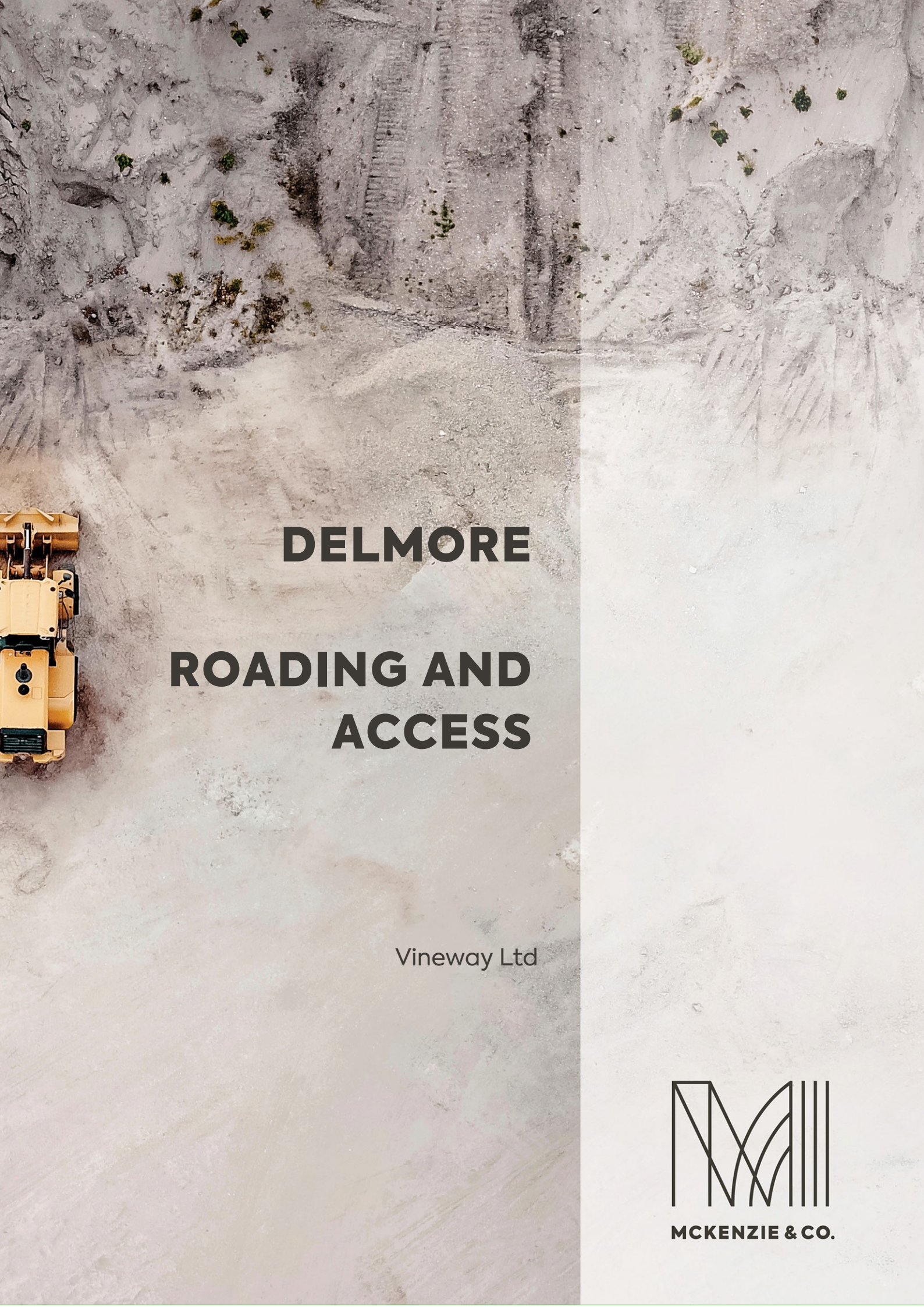

DELMORE

ROADING AND ACCESS

Vineway Ltd

MCKENZIE & CO.

DOCUMENT CONTROL RECORD

PROJECT: Delmore

CLIENT: Vineway Ltd

PROJECT LOCATION: 53A, 53B & 55 Russell Road and 88, 130 & 132 Upper Ōrewa Road

Revision	Date	Originator	Checker	Approver	Description
A	19/12/24	PO			Resource Consent
B	31/01/25	JDK	JDK		Resource Consent
C	04/02/25	JDK	JDK		Resource Consent
D	08/02/25	JDK	JDK		Resource Consent
E	10/02/25	JDK	JDK	JDK	Resource Consent
F	11/02/25	JDK	JDK	JDK	Resource Consent
G	02/07/25	JDK	JDK	JDK	S92

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1. EXECUTIVE SUMMARY

Vineway Ltd proposes a 109-hectare residential development at 53A, 53B & 55 Russell Road and 88, 130 & 132 Upper Ōrewa Road, comprising approximately 1250 lots. McKenzie & Co. Consultants has prepared this Report to address critical roading, cycling, pedestrian, and public transport considerations in support of the Resource Consent application.

The site is zoned Future Urban and is currently used for agricultural activities. Access will be provided from Grand Drive to the northeast, and Russell/Upper Ōrewa Road to the south. Key infrastructure includes an arterial road extension of Grand Drive, around 27 local roads, and 40 private Joint Owned Access Lots (JOALs). Road designs follow established standards from the Auckland Transport Design Manual (TDM) and Austroads, ensuring appropriate design speeds, sight lines, and safe stopping distances.

Key Design Features

Road Network: An arterial road with a 60 km/h design speed and local roads designed for 30 km/h with traffic-calming measures.

Road Geometry & Standards: Vertical and horizontal alignments comply with TDM and Austroads requirements, although a departure is needed for grades above 8% due to steep topography.

Stormwater Management: Runoff is captured via catchpits and conveyed to Gross Pollutant Traps before flowing into communal raingardens for treatment, retention, and detention. Overland flowpaths are contained within carriageways, safely discharging to streams with energy dissipation at outlets.

Pedestrian & Cycling: Provision of footpaths, pram crossings, raised tables, and off-road cycle lanes along the arterial route, with future bus stops planned when demand necessitates.

Utilities & Safety: All services are routed in berms/footpaths, while streetlighting and signage will meet TDM and NZTA standards.

Overall, the proposed design supports multimodal connectivity, addresses environmental considerations, and aligns with relevant local regulations and standards, ensuring a safe and efficient transport network for this new residential community.

2. INTRODUCTION

McKenzie & Co. Consultants have been engaged by Vineway Ltd to provide an infrastructure report in support of the proposed 109Ha development located at 53A, 53B & 55 Russell Road and 88, 130 & 132 Upper Ōrewa Road, Ōrewa. The proposed development is a residential development for approximately 1250 Lots.

This report is prepared in support of Vineway Ltd.'s substantive application under the Fast Track Approvals Act 2024, by addressing the critical roading, cycling, public transport and pedestrian matters that relate to this proposal. It is important to note that this report only covers the movement network, while other infrastructure matters, including earthworks, stormwater, overland flow paths, wastewater, water supply, and utility servicing works are addressed in separate infrastructure reports.

To fully comprehend this report, it should be read together with the consent application, plan drawings, and other supporting documents referred to in this report.

Refer to Mckenzie & Co's Stormwater Engineering Report for further information on the proposed stormwater system to service the transport network as part of this development.

The roading network has been designed with Commute Transport and this report should also be read in conjunction with Commute's Technical report (transport) – 2025.

3. SITE DESCRIPTION

The proposed development site is legally described as Lot 1 DP 336616, Lot 1 DP 497022 & Lot 2 DP 497022, Lot 2 DP 418770, Lot 1 DP 153477 & Lot 2 DP 153477.

The site is zoned Future Urban. The site is accessed from Grand Drive in the northeast, and Russell Road and Upper Ōrewa Road from the south.

Currently, the site is used for agricultural purposes with livestock roaming across a significant portion of the site. Some bush areas subject to consent notices that are proposed to remain for the most part, and a pine tree stand that will be removed for development.

The location of the development is shown below in Figure *1.*

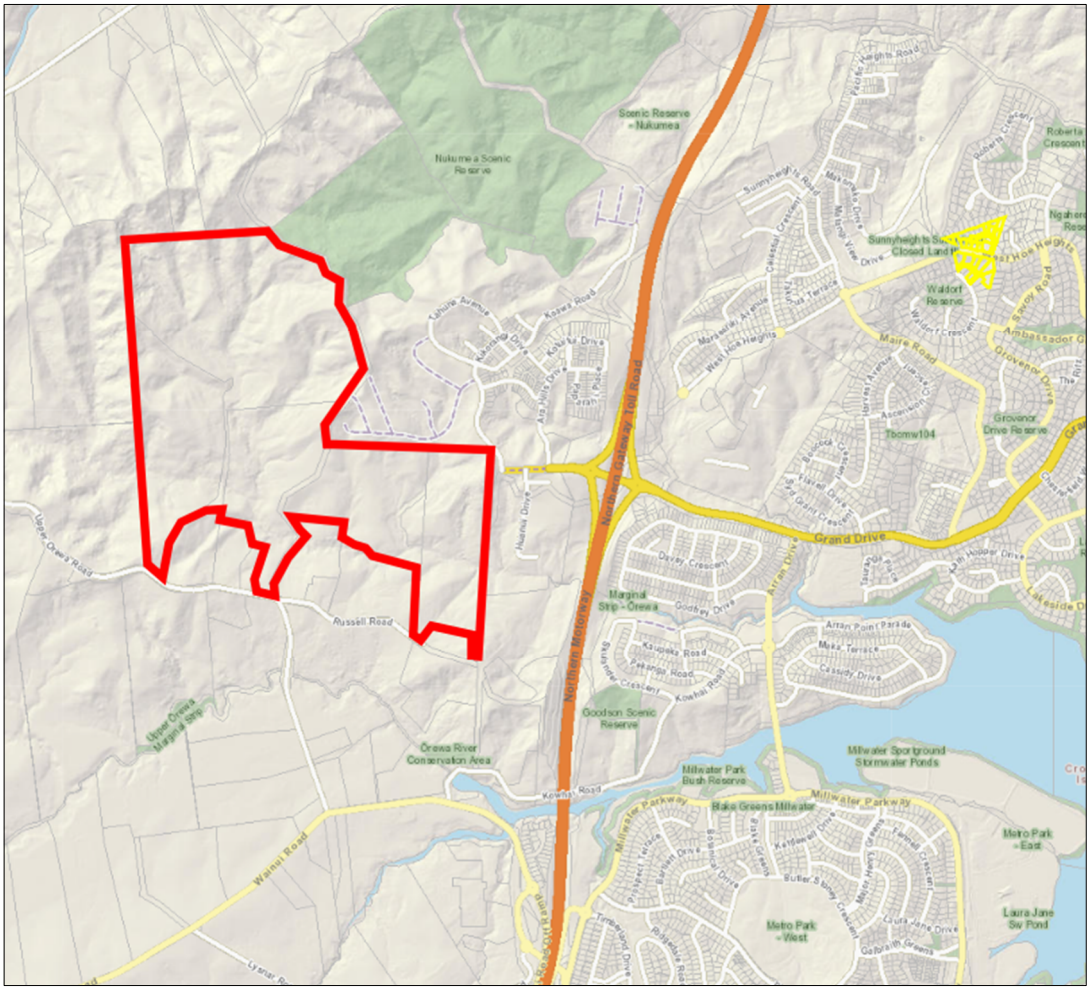


Figure 1 – Site location

DESIGN STANDARDS

Public roads have been designed in accordance with the below requirements, and reports:

- Transport Design Manual, Auckland Transport (TDM)
- Austroads Guide to Road Design (Austroads)
- Alignment and typical cross section, generally in accordance with Notice of Requirement No. 6. (NOR6)
- Commute – Transportation Assessment Report
- Mckenzie & Co Stormwater Report
- NZS4404:2010
- E27 Transport of the Auckland Unitary Plan

4. PROPOSED DEVELOPMENT

The development comprises of approximately 1250 residential lots, each containing an individual dwelling. The proposed transport infrastructure consists of 27 new roads and 40 private Joint Owned Access Lots (JOAL). The internal road network will connect to Grand Drive to the east via an existing roundabout / interchange, and a new connection to Upper Ōrewa Road is proposed for Stage 2. The proposed layout is shown below in Figure 2.

