern portion of the landform is now mostly very gently sloping apart from an approximately 8m high batter slope to the north-west, the gradient of which averages around 1V:3H.

The amphitheatre shaped slope in the southern portion of site is believed to be unaltered and comprises gradients of 1V:6H.

A wide, natural gully heads to the north draining into the Rawiri Stream before passing underneath the Upper Harbour motorway through twin culverts, discharging into the coastal area at Brigham Creek Road.

The gully is protected by an approximately 40m riparian reserve, vested to Auckland Council.

2.2 GEOTECHNICAL CONSIDERATIONS

With reference to the Preliminary Geotechnical Assessment Report prepared by CMW Geosciences, we note the following:

- With appropriate engineering, there should be no insurmountable geotechnical hazards that would prevent future residential intensification.
- Global stability is unlikely to be an issue in terms of minimum required factors of safety for residential development.
- Ground water is not anticipated to be an issue, however, seasonal variances and heavy rainfall may contribute to changes in ground water levels.
- Whilst settlement potential may present a geotechnical constraint to development, this can be dealt with as part of the engineering required to form a future subdivision.
- Based upon information from the adjacent development, soils are likely to be classified a Class H (highly) expansive soils.
- The effects of liquefaction in an earthquake event are anticipated to be insignificant, however, further assessments will be required once development details is known.
- No on-site soakage of stormwater permitted.
- Overall, it is considered that 84 Hobsonville Road is suitable for proposed light industrial development.

2.3 CONTAMINATION CONSIDERATIONS

With reference to the Detailed Site Investigation Report, prepared by Geosciences Ltd, we note the following:

- The site was historically used for the grazing followed by the cultivation and commercial sale of roses and may therefore have been subject to spray drift during pesticide applications.
- All samples taken returned results for heavy metals within the naturally occurring background ranges.
- Based upon the analytical results, GSL conclude the horticultural activity is highly unlikely to have impacted the soil, and highly unlikely to result in a risk to human health or the environment.
- It is understood all contamination was rectified during the last stage of earthwork across the site.

2.4 ECOLOGICAL CONSIDERATIONS

With reference to the ecological assessment, prepared by Bioreseaches, we note the following:

- The site is not located within a Significant Ecological Area (SEA).
- There are no notable trees on the site.
- No special considerations should be required when clearing vegetation for earthworks.

3.0 EARTHWORKS

3.1 PROPOSED EARTHWORKS

This report does not address or assess a detailed earthworks design for future site development. Detailed design will be addressed at resource consent and engineering plan approval stages, based on specific subdivision and development design outcomes.

This report addresses the high-level earthworks principles that will apply to future site development, from the perspective of 'general earthworks principles' and 'erosion and sediment control principles'.

3.2 GENERAL EARTHWORKS PRINCIPLES

The following general earthworks principles will apply to future land modification of the subject site:

- Best-practice earthworks design and methodologies will be adopted at all times.
- Proposed earthworks will work with landform and topography to practicably minimise the cut to fill volumes required to achieve the subdivision and development in accordance with the anticipated outcomes for the precinct.
- Proposed land modification will retain intermittent watercourses and natural wetlands wherever practicable and minimise actual and potential adverse effects on these features, in accordance with the National Policy Statement for Freshwater Management (NPSFM); the National Environmental Standard for Freshwater (NES-F); the Auckland-wide provisions of the Auckland Unitary Plan – Operative in Part (AUP-OP) and any other relevant statutory framework documents, regulations, codes and standards.
- Contaminated material, if found, will be assessment and removed off site to a suitably licensed disposal facility under the supervision of a contamination expert.
- All bulk earthworks and land modification will be supervised by a suitably qualified geotechnical engineer and certification provided to confirm that earthworks have been completed in accordance with the geotechnical recommendations for any project.
- The standard Accidental Discovery Protocols shall apply for the duration of earthworks. Should any features of cultural heritage or archaeological significance be discovered, works shall cease to enable cultural and archaeological investigation and recording of any items or features of interest.