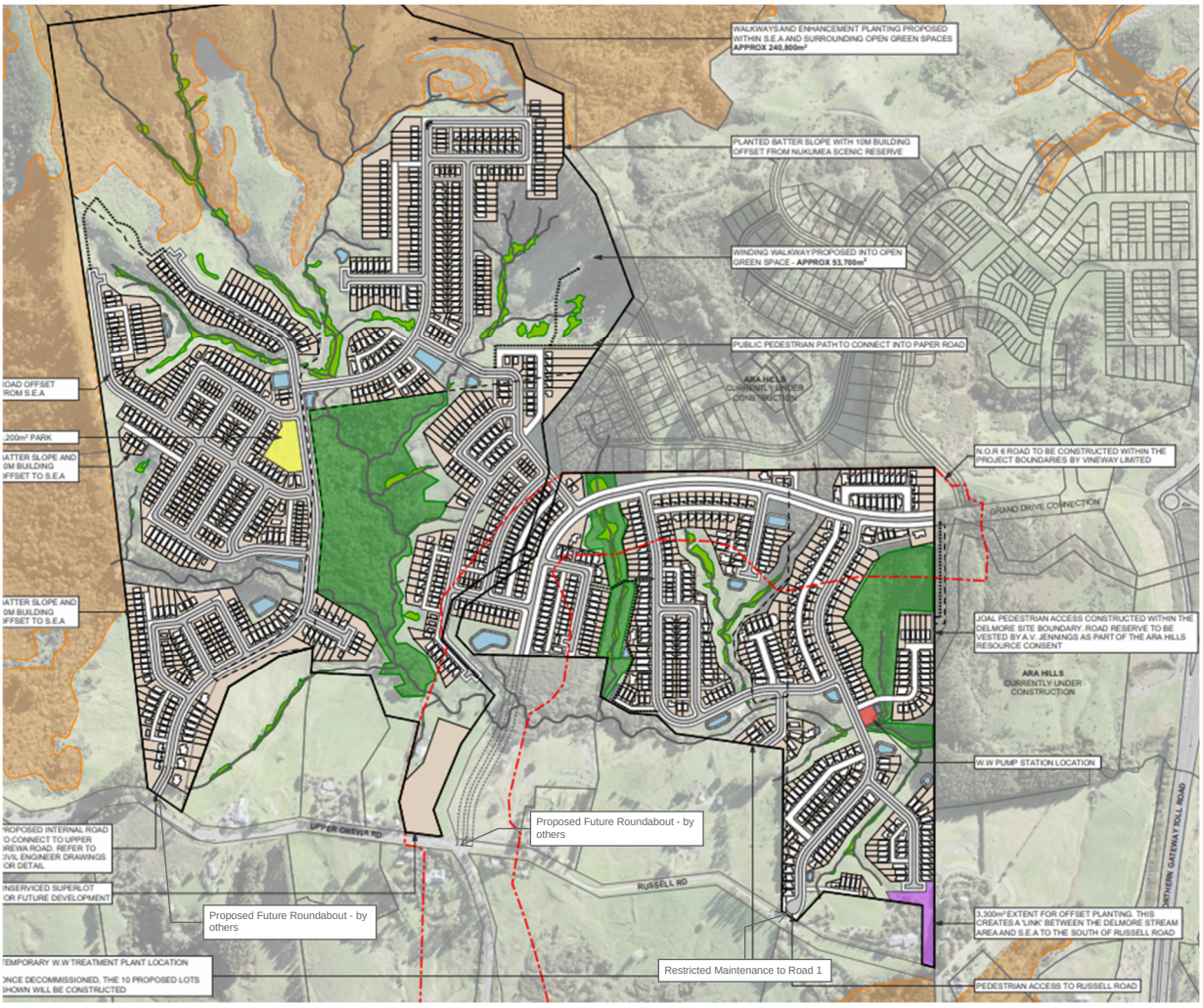


Figure 2 - Proposed development layout

5. DESIGN PARAMETERS

5.1. Design Speeds

- Arterial Road – 60km/h
- Internal roading network, posted speed 50km/hr however with the addition of traffic calming measures, a design speed of 30km/h has been proposed.

5.2. Design Vehicle - Tracking

- Local – Local - 10.3m Truck, using full width of road. This results in intersection radii

of 7m.

- Local – Arterial - 10.3 Rear steer truck, for vehicle tracking, can turn onto central median but not oncoming lane. This means that a radius of 10m has been adopted for Arterial/local roads.
- Local road corners – corners have been tracked and tapers adjusted to suit. More detailed tracking will be undertaken at detailed design stage.

5.3. Visibility for safety

In Stage 2, the intersection of road 17 with Upper Ōrewa Road has been checked for sight lines in both directions and complies with Austroads guidelines. Some vegetation clearing will be required on the inside corner of Upper Ōrewa Rd, and replanted with low planting to ensure vegetation heights remain low.

5.4. Design for Maintenance

No manholes or utility lids are located in the Carriageway.

Road 1 Cul-de-sac radius has been designed to cater for turning circle for a 6m long "Sucker truck" to access the waste from WWTP. There is also a Commercial Vehicle crossing (will restricted access) to be built between Road 1 cul-de-sac and Russel Road.

5.5. Horizontal Alignment

The proposed development involves the construction of an arterial road, which runs along the northern boundary of the property, and is noted as NOR 6, and a local road network. The arterial road is within the NOR 6 designation boundaries. Itis noted that the road alignment proposed by Delmore is different to the alignment proposed by NOR 6, however original alignment was prepared for preliminary purposes only. The proposed alignment has the benefit of more detailed design. This revised alignment is superior in terms of efficiency, integration, and environmental impact mitigation.

There are also a number of private JOALS serving lots from the rear. The JOALS have various widths, depending on the number of dwellings that are access from it.

All horizontal curves are compliant with Austroads chapter 3.

Widening has been undertaken on corners where required for vehicle tracking to enable a 95th percentile car to pass a 10.3m rubbish truck.

5.6. Vertical Alignment & Longitudinal Grades

Road Design Part 3: Geometric design, Table 8.7 and Figure 8.9 have been used to determine minimum K values for crest and sag curves.

Minimum K-values	Crest	Sag
40km/h	Desirable minimum: 3.5 Absolute minimum: 2.9	Desirable minimum: 3 Absolute minimum: 1
50 km/h	Desirable minimum: 6.8 Absolute minimum: 5.4	Desirable minimum: 4 Absolute minimum: 2

5.6.1. Arterial Rd

The steepest vertical grade on the arterial road is 8%.

The designed minimum vertical k values are within the above with Austroads chapter 3.

5.6.2. Local Roads

The steepest vertical grade on the local roads is 12.5%, due to geographical constraints. This is steeper than TDM section 5.3 however the constraints do not allow for flatter grades. A departure from standard will be required for roads over 8%.

5.6.3. Private Joint Owned Access Lot (JOAL)

Joals have a minimum 4m platform at maximum grade of 5% adjacent to the road reserve, to satisfy Table E27.6.4.4.1.

Maximum longitudinal grades have been designed to be a maximum of 20%.

Changes of grades greater than 12.5% have been designed to have a transition to avoid a car striking the ground.

5.7. Cross-Fall

All roads have carriageways with 3% cross fall, and berms and footpaths have 2% cross fall.

Some roads have single cross fall where these benefits local topography, to enable better vertical geometry changes. Overland flowpaths (OLFPs) have been checked for these roads to ensure flow widths remain within allowable limits, as specified in Auckland Transports the Transport Design Manual (TDM).

5.8. Intersection Design

Vehicle tracking has shown that compound curves are not required where the local roads intersect with the arterial roads. A truck can manoeuvre over the flush central median, in accordance with the TDM.

Local to Local Road kerb returns are 7m radii.

For details of vehicle tracking refer to the Transportation Report prepared by Commute Transportation.

There are two future roundabouts (to be built by others) shown in drawings to provide context. These are between

- NOR 6 and Russel Road
- Road 17 and Russel Road

5.9. Road Reserve and Lane Widths

Road cross sections are shown on 3725-1-3600 to 3602.

Road reserve widths are shown below in Table 1.

Table 1 - Road reserve widths

NoR Road / Grand Drive extension	24 metres	3.8m in either direction plus 2.8m median (10.4 total width)	2.0m footpath and 2.0m cycle lane on either side
All other local Roads	16 metres	3.0m in either direction (6.0m total width)	1.8m width on both sides

The roads been design with localised widening at the bends to accommodate truck movements. Vehicle tracking has been undertaken by Commute Transport which confirms that vehicle manoeuvring can be accommodated within the masterplan. Further refinement will occur during detailed design.

5.10. Road Drainage and Utilities

The stormwater discharge from the development is subject to a discharge consent however is proposed to be adopted under Auckland Council's Region Wide Network Discharge Consent (NDC) as a Greenfield Development, within Schedule 10 at the time the land is rezoned from FUZ. To comply with the NDC, a comprehensive Stormwater Management Plan has been developed. This plan outlines how stormwater quality and quantity will be managed on-site through the application of best practice methods.

Runoff from impervious surfaces within the road reserve will be captured by catchpits and conveyed through a pipe network. The runoff will then pass through a Gross Pollutant Trap (GPT) before being discharged into communal raingardens. These raingardens will provide treatment, retention, and detention of stormwater flows. For storm events exceeding the 95th percentile, excess flows will bypass the raingardens and discharge directly to the stream outlet.

The stream outlet will be designed to reduce flow energy before entry into the stream to prevent erosion. This will be achieved using rip rap and other energy dissipation measures.

Multiple communal raingardens will be utilized to manage water quality, and to provide retention and detention for impervious surface runoff from public roads and private JOALs. The design and operational details of these raingardens are provided in the Stormwater Report and illustrated in the 400 series drawings. The design adheres to the standards outlined in Auckland Council's Stormwater Management Devices in the Auckland Region (GD01) 2017, version 4. No on-road raingardens are proposed.

OLFPs have been modelled to confirm flow depths and velocities, with results presented in plans 3725-1-4600 to 4650. The modelling confirms that OLFPs can be contained within the road carriageways and safely discharged into receiving streams. The OLFP discharge points will be protected using rip rap and other energy dissipation devices to minimize erosion risks.

All DxV values comply with the allowable limits of 0.03 to ensure pedestrian and vehicle safety in overland flow conditions.

All underground services, including utility infrastructure, will be located within berms and footpaths. No manholes or utility access chambers are proposed within the carriageway to maintain road surface integrity and reduce maintenance disruption.

5.11. Road Safety Features (Barriers, Clearance, Sight Distance)

All site distance and safe stopping distances have been checked by Commute Transportation Consultants as part of its traffic assessment. Refer to the report to confirm compliance.

Traffic barriers are shown where their risk to vehicles where they are non-recoverable. These are primarily shown above culverts and above retaining walls.

Mid-block pedestrian crossings have been proposed along the NOR6 alignment, to facility pedestrian and cyclists cross the road at key locations. A refuge island is proposed at each location.

5.12. Car Parking

Car parking bays are located within the front berm. They are a minimum of 2.1 wide, and have 45 splays at each end to facilitate manoeuvring. They have been located minimum 1m from driveways and 6m from intersections. Refer to Commutes Transportations traffic assessment for more detail on requirements for onsite parking.

5.13. Streetlighting

5.13.1. Streetlighting

Indicative locations for streetlighting are shown on 3000 series drawings. A full lighting design to meet TDM requirements will be provided at the Engineering Plan Approval stage.

5.13.2. JOAL Lighting

It is proposed that JOAL lighting will be achieved through the use of solar enabled lights and poles.

5.14. Road Cross Sections

The arterial road is an extension of Grand Drive and is part of Supporting Growths future growth network. Provision has been made for pedestrians, and an offroad cycle lanes in each direction. The cycle lanes will be integrated with bus stops in the future when future bus stops are installed. This is addressed in more detail in section 5.4.

Typical cross sections are shown below in Figure 3, and detailed on plans 3725-1-3600 and 3602.

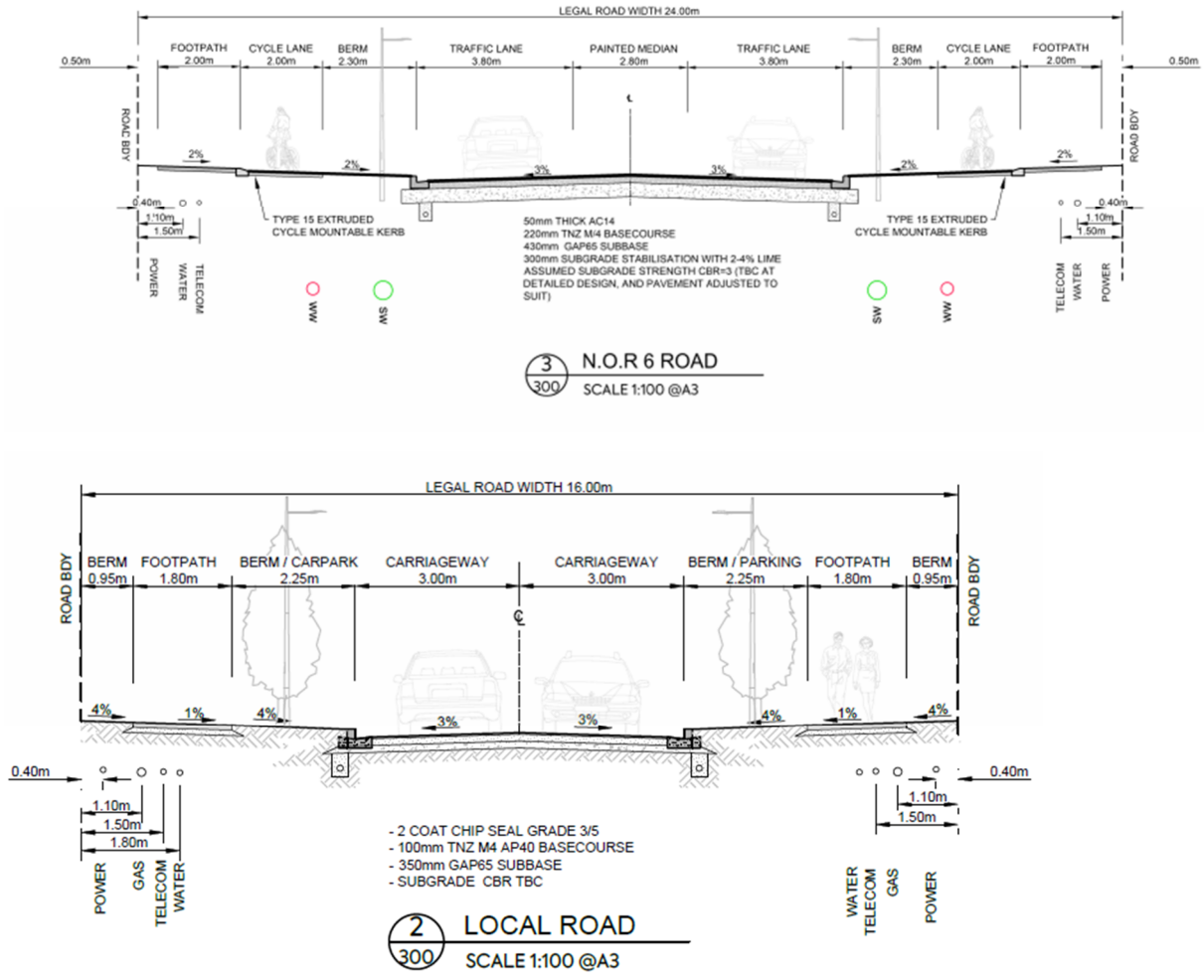


Figure 3 - Typical Road Cross Sections

The pavement design will be confirmed at time of Engineering Approval, and further testing to confirm subgrade CBRs.

5.15. Intersections

Where local roads intersect the arterial road, a raised table will be provided to provide traffic calming and level pedestrian and cycling crossings.

All intersections will have pram crossings with tactile pavers.

Vehicle tracking has been provided by Commute Transportation.

5.16. Public Transport

Public transport has been addressed in Commute Transportations Traffic Assessment. The arterial road is the primary bus route through the site. No bus stops are proposed to be constructed as part of this development, however bus stops are expected to be installed in the future, when road connections and demand requires. The cycle lane can be narrowed and road marking installed to alert cyclists to the hazard. An example of how the cycle lane can be narrowed to allow for future bus stop provision is shown below in Figure 4.

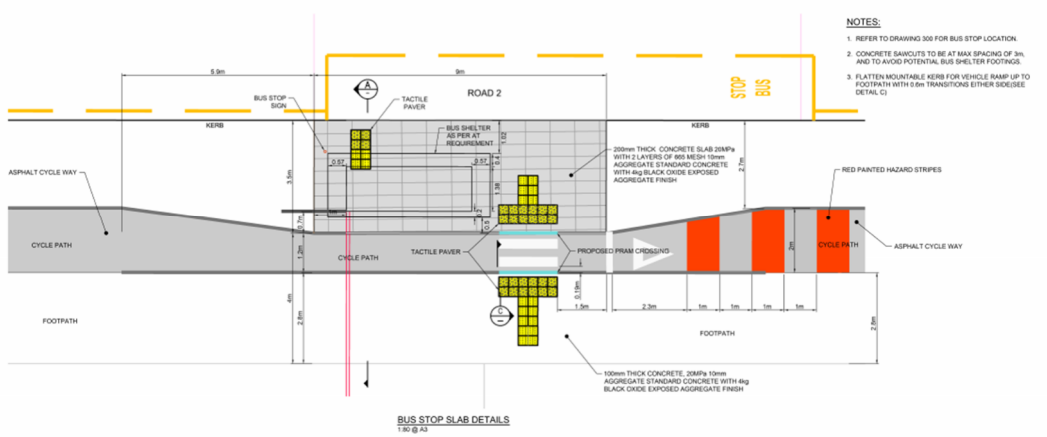


Figure 4 - Proposed Future bus stop provision.

5.17. Vehicle Tracking

Commute Transportation has undertaken vehicle tracking for this development, and reference should be made to the Traffic Assessment.

5.18. Car Parking

No formal roadside vehicle parking is proposed. On site parking is covered by Commute Transportation.

5.19. Signage and Road Marking

Road marking and signage will be provided to meet TDM and the NZTA Manual of Traffic Signs and Markings.

Give ways are proposed where local roads intersect with the Arterial Road.

5.20. Traffic Calming.

Traffic calming will be provided throughout the development to achieve a design speed

of 30km/h. A lower speed limit will support shared use of the road by motor vehicles and bikes.

Raised tables or other devices will be provided at distances of no more than 60m between intersections, to slow traffic flow. Refer to drawing 3000- 3006 for calming details.

6. DEPARTURE FROM STANDARDS

6.1. Longitudinal Grades

A departure from standard for longitudinal grades will be required, for grades >8%. There are a number of roads where the longitudinal grade exceeds 8%, due to geographical constraints. There are no other options available to reduce these grades.

7. CONSULTATION

7.1. NOR 6 Hearing

The alignment of the road, referred to as NoR 6 on plans 3275-1-3000 to 3006, generally follows the proposed designation by the Supporting Growth Alliance. Vineway Ltd reviewed the alignment's potential impact on the proposed development, submitted a Memo dated 6 June 2024 regarding the proposed NOR alignment.

Prior to the hearing, rebuttal evidence on engineering design matters was provided by Martin Barrientos, who stated:

"The outputs provided by Mr Hingston and Mr Kitchen show that other alternative alignment options are possible within the designation boundary and I consider that there are opportunities to work collaboratively with Vineway Limited on the final design of the road within their land holding to achieve an integrated outcome. In addition, there may also be opportunities for the development to occur over the area required for earthworks for the road, as it is intended that the designation would be drawn back to the road corridor boundary. ".

McKenzie and Co presented to the panel on 1 July 2024. At the time, only an indicative design had been completed.

The design presented as part of this application has consistent design parameters and alignment to what was presented to the panel. The cross section is consistent with the information that was provided for the NOR alignment.

The design is still contained within the designation boundary, and as such is consistent with the feedback provided.

Moving forward, the intention is to collaborate with Auckland Transport throughout the design process to refine the design as necessary.

8. CONCLUSION

The proposed development of Delmore has been designed to provide the required infrastructure necessary for use and enjoyment of the developed lots and follows the AUP and various Council standards.

The design has taken into consideration the possible impact of the proposed development and has minimised impacts to the receiving environment using accepted engineering practices.

APPENDIX A – ENGINEERING PLANS

BOUND SEPARATELY

APPENDIX B –CORRESPONDENCE

Memorandum

To: Djordje Petkovic – Vineway Limited

From: Cosette Pearson / Nick Roberts – Barker & Associates Limited

Date: 6 June 2024

Re: Review of proposed conditions of NoR 6 - North: New Connection between Milldale and Grand Drive, Ōrewa

Introduction

We are of the understanding that Vineway Limited are planning to develop land at 88, 130 and 132 Upper Ōrewa Road and 53A, 53B and 55 Russell Road, Ōrewa (the Site), which is just over 109ha in size. Vineway Limited recently submitted an application (to be referred as a Fast-Track listed project), to subdivide the site and construct a master-planned residential development providing a complete urban outcome of approximately 1250 homes complete with parks, river-side walkways, and supporting infrastructure.

As part of this application, Vineway Limited proposed to fund and deliver the portion of Auckland Transport's (Supporting Growth Alliance) Northern Project Road network that runs through the site from north to south (NoR 6) as illustrated in the Alternative NoR Alignment prepared by McKenzie & Co at **Figure 1** below. This connects the existing Ōrewa SH1 interchange at Grand Drive with Wainui Road. The project will also include upgrading parts of the areas existing roads to ensure a comprehensive, connected, safe, and functional network.

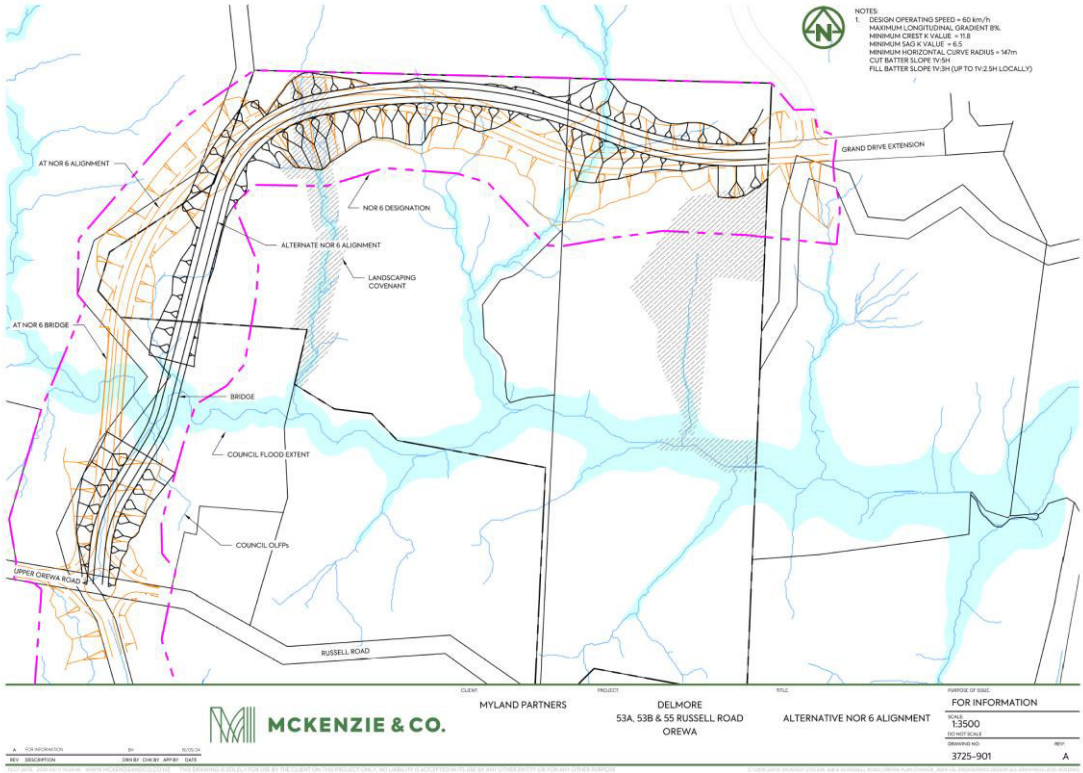


Figure 1 The alternative NoR alignment portion of NoR6 that VinewayLimited propose to fund and deliver as part of their comprehensive development of the Site.

Barker & Associates
+64 375 0900 | admin@barker.co.nz | barker.co.nz
Kerikeri | Whangārei | Warkworth | Auckland | Tauranga | Hamilton | Cambridge | Napier | Wellington | Christchurch | Wānaka | Queenstown

NoR 6 Conditions - Review

We have undertaken a review (based on our understanding of Vineway Limited landholdings and intentions to develop the Site) of the conditions of the New Connection between Milldale and Grand Drive, Ōrewa (NoR 6) (extent of NOR 6 shown in **Figure 2** below), to inform Vineway Limited's Corporate evidence at the upcoming SGA Hearings.

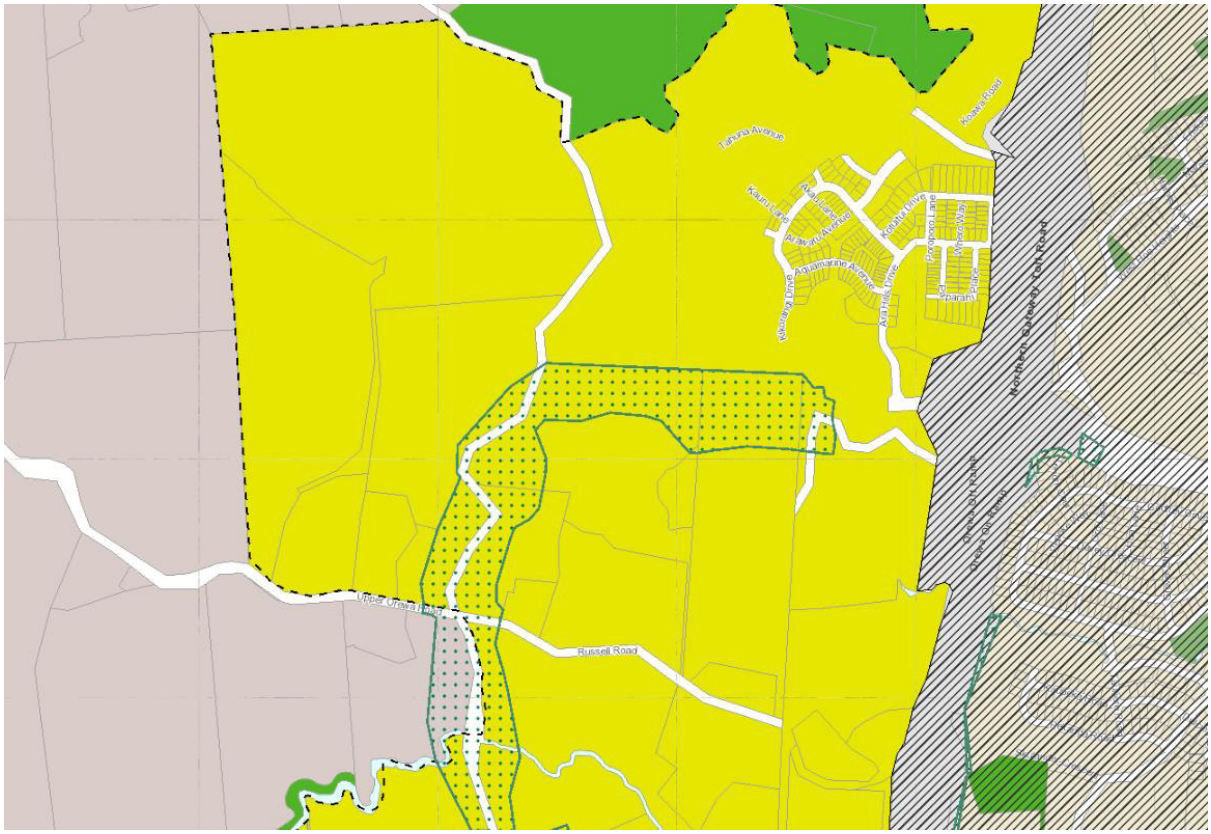


Figure 2 The extent of NoR 6 as it has been applied across the Vineway Limited landholdings

At a high-level, the conditions that are proposed for NoR6 are generally standard of Notices of Requirement for new or upgrades to existing roads as part of Supporting Growth Alliance's arterial upgrades. How Vineway Limited deliver the portion of the road across their landholdings and how this is contractually agreed to between Vineway Limited and Auckland Transport will be via a private contract between Vineway Limited and Auckland Transport rather than by way of any conditions of the NoR.

However, we are of the view that it is important for consideration to be given through a Land Use Integration process condition for the 'integration of planned or privately constructed public transport infrastructure', that being both in the northeast (Ara hills) and the south (remainder of NoR 6 that runs south towards Milldale).

Of the **Conditions** (refer **Attachment 1** for the marked-up AT NoR Conditions from MR Chris Scarftons Planning and Conditions Evidence), key conditions to note are:

Designation Review (Condition 3)

This condition reaffirms the Requiring Authorities (Auckland Transports) obligations under section 182 of the RMA by confirming that the Requiring Authority will, as soon as reasonably practicable following Completion of Construction:

(a) Review the extent of the designation boundary to identify any areas of designated land that are no longer required for the on-going operation, maintenance or mitigation of effects of the Project.