3.3 EROSION AND SEDIMENT CONTROL PRINCIPLES

The following erosion and sediment control principles will apply to future land modification of the subject site:

- All erosion and sediment controls will comply with the "Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region" Auckland Regional Council guideline document 2016/005 (GD05) updated June 2016 and any amendments to this document.
- Prior to the commencement of earthworks, a final detailed sediment and erosion control plan will be submitted for Council approval and will cover all specific requirements in relation to the works and program.
- Liaison and coordination with Council monitoring officers will be undertaken at the time of preparing the final erosion and sediment control plan, throughout the construction work and up to completion to achieve the optimal environmental outcome for any future land development project.
- In particular, specific erosion and sediment controls in relation to earthworks in close proximity to watercourses and/or natural wetlands shall be employed to ensure that any actual or potential adverse environmental effects will be avoided or mitigated.

4.0 ROAD LAYOUT

An Integrated Transport Assessment (ITA) has been prepared by Harrison Grierson confirming the transportation environment and network to be well suited for the proposed land-use activities, both existing and future connectivity. The report notes the site has proximity to various public transport options, pedestrian facilities and high quality and dedicated cycle crossing signals at the intersection with Hobsonville Road, all of which enhance pedestrian and cyclist safety.

A new road is proposed to provide access to the development off an existing Spine Road and intersection that currently intersects with Hobsonville Road. Internal roads within the development will be subject to Auckland Transport Traffic Design Manual. No issues are anticipated when adhering to these standards.

5.0 STORMWATER

5.1 EXISTING INFRASTRUCTURE

The existing site is largely greenfield in nature however there is an existing piped stormwater network to the east of the site.

The existing Stormwater infrastructure and stream identifiers are shown in in **Figures 3 and 4** below. Harrison Grierson have been involved in the design and construction of the existing network surrounding the proposed site and can confirm that the development of this site was included in the over arching design.

There is a wide natural gully on the northern boundary, which drains to the north and connects to the Rawiri Stream, before passing underneath the Upper Harbour motorway, through twin 2.1m dia. culverts, discharging into the coastal area at Brigham Creek Road.

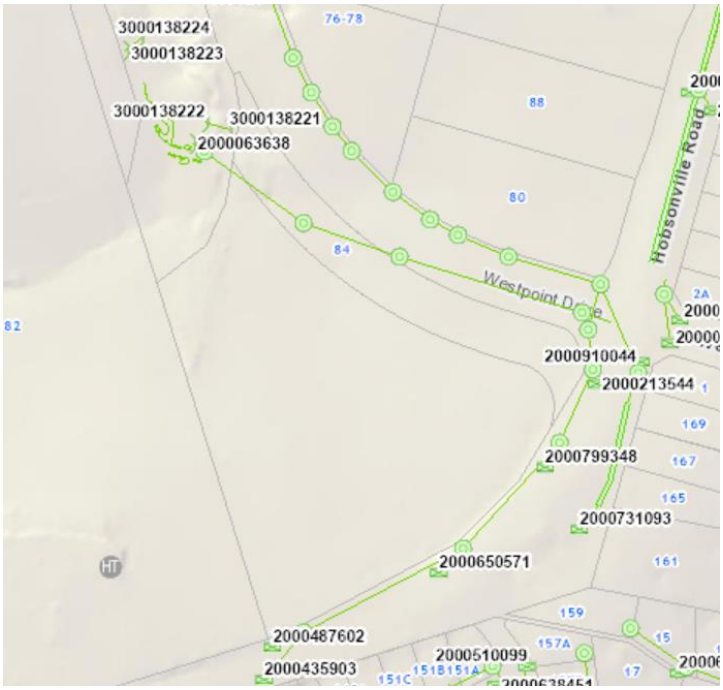

FIGURE 3 EXISTING PUBLIC STORMWATER NETWORK (SOURCE: AUCKLAND COUNCIL GIS)