(b) Give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation that are no longer required for the on-going operation, maintenance or mitigation of effects of the Project.

Condition 3. Designation Review of NoR 6 reads as follows:

(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.

Our comment: As Vineway Limited are proposing to fund and deliver part of the new Connection between Milldale and Grand Drive, we would recommend you seek amendments to this condition as follows:

(a) The Requiring Authority shall ~~within 6 months of Completion of Construction or~~ as soon as ~~otherwise~~ reasonably practicable and no later than 6 months from the Completion of Construction:

The reason for this suggested request is because Vineway Limited will want the part of the designation applied to their land that is not required for the project to be removed as soon as reasonable from completion of construction so that the adjacent residential development can progress with certainty.

We also recommend Vineway Limited seek an additional condition as follows:

An application under s176(1)(b) of the RMA, for works within the designated land must be processed by the Requiring Authority within 20 working days.

This will provide further certainty for Vineway Limited for future development.

Lapse Period

The lapse condition confirms when the designation will lapse in accordance with section 184(1)(c) of the RMA. Condition 4. Lapse of NoR 6 is as follows:

In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 30 years from the date on which it is included in the AUP.

Given Vineway Limited will be in control of the delivery of the portion of the road that the NoR applies to their landholdings, we do not recommend Vineway Limited seek any amendments to this condition.

Land Use Integration Process

Based upon our review of the notified conditions for NoR 6, it is our view that the most important consideration for Vineway Limited is that there is integration with the adjacent planned or constructed transport network.

The Land Use Integration Process condition requires the setting up a process to encourage and facilitate the integration of master planning and land use development activity on land directly affected or adjacent to the designation prior to the implementation of the Project. The condition recognises that, given the extended lapse dates (six times greater than the standard RMA NoR lapse period) and likely land use change within the receiving environment, it is likely that other land use changes will occur prior to the implementation of the Project.

In the *Notified* Condition set, the Land Use Integration Process was included as Condition 10.

In the conditions attached to the *Hearing Panels Direction* dated 20 February 2024, the Land Use Integration Process Condition has been deleted.

In Mr Chris Scraftons Strategic Planning and Conditions evidence on behalf of Auckland Trasport and Waka Kotahi, the Land Use Integration Process condition is included in Auckland Transport (includes Nor 6) NoRs, however is not included in the Waka Kothai NoRs. In Mr Scraftons evidence, the notified Land Use Integration Process condition has been further amended to include an additional clause which recognises that any information provided by a Developer or Development Agency to assist land use integration could result in potential modifications to the extent of the designation ((c)(ii)) below).

We recommend Vineway Limited supports the Land Use Integration Process condition as set out in Mr Chris Scraftons Strategic Planning and Conditions evidence, with one further amendment as shown in underline below:

Land use Integration Process

(a) *The Requiring Authority shall set up a Land use Integration Process for the period between confirmation of the designation and the Start of Construction. The purpose of this process is to encourage and facilitate the integration of master planning and land use development activity on land directly affected or adjacent to the designation. To achieve this purpose:*

(i) within twelve (12) months of the date on which this designation is included in the AUP, the Requiring Authority shall include the contact details of a nominated contact on the project website (or equivalent information source) required to be established by Condition 2(a)(iii); and

(ii) the nominated contact shall be the main point of contact for a Developer or Development Agency wanting to work with the Requiring Authority to integrate their development plans or master planning with the designation.

(b) *At any time prior to the Start of Construction, the nominated contact will be available to engage with a Developer or Development Agency for the purpose of:*

(i) responding to requests made to the Requiring Authority for information regarding design details that could assist with land use integration; and

(ii) receiving information from a Developer or Development Agency regarding master planning or land development details that could assist with land use integration.

(c) *Information requested or provided under Condition 3(b) above may include but not be limited to the following matters:*

(i) design details including but not limited to:

A. boundary treatment (e.g. the use of retaining walls or batter slopes);

B. the horizontal and vertical alignment of the road (levels);

C. potential locations for mid-block crossings~~; and~~

D. integration of stormwater infrastructure~~; and~~

E. traffic noise modelling contours; and

F. the integration of planned or privately constructed public transport infrastructure.

(ii) potential modifications to the extent of the designation in response to information received through Condition 3(b)(ii);

(iii) a process for the Requiring Authority to undertake a technical review of or provide comments on any master planning or development proposal advanced by the Developer or Development Agency as it relates to integration with the Project; and

(iv) details of how to apply for written consent from the Requiring Authority for any development proposal that relates to land is within the designation under section 176(1)(b) of the RMA.

(d) *Where information is requested from the Requiring Authority and is available, the nominated contact shall provide the information unless there are reasonable grounds for not providing it.*

(e) *The nominated contact shall maintain a record of the engagement between the Requiring Authority and Developers and Development Agencies for the period following the date in which this designation is included in the AUP through to the Start of Construction for a Stage of Work. The record shall include:*

(i) details of any requests made to the Requiring Authority that could influence detailed design, the results of any engagement and, where such requests that could influence detailed design are declined, the reasons why the Requiring Authority has declined the requests; and

(ii) details of any requests to co-ordinate the forward work programme, where appropriate, with Development Agencies and Network Utility Operators.

(f) *The record shall be submitted to Council for information ten working days prior to the Start of Construction for a Stage of Work*

This is a critical condition (with suggested amendments) to Vineway Limited, which we recommend Vineway Limited seeks being reinstated and amended further than in the evidence of Mr Scrafton. We also recommend Vineway Limited support Mr Scraftons recommendation that this be relocated to Condition 3 (a General Condition) rather than as a pre-construction condition.

The reason being that the integration of both planned or privately constructed public transport infrastructure is extremely important to ensure that Vineway Limited will be delivering a piece of infrastructure that will be coordinated with and integrate seamlessly with the wider planned environment (including adjacent roading infrastructure).

A new Condition 4 is recommended for Stakeholder Communication and Engagement, and reads as follows:

Stakeholder Communication and Engagement

At least 6 months prior to the start of detailed design for a Stage of Work, the Requiring Authority shall identify:

(i) a list of Stakeholders;

(ii) a list of properties within the designation which the Requiring Authority does not own or have occupation rights to; and

(iii) methods to engage with Stakeholders and the owners and occupiers of properties identified in (a)(i) – (ii) above. A record of (a) shall be submitted with an Outline Plan for the relevant Stage of Work.

We recommend Vineway Limited does not seek any amendments to this condition, however note that it is relevant as Vineway Limited will be included in the list of stakeholders and will need to be actively engaged through all stages of the NoR 6 process.

Stakeholder Communication and Engagement Management Plan (SCEMP)

The following Pre-Construction Condition requiring a Stakeholder Communication and Engagement Plan has proposed amendments following s92 Response and Primary Evidence:

We recommend Vineway Limited support this condition as drafted below (with mark-ups), as it specifies that the SCEMP will be prepared in consultation with stakeholders, which includes Vineway Limited.

Auckland Transport proposed conditions

Yellow underlined and ~~strikethrough~~ – changes presented following s92 response
Blue underlined and ~~strikethrough~~ – changes presented in Primary Evidence

NoR No.	No.	Condition
All	11.	**[Relocated] Stakeholder Communication and Engagement Management Plan (SCEMP)** (a) A SCEMP shall be prepared in consultation with ~~s~~Stakeholders prior to the Start of Construction (b) The objective of the SCEMP is to identify how the public and ~~s~~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) a list of Stakeholders; (ii) a list of properties within the designation which the Requiring Authority does not own or have occupation rights to; (iii) methods to engage with Stakeholders and the owners of properties identified in (b)(ii) above; (iv) 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); (v) 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; ~~(vi) a list of stakeholders, organisations (such as community facilities) and businesses who will be engaged with;~~ ~~(vii) identification of the properties whose owners will be engaged with;~~ (viii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (ix) methods and timing to engage with ~~landowners~~ owners and occupiers whose access is directly affected; (x) 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 (b)(i) and (iii) above; and (xi) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant. (c) Any SCEMP prepared for a Stage of Work shall be submitted to Council for information ten working days prior to the Start of Construction for a Stage of Work.

Another particularly relevant condition for Vineway Limited is the Urban and Landscape Design Plan which is a pre-construction condition, requiring key stakeholders (which will include Vineway Limited) to be invited to participate in the development of the Urban and Landscape Design Plan. It also requires that details are provided of how the Project has responded to matters identified through the Land use Integration Process.

All	13.	**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) [relocated] 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) [relocated] 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. (v) has responded to matters identified through the Land Use Integration Process (Condition 3) (d) [relocated] 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 Condition 12 may be reflected in the ULDMP. (e) **Key stakeholders shall be invited to participate in the development of the ULDMP at least six (6) months prior to the start of detailed design for a Stage of Work.** (f) 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. (g) 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 and existing roads (including slip lanes), 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 (Condition 25); and

Auckland Transport proposed conditions

Yellow underlined and ~~strikethrough~~ – changes presented following s92 response
Blue underlined and ~~strikethrough~~ – changes presented in Primary Evidence

NoR No.	No.	Condition

I. re-instatement of construction and site compound areas~~, driveways, accessways and fences.~~; and

J. re-instatement of features to be retained such as:
   a. boundary features;
   b. driveways;
   c. accessways; and
   d. fences.

(iv) ~~The ULDMP shall also include the following~~ planting details and maintenance requirements:

A. planting design details including:
   a. identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan (where relevant) and Ecological Management Plan. Where practicable, mature trees and native vegetation should be retained;
   b. street trees, shrubs and ground cover suitable for ~~borms~~ the location;
   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 the Ecological Management Plan (Conditions 27) and Tree Management Plan (Condition 27);
   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.

B. 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

C. 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.~~

Again, we recommend Vineway Limited support this condition as drafted above, as it has been amended to includes the requirement that Key stakeholders shall be invited to participate in the development of the ULDMP at least six (6) months prior to the start of detailed design for a Stage of Work which again includes Vineway Limited.

Summary

Our recommendation is that Vineway Limited seek an amendment to the Land Use Integration Process Condition to include ***the integration of planned or privately constructed public transport infrastructure.***

We also recommend pursuing amendments to the Designation Review condition to specify that *The Requiring Authority shall as soon as-**reasonably** practicable **and no later than 6 months from the Completion of Construction**:*

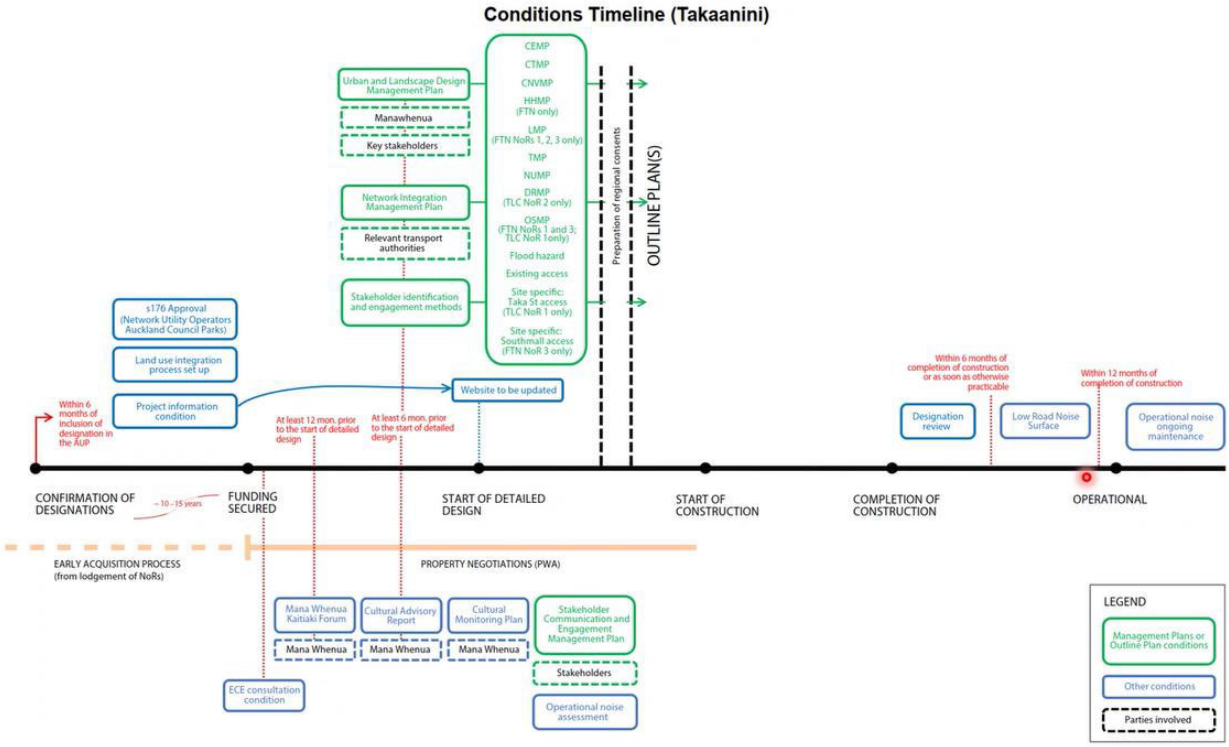
(i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and

(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.

And that:

An application under s176(1)(b) of the RMA, for works within the designated land must be processed by the Requiring Authority within 20 working days.

For the purpose of this memo, we have also attached an example timeline from the southern NoRs, which sets out the different stages for the pre-construction, during construction and/or operational conditions. It also demonstrates the point within the process at which the Designation Review condition needs to enacted as well as the various stakeholder engagement processes.



BEFORE AN INDEPENDENT HEARINGS PANEL
OF THE AUCKLAND COUNCIL

I MUA NGĀ KAIKŌMIHANA MOTUHAKE O TĀMAKI MAKAURAU

UNDER	the Resource Management Act 1991 (the **RMA**)
AND	
IN THE MATTER OF	Notices of requirement for designations, notices of requirement for alterations to existing designations, by **NZ TRANSPORT AGENCY WAKA KOTAHI** and **AUCKLAND TRANSPORT**, collectively known as the **North Projects**

STATEMENT OF REBUTTAL EVIDENCE OF MARTIN BARRIENTOS ON BEHALF OF AUCKLAND TRANSPORT AND NZ TRANSPORT AGENCY WAKA KOTAHI

ENGINEERING AND DESIGN – PROJECT SPECIFIC

Dated: 7 June 2024

Te Tupu Ngātahi Supporting Growth
Auckland

Solicitor acting: **Natasha Garvan / Mathew Gribben**
Email: Natasha.garvan@supportinggrowth.nz / Mathew.gribben@supportinggrowth.nz
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Glossary Table

Acronym/Term	Description
AT	Auckland Transport
NoR 4	Notice of Requirement 4: SH1 Improvements
NoR 6	Notice of Requirement 6: New Connection between Milldale and Grand Drive
NoR 10	Notice of Requirement 10: Upgrade to Wainui Road
NoR 13	Notice of Requirement 13: Upgrade to East Coast Road from Silverdale to Redvale Interchange
NoRs	Notices of Requirement
North Projects	The North Projects comprising the NoRs
NZTA	NZ Transport Agency Waka Kotahi
SH1	State Highway 1
Te Tupu Ngātahi	Te Tupu Ngātahi Supporting Growth Alliance

Table of Contents

1. INTRODUCTION

1.1 My name is Martin Barrientos and I am the Engineering Lead for the North Projects within Te Tupu Ngātahi Supporting Growth Alliance (**Te Tupu Ngātahi**).

1.2 I have the qualifications and experience set out at paragraphs [2.2] – [2.5] of my statement of primary evidence dated 1 May 2024.

1.3 I have been engaged by Auckland Transport (**AT**) and NZ Transport Agency Waka Kotahi (**NZTA**) to provide expertise in relation to the North Projects. My primary evidence sets out my involvement in the North Projects to date, including my involvement in preparing the Notices of Requirements (**NoRs**) for the North Projects.

1.4 My rebuttal evidence responds to the evidence of submitters within my area of expertise.

1.5 I repeat the confirmation given in my primary evidence that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023, and that my evidence has been prepared in compliance with that Code.

2. SCOPE OF REBUTTAL EVIDENCE

2.1 In preparing this rebuttal statement, I have read and considered the relevant evidence of other submitters. My evidence relates to the approach to engineering and design, and outlines that the uncertainties within the concept design are accommodated by the proposed designation boundary, with the future detailed design required to enable refinements and integration with adjoining land uses.

2.2 In this statement, I respond to engineering and design matters raised within the expert evidence of:

(a) Mr Alex van Son of Planning Focus Limited in relation to SH1 Improvements (NoR 4), provided on behalf of Highgate Business Park Limited;

(b) Mr Brin Hingston and Mr James Kitchen of McKenzie & Co Consultants Limited in relation to the new connection between Milldale and Grand Drive (NoR 6), provided on behalf of Vineway Limited;

(c) Mr Paul Arnesen of Planning Focus Limited in relation to SH1 Improvements (NoR 4) and the upgrade to East Coast Road from Silverdale to Redvale Interchange (NoR 13), provided on behalf of Snowplanet Limited;

(d) Mr Ashley Martin Watson of Airey Consultants Limited in relation to the new connection between Milldale and Grand Drive (NoR 6) and the upgrade to Wainui Road (NoR 10), provided on behalf of Northridge2018 Limited;

(e) Mr Daniel Shaw of SFH Consultants Limited in relation to the new connection between Milldale and Grand Drive (NoR 6) and the upgrade to Wainui Road (NoR 10), provided on behalf of Northridge2018 Limited; and

(f) Mr Nicholas Roberts of Barker & Associates Limited in relation to a number of the North Projects NoRs on behalf of Fulton Hogan Land Development Limited.

2.3 I have also considered the relevant matters raised by Ms Natasha Rivai (of CivilPlan Consultants Limited) and Mr John Punshon (of North Shore Aero Club Incorporated), both provided on behalf of North Shore Aero Club Incorporated, and consider that they are addressed in my primary evidence.[1]

3. DESIGNATION BOUNDARY ADJUSTMENTS

3.1 Appendix A of my primary evidence summarises a number of post-lodgement amendments to the designation boundaries. As explained in that evidence, where reductions were made for individual submitters (and any associated consequential changes), the theme of the submission was considered for applicability elsewhere and, where appropriate, additional reductions were applied for consistency.

3.2 I explained that these additional reductions would be confirmed at a later date, following communications with affected landowners. That process has occurred and the confirmed further reductions are summarised in **Appendix A** of this (my statement of rebuttal) evidence.

3.3 In my primary evidence I discussed the submission received from BP Oil New Zealand Limited and explained that it is the existing designation for SH1 that extends into their BP Millwater site. As noted in that evidence, in terms of the concept design I consider that the designation can be removed. Following my primary evidence being filed, the designation is now proposed to be removed from the site now, so that it runs along the property boundary as shown in Figure 1.

[1] Barrientos Primary Evidence, at [11.120]-[11.125].

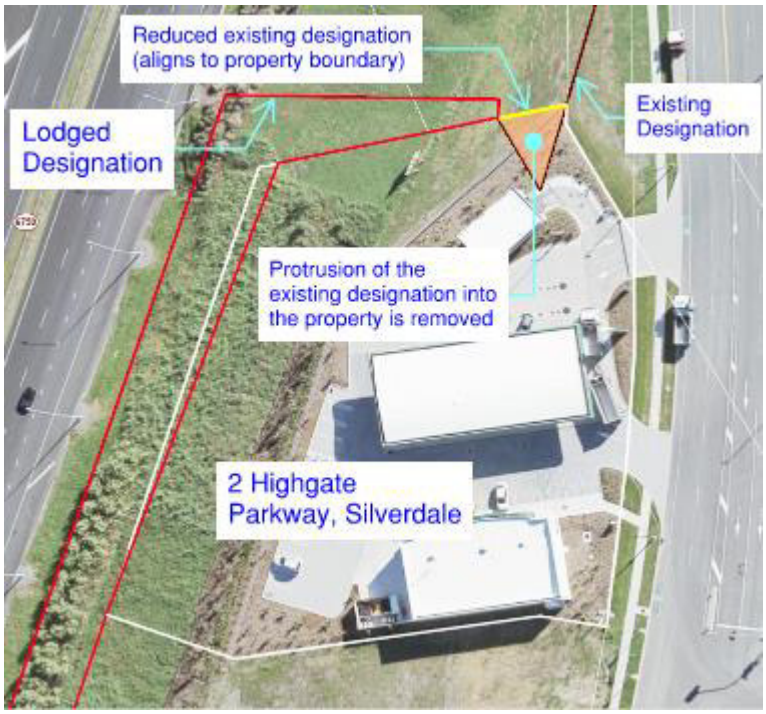


Figure 1: Reduction of existing designation (6759) for SH1 at 2 Highgate Parkway, Silverdale

4. SPECIFIC RESPONSES TO SUBMITTER EXPERT EVIDENCE

Mr Alex van Son on behalf of Highgate Business Park Limited

4.1 Mr van Son's evidence describes the impact to the property at 17 Waterloo Road, Silverdale, from the active mode path connection between the north-south trunk active mode facility and Highgate Parkway / Waterloo Road, and its designation. The concept design for this connection which is part of NoR 4, is reproduced in Figure 2 for convenience.

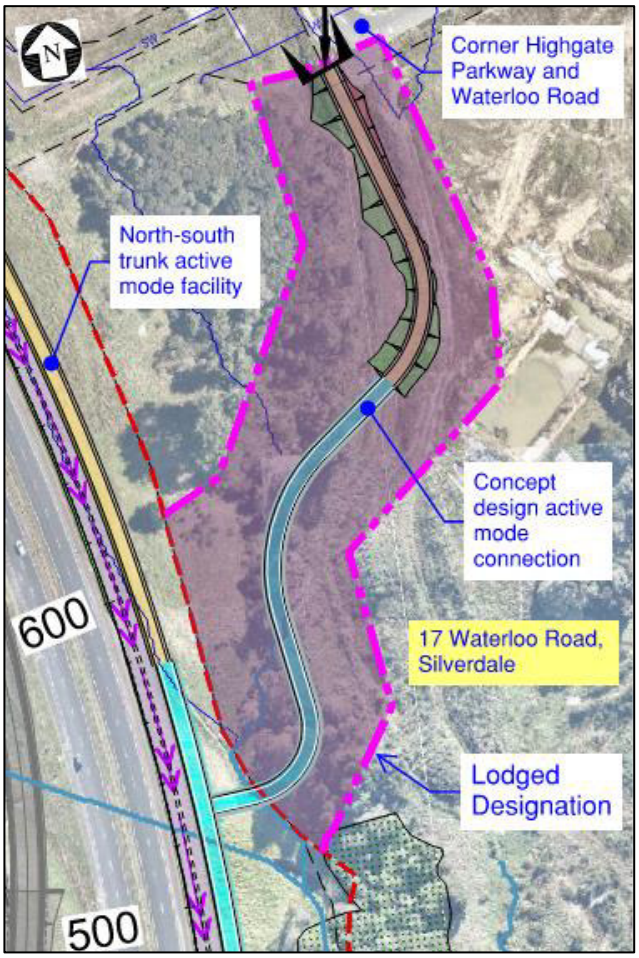


Figure 2: Concept design active mode connection within 17 Waterloo Road, Silverdale

4.2 Mr van Son's evidence confirms our understanding on the lapse of the regional earthworks consent for the site and the unconsented status of the residential subdivision at 17 Waterloo Road, Silverdale.[2] Consequently, the concept design developed the active mode connection based only on the publicly available ground profile (i.e., from the Auckland North LiDAR survey 2016-2018) and design requirements for the active mode connection.

4.3 Ms Bunting covers, in her evidence, the consenting aspects of Mr van Son's evidence.

4.4 In response to Mr van Son's statement in paragraph 36 of his evidence, I note the following:

(a) If the full scope of earthworks and ground retention contained within bulk earthworks consent L68199, as described by Mr van Son, were implemented, then the concept design active mode connection would conflict with those works.

[2] Statement of evidence of Alex van Son on behalf of Highgate Business Park Limited, dated 17 May 2024, at [21], [26] and [29]-[30].

(b) As such, a potential alternative alignment for the active mode connection, which still meets the design requirements for the active mode pathway and fits within the proposed designation boundary, was developed by Te Tupu Ngātahi and is shown in Figure 3. This is an example of an option that demonstrates the potential to integrate with the development, but given the constrained construction space to the west, would be a more costly option.

(c) Other options for integration may be possible (e.g., through alternative design standards or design requirements). These would need to be explored at detailed design, considering the status of land development at that time and relative costs of the options (noting that options that increase the constraint on construction space are likely to be more costly than those that do not constrain or constrain to a lesser degree).

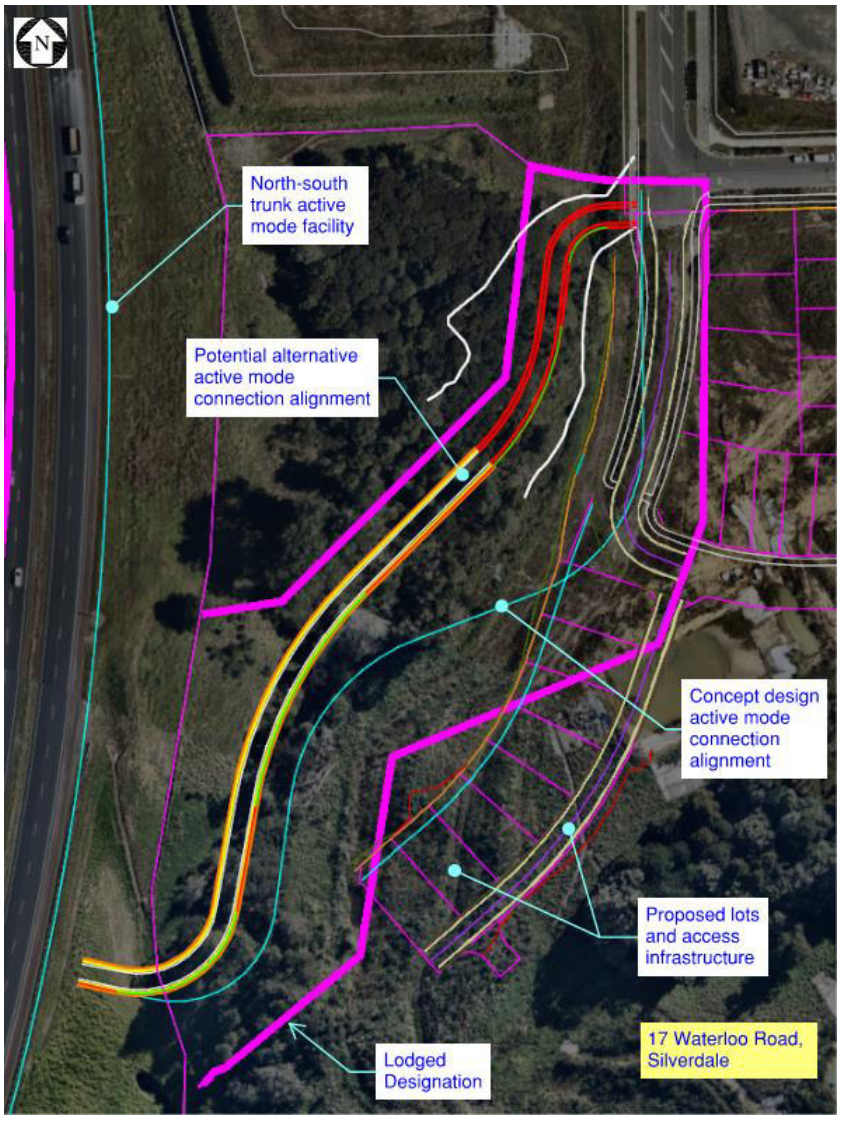


Figure 3: Potential alternative alignment for the active mode connection

4.5 Regarding the designation, Highgate Business Park Limited proposed an amended designation to Te Tupu Ngātahi in April 2024 and Mr van Son has reproduced this in Figure 6 of his evidence. For convenience, the proposal is provided in Figure 4 below.