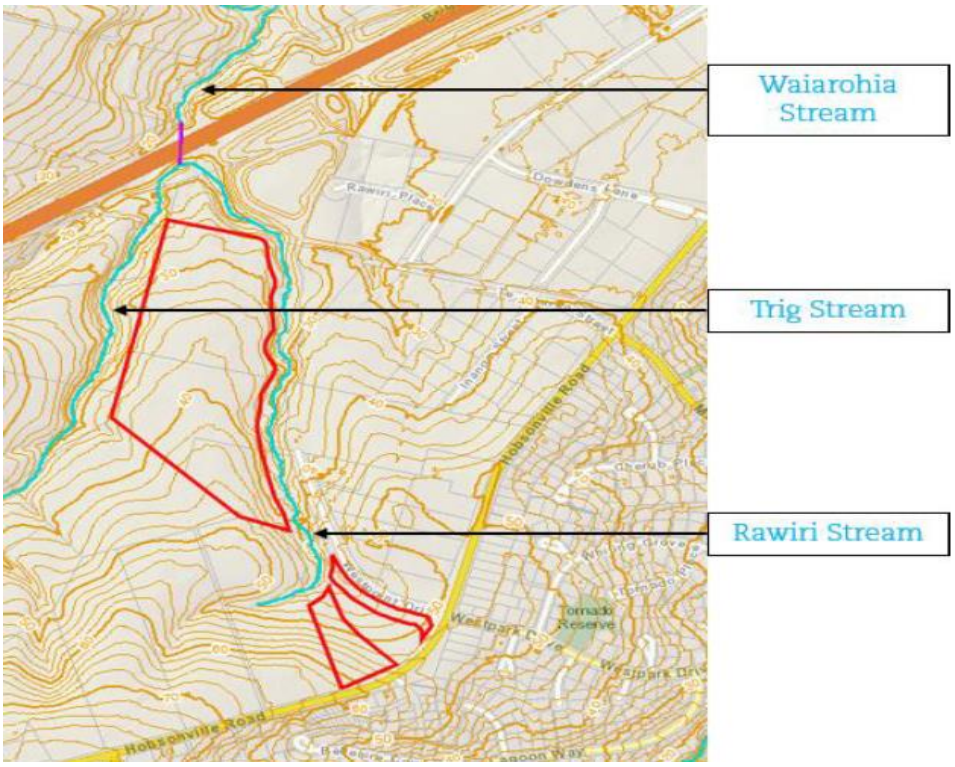

FIGURE 4: STREAM LOCATIONS (SOURCE: AUCKLAND COUNCIL GIS)

5.2 PROPOSED INFRASTRUCTURE

5.2.1 PRIMARY NETWORK

Stormwater runoff from the site will be collected by the primary network and discharge into the existing gully to the north of the site.

The drainage network will capture and convey the flows resulting from the 10% AEP rainfall event, including an allowance for a 2.1deg climate change event.

If the new stormwater network is to be vested as a public asset, it will be designed and constructed in accordance with Auckland Council Code of Practice Chapter 4: Stormwater.

Any new private pipes will be designed and constructed in accordance with the NZ Building Code, clause E1.

5.2.2 SECONDARY NETWORK

The secondary network will take the form of overland flow paths, which will be designed to convey the flows resulting from the 1% AEP rainfall event, including an allowance for a 3.8deg climate change event.

For secondary network requirements we refer Council to the separate Stormwater Management Plan (ref: R002-A2212330-SMP-RJK) prepared for the subject site and submitted in support of the private plan change application.

5.2.3 STORMWATER QUALITY MANAGEMENT

For stormwater management requirements we refer Council to the separate Stormwater Management Plan (ref: R002-A2212330-SMP-RJK) prepared for the subject site and submitted in support of the private plan change application. They key components influencing stormwater servicing are defined below:

- Stormwater Management Area Flows – Stormwater detention and attenuation in accordance with SMAF 1 hydrology mitigation
- Preferred management approach is a communal, end-of-pipe approach.
- Water Quality Treatment – Stormwater treatment in accordance with AUP water quality provisions of GD01.
- Preferred management approach is a communal, end-of-pipe approach.
- Preservation of ecological value and hydrological function of existing natural features, including wetlands and stream reaches.