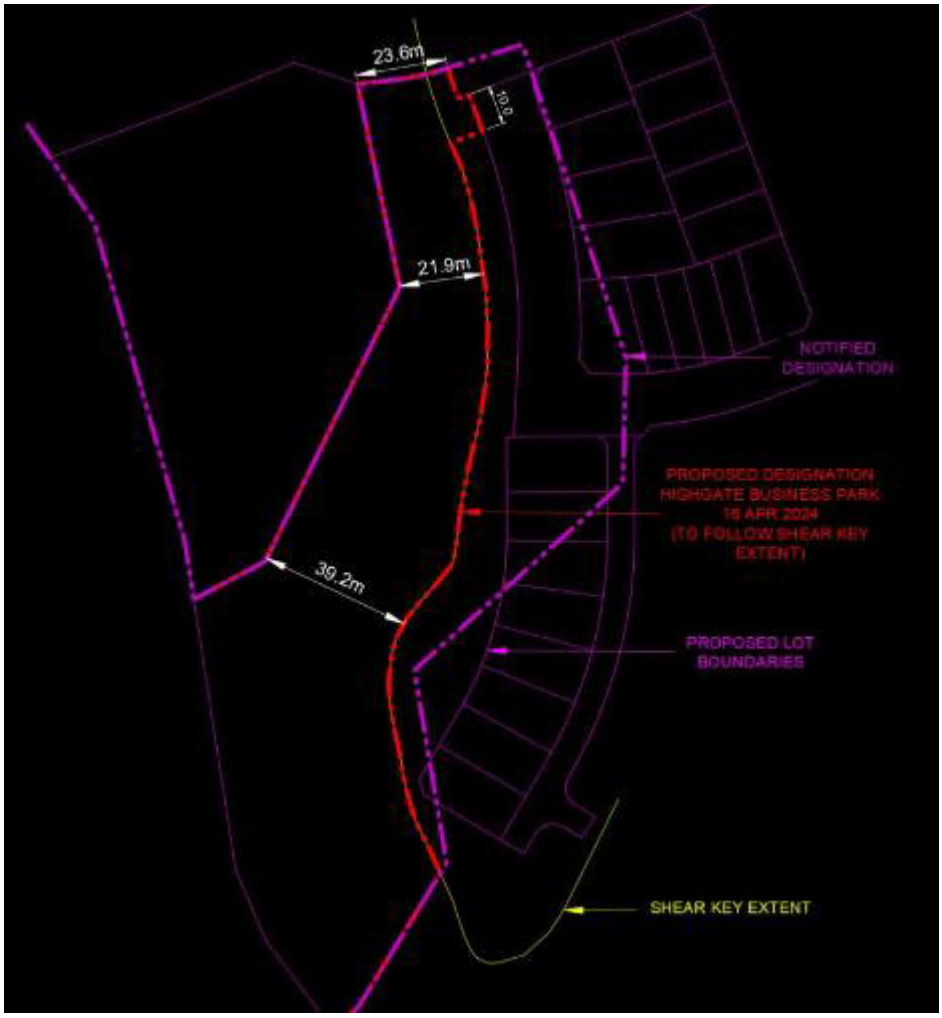


Figure 4: Highgate Business Park Limited's proposed amended designation

4.6 As communicated by Te Tupu Ngātahi to Highgate Business Park Limited in the most recent interactions in late-April 2024, it is largely the uncertainty around the final form of Highgate Business Park Limited's development that precludes amendment to the designation at this stage. Changes to the layout and position of the proposed lots and access infrastructure could yet be made as the development's plans are progressed, including through the consenting process. Therefore, while there are opportunities for integration in the future, any amendments to the designation boundary cannot be made before the development plans are more progressed and certain.

4.7 In addition, I do not consider the proposal to follow the shear key extent as the reference for the designation is appropriate because:

(a) There is potential for the earthworks and ground retention scheme to change. For example, there could be a requirement to enlarge the shear key or require an alternative stability measure to be installed further to the west. The need to change the earthworks and ground retention could arise from the new consenting processes that the development will be subject to, noting that the regional earthworks consent has lapsed (for example, the need to apply current design standards / practice to the design).

(b) The requirement for sufficient space to construct the active mode connection. Given the challenging topography and space constraints, the connection is expected to be formed fully using a bridge structure. For the potential alternative alignment for example, shown in Figure 2, the construction works will need to be carried out almost exclusively from the eastern side of the structure. As such, constraining space for construction on the eastern side is not appropriate.

4.8 I consider that modification to the designation boundary is best made once the layout and position of the proposed lots and access infrastructure are confirmed, consented and the intention to implement communicated to NZTA. In addition, any amendment to the eastern side of the designation boundary would be limited to following the western edge of the lot and access infrastructure boundaries.

4.9 I consider that there are opportunities to continue to work collaboratively with Highgate Business Park Limited on the final design for their development to achieve an integrated outcome with the proposed active mode connection.

Mr Brin Hingston and Mr James Kitchen on behalf of Vineway Limited

4.10 Vineway Limited's submission (NoR 6-01) sought adjustment of the road alignment as necessary to integrate fully with a proposed residential development on the site (noting that the proposal, Te Tupu Ngātahi understands, is in early development / concept stage).

4.11 The evidence from Mr Hingston and Mr Kitchen is a design memorandum that presents an alternative alignment for the new connection between Milldale and Grand Drive (NoR 6) that, Te Tupu Ngātahi understands, better complements the proposed development layout.

4.12 No request to reduce the designation boundary is made within the evidence.

4.13 The concept design developed by Te Tupu Ngātahi was based on existing constraints and rural topography and environment. Mr Hingston's and Mr Kitchen's alternative

design further considers Vineway Limited's proposed land development layouts, to show a feasible integrated arrangement. Nonetheless, many of the alternative design's input parameters are similar to those used by Te Tupu Ngātahi's concept design. It is noted that, at detailed design, final parameters to be adopted for the road would be subject to review and agreement with AT's engineering team.

4.14 I consider that the proposed designation boundary, informed by Te Tupu Ngātahi's concept design, remains appropriate and reasonably necessary to deliver this project.

4.15 The outputs provided by Mr Hingston and Mr Kitchen show that other alternative alignment options are possible within the designation boundary and I consider that there are opportunities to work collaboratively with Vineway Limited on the final design of the road within their land holding to achieve an integrated outcome. In addition, there may also be opportunities for the development to occur over the area required for earthworks for the road, as it is intended that the designation would be drawn back to the road corridor boundary.

4.16 I note that Vineway Limited are offering to deliver the portion of the NoR 6 alignment within their project site between Upper Orewa Road and Grand Drive Extension. The land use integration process will provide the framework for Vineway Limited to work with AT in the development of their master planning. Mr Mason's primary evidence at provides a discussion on this process,[3] and Mr Scrafton discusses in his primary evidence how the designation review condition can operate where a developer delivers part of the project.[4]

Mr Paul Arnesen on behalf of Snowplanet Limited

4.17 Mr Arnesen's evidence relates to the extents of designation onto the property at 91 Small Road, Silverdale from the SH1 Improvements (NoR 4) and the upgrade to East Coast Road from Silverdale to Redvale Interchange (NoR 13).

Extent of designation boundaries for NoR 4

4.18 Ms Bunting covers, in her evidence, the consenting aspects (in relation to compliance with existing discharge permits) raised in Mr Arnesen's evidence.[5]

[3] Mason Primary Evidence, at [7.16]-[7.20].
[4] Scrafton Primary Evidence, at [10.32]-[10.33] (p. 65).
[5] Statement of Evidence of Paul Arnesen on behalf of Snowplanet Limited, dated 20 May 2024, at [6.3]-[6.4].

4.19 The designation for NoR 4 onto the property was reduced (post-lodgement) following review in response to Snowplanet's submission (NoR 4-32). This was covered in my primary evidence.[6]

4.20 Expansion of the designation boundary to fully cover the site stormwater pond, as proposed in Figure 3 of Mr Arnesen's evidence, is not considered necessary. It is noted that NZTA cannot propose a designation over an area it does not consider reasonably necessary to meet the project objectives. As I outlined in my primary evidence, it is an impact only to the western edge of the site's stormwater pond (by the permanent works) that is considered likely,[7] and I consider that any required reinstatement works would be limited to that area and could be completed within the reduced (post-lodgement) designation boundary.

4.21 In response to paragraph 6.6 (purpose of designation extent) in Mr Arnesen's evidence, the designation provides space for both permanent works and the construction of those works. With reference to Mr Mason's primary evidence, which addresses the programme-wide Te Tupu Ngātahi design approach:[8]

> *"It is important that land required for construction is included in the proposed designation boundary to ensure that it is identified and protected to enable the construction of the transport corridors/stations in the future. The actual extent of permanent works will be influenced by many factors and therefore, the demarcation of temporary and permanent property impacts is best carried out at the time of implementation. Following completion of works, the conditions provide for the extent of the designation to be reviewed and the designation boundary can be drawn back to the edge of the final formed corridor/station."*

4.22 Given the above, I consider that the reduced (post-lodgement) designation boundary for NoR 4 at the property is reasonably necessary to deliver the SH1 Improvements project. And, therefore, further reductions to the designation, such as those sought along the access road and to the west of the existing carpark (refer to Figure 5), are not proposed to be made.

[6] Barrientos Primary Evidence, at [11.27]-[11.31].
[7] Barrientos Primary Evidence, at [11.29].
[8] Mason Primary Evidence, at [1.7].

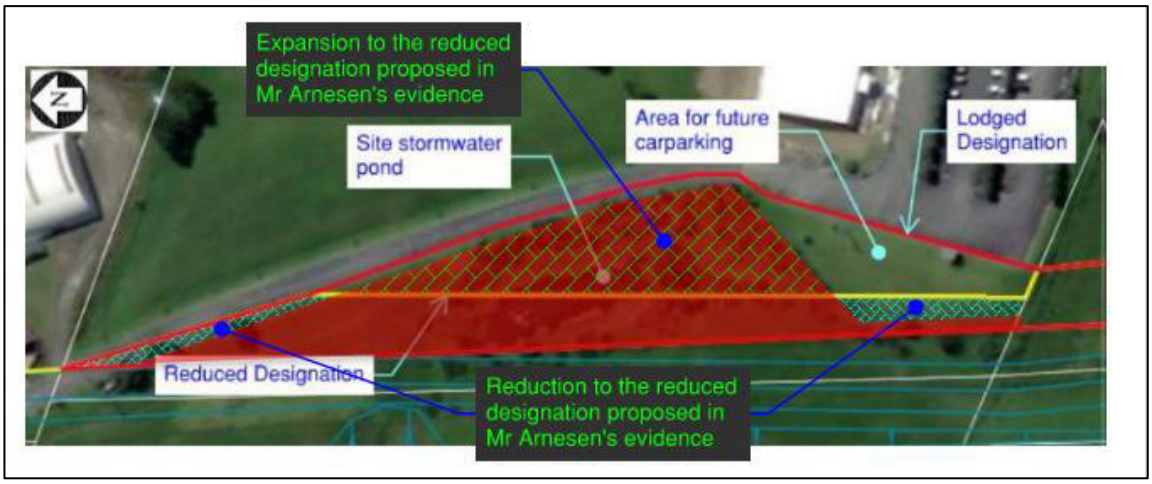


Figure 5: Designation adjustments contained within Figure 3 of Mr Arnesen's evidence

4.23 I note that the purpose of the further reductions described in paragraph 6.6 and Figure 3 in Mr Arnesen's evidence (clarified in Figure 5) relate to bus parking and enlargement of parking space. I consider that these activities undertaken within the designation are unlikely to preclude delivery of the SH1 Improvements projects. However, any plans Snowplanet may have for these areas should be raised with NZTA and appropriate approvals obtained.

Extent of designation boundaries for NoR 13

4.24 Snowplanet's submission (NoR 13-27) on the extent of designation for NoR 13 onto the property was considered and no reduction was proposed, per the response in my primary evidence.[9] I consider that my response in primary evidence remains valid and encourages Snowplanet to engage with AT such that an integrated solution that benefits both projects can be developed.

4.25 In his evidence, Mr Arnesen seeks clarification on "*why the requested retaining wall option would not satisfy Snowplanets [sic] requirements*".[10] Per the discussions held between the North Projects team and Snowplanet, and as stated in Mr Arnesen's evidence, Snowplanet seeks "*the extent of NoR 13 be reduced so as it would not impede the establishment of the consented Alpine Coaster and potential solar array*".[11] As I stated in my primary evidence "*the extent of that reduction would be unlikely to satisfy the submitter's requirements*".[12] That is, even with a ground retention solution, the

[9] Barrientos Primary Evidence, at [11.105]-[11.108].
[10] Statement of Evidence of Paul Arnesen on behalf of Snowplanet Limited, dated 20 May 2024, at [6.9].
[11] Statement of Evidence of Paul Arnesen on behalf of Snowplanet Limited, dated 20 May 2024, at [5.4].
[12] Barrientos Primary Evidence, at [11.107(b)].

designation, whilst indeed smaller, would still be required over the eastern (i.e., East Coast Road adjacent) portions of Snowplanet's potential projects.

4.26 I do not consider that the alpine coaster and / or solar array are impeded by the designation. As I have described in my primary evidence, modifications to the earthworks could be made to achieve the desired grades and, as I have mentioned previously, an integrated solution could be developed together with AT. An example of adjusted earthworks to enable integration is shown in Figure 6.

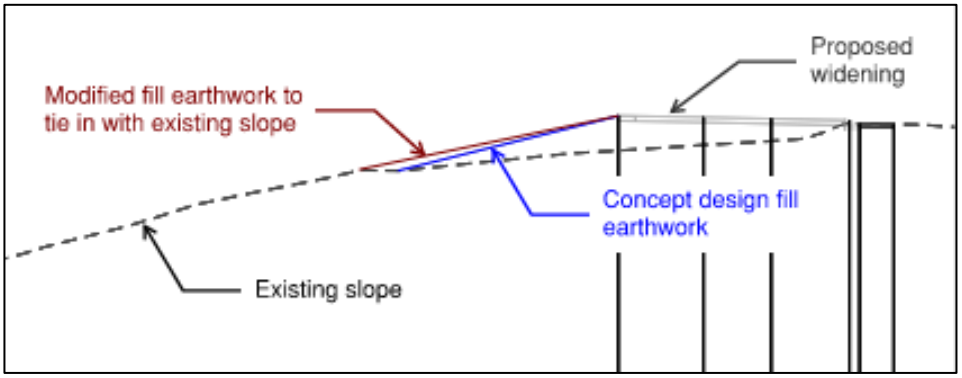


Figure 6: Typical slope between East Coast Road and 91 Small Road, Silverdale

Mr Ashley Martin Watson (engineering) and Mr Daniel Shaw (planning) on behalf of Northridge2018 Limited

4.27 Mr Watson's and Mr Shaw's respective evidence describe the impact to the property at 379 Wainui Road, Wainui (and associated lot Pt Allot 52 SO 1138, Wainui Road), Silverdale from the new connection between Milldale and Grand Drive (NoR 6) and the upgrade to Wainui Road (NoR 10).

4.28 At paragraph 9 of Mr Watson's evidence, he notes that the area of the proposed designation within the site is 1.58ha, being approximately 20% of the site area (7.56ha). For clarification, I have calculated the following: area of the designation approximately 1.63ha, combined area of 379 Wainui Road and Pt Allot 52 SO 1138 approximately 11.23ha and, as a percentage, the designation covers some 14.5% of the site (c.f., 20% stated by Mr Watson).

4.29 My response to Mr Watson's and Mr Shaw's respective evidence generally covers two themes:

(a) The space provided by the designation; and

(b) The typical cross sections applied for the routes.

Space provided by the designation

4.30 The designation provides space for both permanent works and the construction of those works. With reference to Mr Mason's primary evidence, which addresses the programme-wide Te Tupu Ngātahi design approach:[13]

> *"It is important that land required for construction is included in the proposed designation boundary to ensure that it is identified and protected to enable the construction of the transport corridors/stations in the future. The actual extent of permanent works will be influenced by many factors and therefore, the demarcation of temporary and permanent property impacts is best carried out at the time of implementation. Following completion of works, the conditions provide for the extent of the designation to be reviewed and the designation boundary can be drawn back to the edge of the final formed corridor/station".*

4.31 Given the above, and with reference to item 10 (facilities affected) in Mr Watson's evidence, the designation does not remove nor prevent the continued use of the golf course, café and carparking. These may continue to operate. The impacts to the site could arise from the future permanent works and their construction if the golf course remains in place at the time of project implementation. However, there are opportunities for refinement to mitigate or avoid impacts, and these would be determined at detailed design.

Typical cross section applied for the routes

4.32 At paragraph 18 of Mr Watson's evidence, he questions the statement in the assessment of alternatives that '*there is no real differentiation between options from a value for money perspective*', as he considers that the construction methodology would vary dramatically between the options, including with respect to reuse of existing pavement.

4.33 The existing pavement is currently some 8.5m wide and the carriageway width proposed in the concept design is approximately 10m wide. As such, an average of 1.5m of new pavement will be required regardless of whether the road is widened to the north, south or both sides of Wainui Road. The assumption in the concept design is that the existing pavement would need to be reconstructed regardless due to increased use by heavy vehicles, so all options will potentially require this. Therefore, pavement quantities are not a material differentiator in the options assessment.

4.34 At paragraph 19 of Mr Watson's evidence, he considers that there are possible road cross section arrangements that would enable the designation to be minimised or

[13] Mason Primary Evidence, at [1.7].

removed, including varying the proposed berms. In response, the concept designs for the North Projects were developed based on typical, indicative cross sections. I refer to Mr Mason's primary evidence for a discussion on the philosophy applied.[14] It is noted that the widening proposed in the concept design is mostly for the new berm areas with separated walking and cycling facilities, which do not currently exist.

4.35 In response to paragraph 35 (widening could be achieved within the existing road reserve) in Mr Shaw's evidence, the existing road reserve width is approximately 23m. Based on the concept design, the width of permanent works required to deliver the projects in NoR 6 and NoR 10 adjacent to Northridge2018 Limited's landholdings is approximately between 26m and 38m (being composed of a 24m two-lane arterial cross section and the width required either side for earthworks. Therefore, the works proposed by the concept design cannot be accommodated within the existing road reserve.

Mr Roberts (planning) on behalf of Fulton Hogan Land Development Limited

4.36 Mr Roberts' evidence queries the extents of the designation boundaries for a number of the NoRs proposed by the North Projects and states these as being "*…greater than what is required for the proposed new or upgraded road designs…*".[15]

4.37 The extents of the proposed designation boundaries were determined following the programme-wide Te Tupu Ngātahi design approach, which provides space for both permanent works and the construction of those works. I refer to Mr Mason's primary evidence:[16]

> *"It is important that land required for construction is included in the proposed designation boundary to ensure that it is identified and protected to enable the construction of the transport corridors/stations in the future. The actual extent of permanent works will be influenced by many factors and therefore, the demarcation of temporary and permanent property impacts is best carried out at the time of implementation. Following completion of works, the conditions provide for the extent of the designation to be reviewed and the designation boundary can be drawn back to the edge of the final formed corridor/station".*

4.38 Members of the North Projects team, myself included, met with Mr Roberts and representatives from Fulton Hogan Land Development Limited on 4 June 2024 to

[14] Mason Primary Evidence, at [6.5]-[6.6].
[15] Statement of Evidence of Nicholas Jon Roberts on behalf of Fulton Hogan Land Development Limited, dated 20 May 2024, at [38].
[16] Mason Primary Evidence, at [1.7].

understand specific locations where the designation boundary extents are of concern to the submitter.

4.39 One of the locations was the site at 193 Wilks Road, Dairy Flat, which interfaces with the SH1 Improvements project (NoR 4). Most of the site's eastern boundary is subject to NoR 4 to support the widening of the northbound lanes of the motorway, with an enlargement in the designation provided in the south-eastern corner of the site to accommodate part of the new Wilks Road interchange, active mode connections and stormwater infrastructure.

4.40 Considering the items raised at the discussion around active modes and stormwater design and the concern specifically about the designation extent over the site, the concept design for the active mode connections and stormwater infrastructure was reviewed and revised. The objective of the revised design was to reduce the footprint of the permanent physical works whilst still preserving the outcomes desired by the project.

4.41 The concept design adopted an active modes alignment that would typically be utilised at locations with a diamond interchange for the motorway (i.e., four ramps). In those situations, the active mode would typically run beside the off-ramp, cross the connecting arterial road and then run beside the on-ramp. The arrangement at the Redvale (Penlink) interchange provides an example of this, as shown in Figure 7 below.

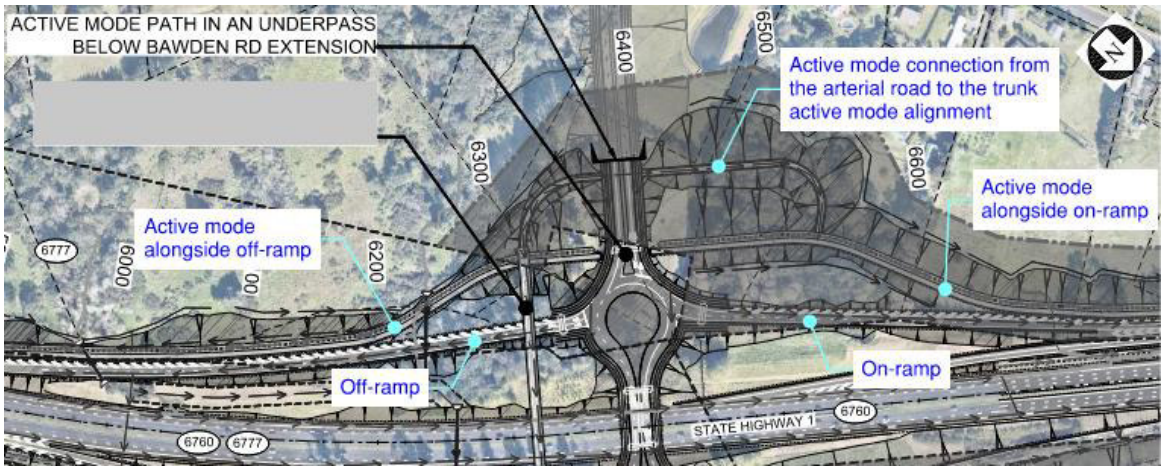


Figure 7: Concept design active mode alignment through the upgraded interchange at Redvale (Penlink)

4.42 At the Wilks Road interchange, only south-facing ramps are provided. As such, the revision to the concept design made use of the space within the interchange itself to provide for the active mode alignment and reduce the requirement for adjacent land. A description of the change to the stormwater concept design is outlined in Mr Seyb's rebuttal evidence.

4.43 Figure 8 presents a comparison of:

(a) the concept design and the revised design; and

(b) the lodged designation and the reduced designation.

4.44 The amendment to the designation boundary extent reduces the land required from the property at 193 Wilks Road, Dairy Flat by 1.29ha. No other changes in the designation boundary arise from this change at other properties in the vicinity.

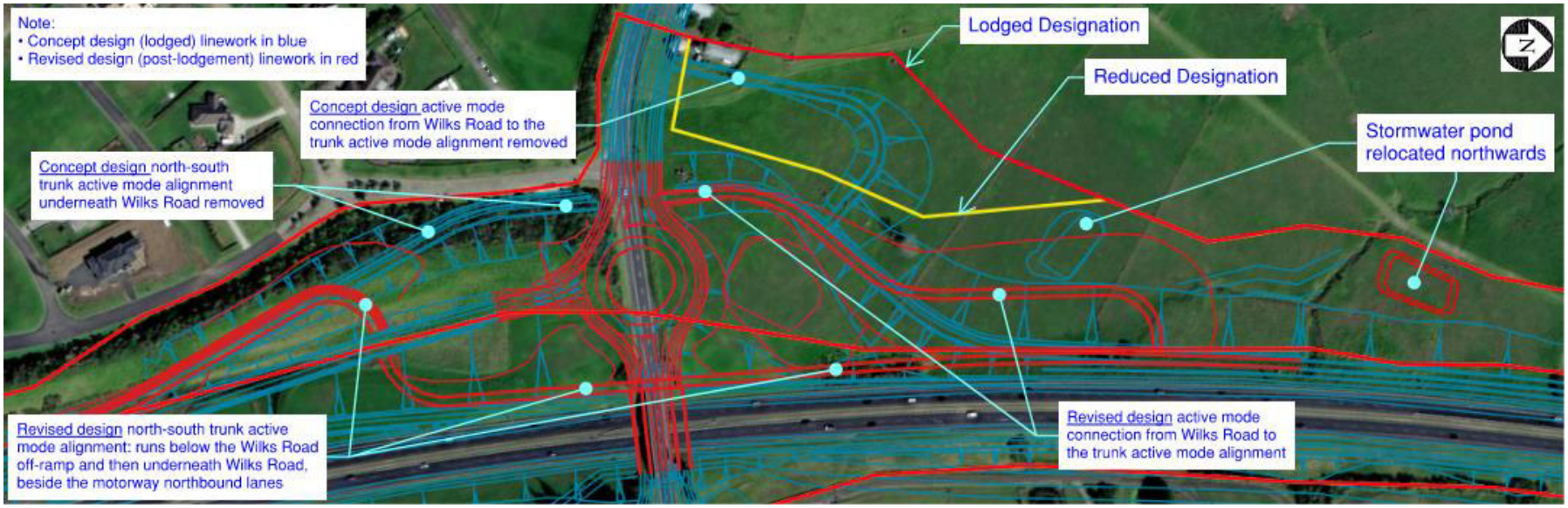


Figure 8: Revised active mode and stormwater design and reduced designation at 193 Wilks Road, Dairy Flat