Based on contour data and recommended allowances within the Stormwater Management Plan we anticipate no stormwater servicing issues for the site. Site drainage will be subject to Topographic survey and Stormwater Management Plan approval.

6.0 WASTEWATER

There is access to an existing wastewater network to the north of the site and has been designed with sufficient capacity for the development in a previous development. Harrison Grierson have

been involved in the design and construction of the existing network surrounding the proposed site and can confirm that the development of this site was included in the overarching design.

The existing public Wastewater infrastructure is shown in **Figure 3** below.

FIGURE 5: EXISTING PUBLIC WASTWATER NETWORK (SOURCE: AUCKLAND COUNCIL GIS)

FIGURE 6: EXISTING PUBLIC WASTWATER NETWORK (SOURCE: AUCKLAND COUNCIL GIS)

A new connection will be made to the existing public wastewater network and extended to service the development of the site.

If the new wastewater network is to be vested as a public asset, it will be designed and constructed in accordance with Auckland Council Code of Practice Chapter 5: Wastewater.

Any new private pipes will be designed and constructed in accordance with the NZ Building Code, clause G13.

Based upon the topography of the site, it is expected all new pipes will be gravity. It is not anticipated a pumped solution will be required.

7.0 WATER SUPPLY

The recent de elopement of Westpoint Drive included the installation of a new 200dia watermain, with 150dia future connection for the site.

The existing public Water infrastructure is shown in **Figures 7 and 8** below.

FIGURE 7: EXISTING PUBLIC WATER NETWORK (SOURCE: AUCKLAND COUNCIL GIS)

FIGURE 7: CONNECTION FOR FUTURE DEVELOPMENT (SOURCE: AUCKLAND COUNCIL GIS)

Watercare has been contacted and have confirmed that there is sufficient capacity in the current network surrounding the site to connect to. Copies of their replies will be provided once available.

Watercare will need to be included in design discussions to ensure all areas of the network are covered. Indications show no network upgrades are required.

8.0 UTILITY SERVICES

There are existing electricity and telecommunications networks in the vicinity of the site.

Chorus and Vector have been contacted to confirm availability and capacity of services for the proposed site. Copies of their replies will be provided once available.

It should be noted as this report is not assessing specific development details, the final services requirements and availability, including any necessary upgrades, will need to be assessed in more detail as part of the future resource consent and engineering plan approval applications.

9.0 CONCLUSION

It is proposed to rezone approximately 1.7477ha of land at 84 Hobsonville Road, for light industrial subdivision and development. It is proposed to apply the Business – Light Industry zone to the land and to extend the Hobsonville Corridor sub-precinct C rules across the entire site.

HG has assessed the proposal in terms of the civil engineering aspects of future subdivision and development of the site in accordance with the proposed precinct provisions, and the provisions of the AUP-OP that will also apply. The following conclusions can be made:

- The standard district and regional land disturbance provisions of the AUP-OP should apply to the subject site; no additional site-specific provisions are proposed or warranted.
- The standard cultural heritage provisions of the AUP-OP should apply to the subject site; no additional site-specific provisions are proposed or warranted.
- The standard stormwater (quality and volume) provisions of the AUP-OP should apply to the subject site; no additional site-specific provisions are proposed or warranted. However, future subdivision and development of the subject site should be carried out in accordance with the Stormwater Management Plan for the site.
- The site the subject of this private plan change application can be serviced for potable and firefighting water supply. Connections to the existing water supply network are available; upgrades to local water supply infrastructure (storage and pumps) may be required to service full site development and will be further investigated at resource consent stage.
- The subject site can be serviced for public utility services including power and telecommunications.

Having regard to the above, there are no civil engineering reasons why the subject site should not or cannot be rezoned from Future Urban to Business – Light Industry zone.

10.0 LIMITATIONS

10.1 GENERAL

This report is prepared for Austino New Zealand Limited and the Auckland Council to support a Private Plan Change application and should not be used or relied upon by any other person or entity or for any other project.

This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Harrison Grierson Consultants Limited. No responsibility is accepted by Harrison Grierson Consultants Limited or its directors, servants, agents, staff, or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purpose.