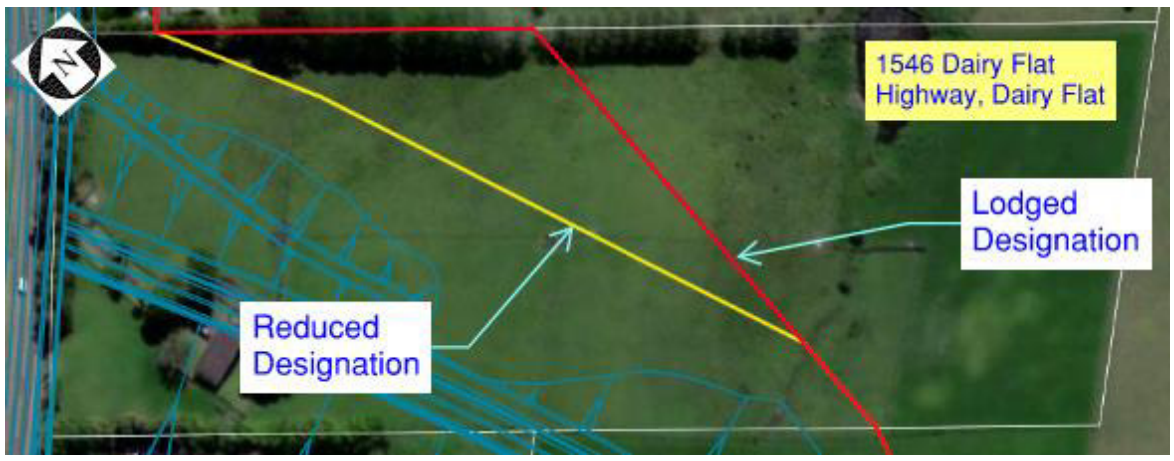
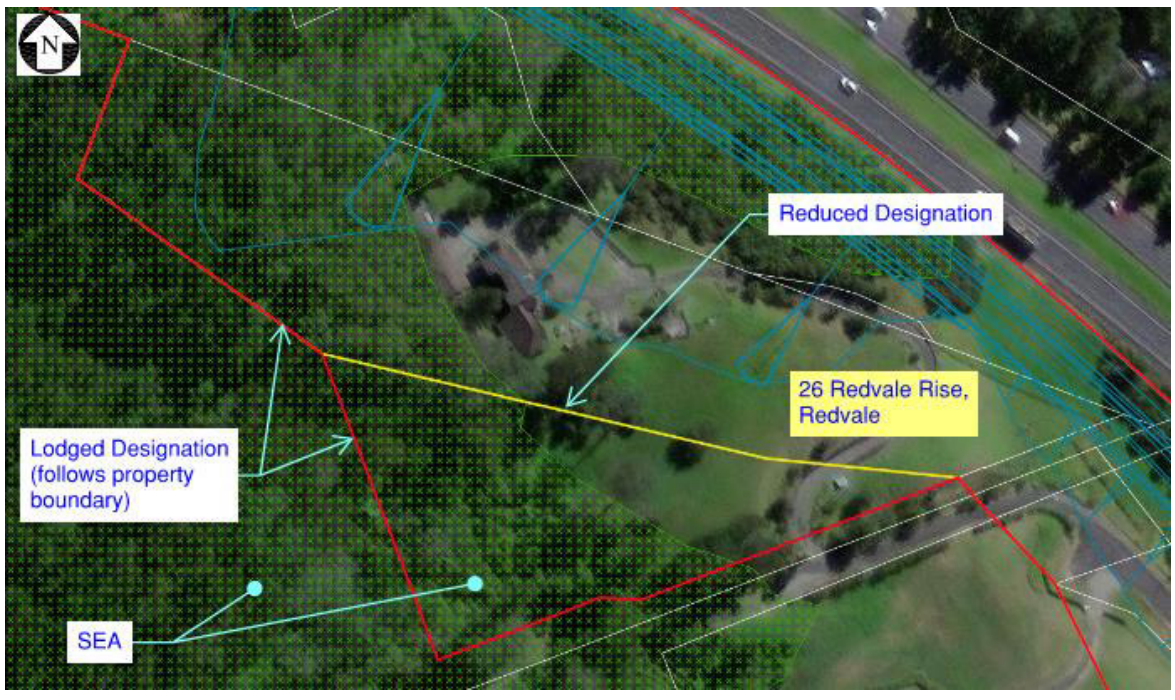
Martin Barrientos

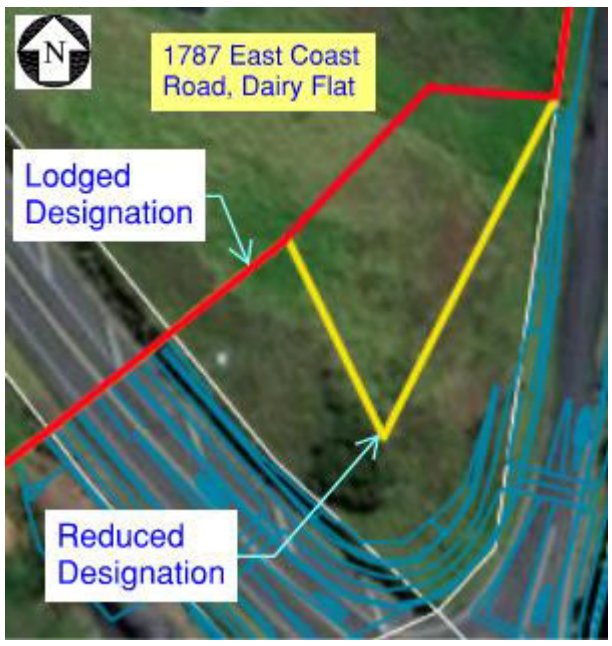
7 June 2024

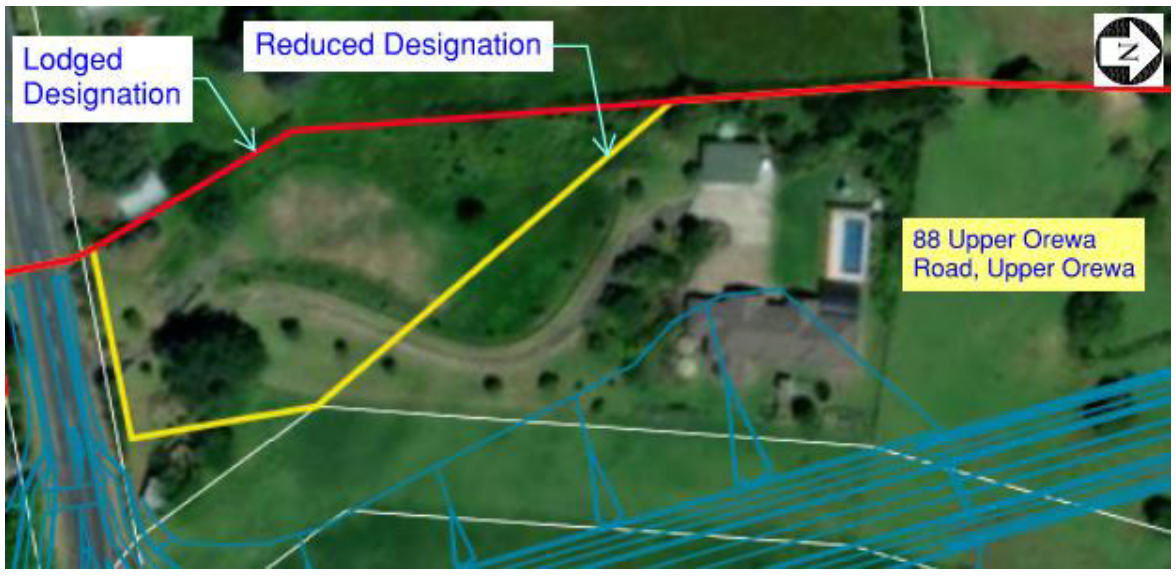
APPENDIX A

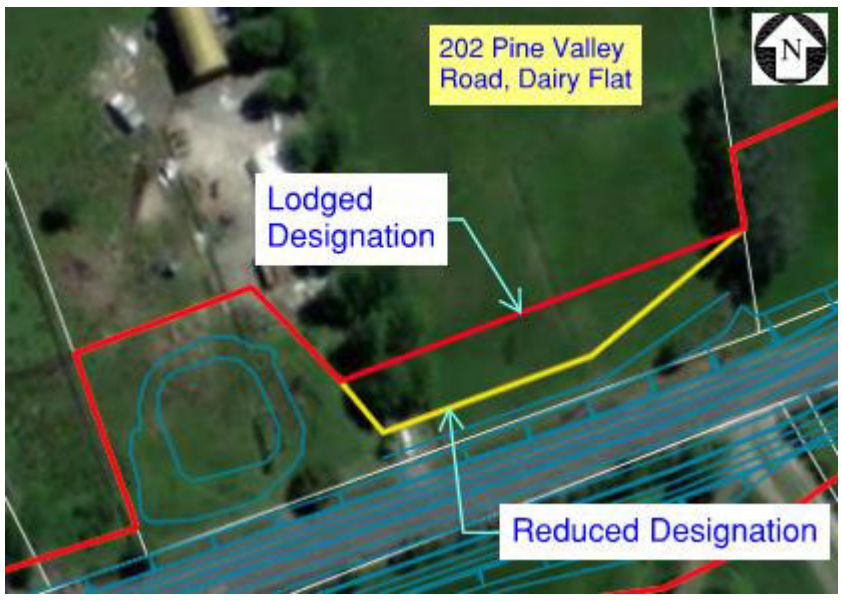
The tables below summarise the reductions to the designation boundaries made post-lodgement at discrete locations where no submissions were received and were not included in the table attached to my primary evidence.

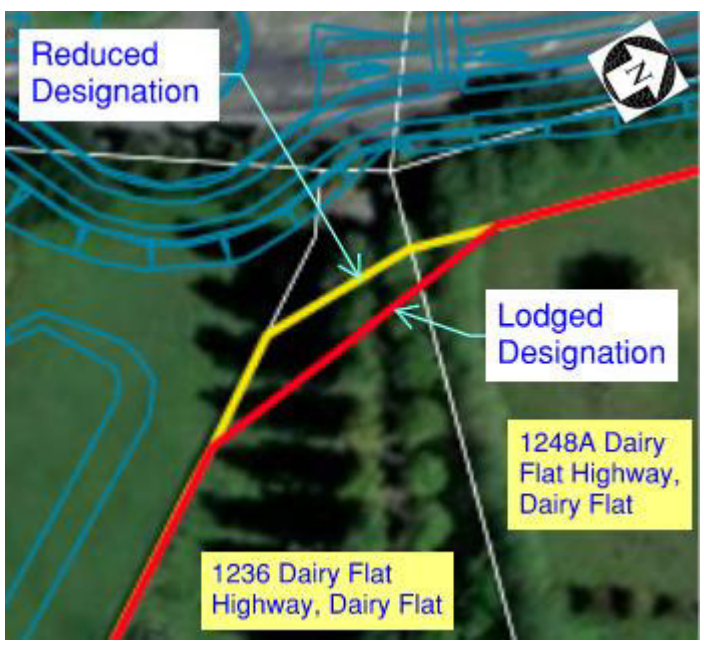
The rationale for these reductions is to better align with guidance parameters following a review of the designation boundaries (the guidance parameters are described in section 9.2 and 9.3 of my primary evidence).

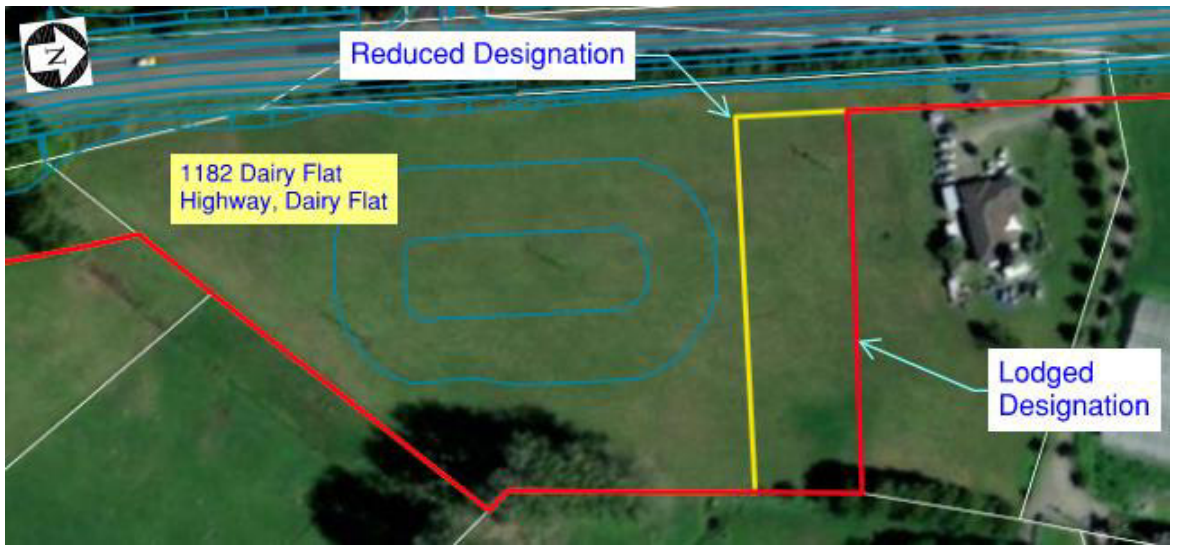
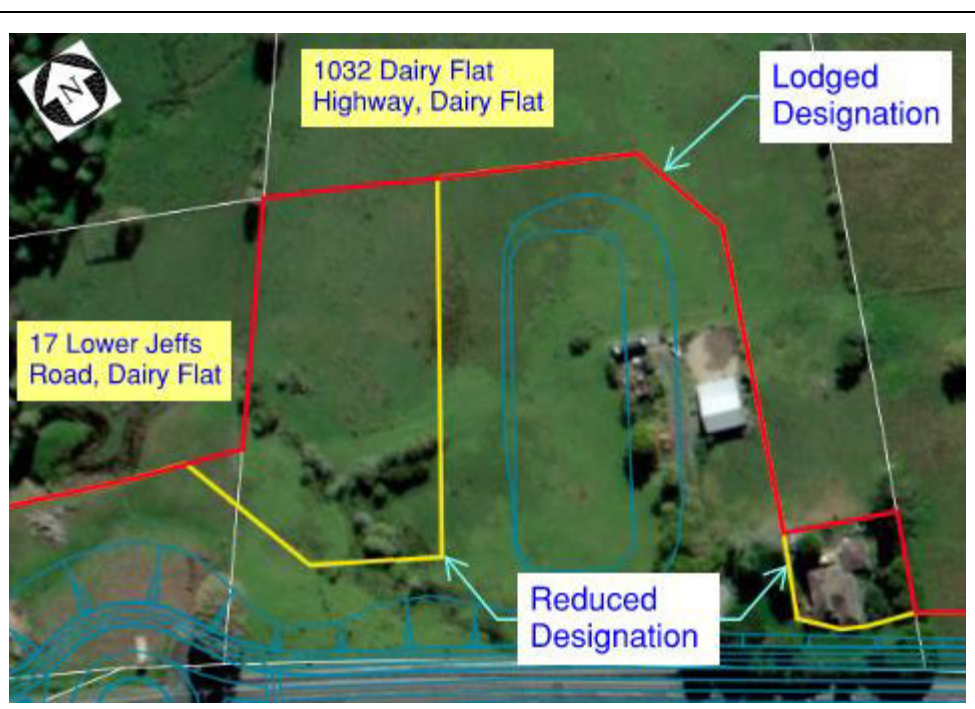
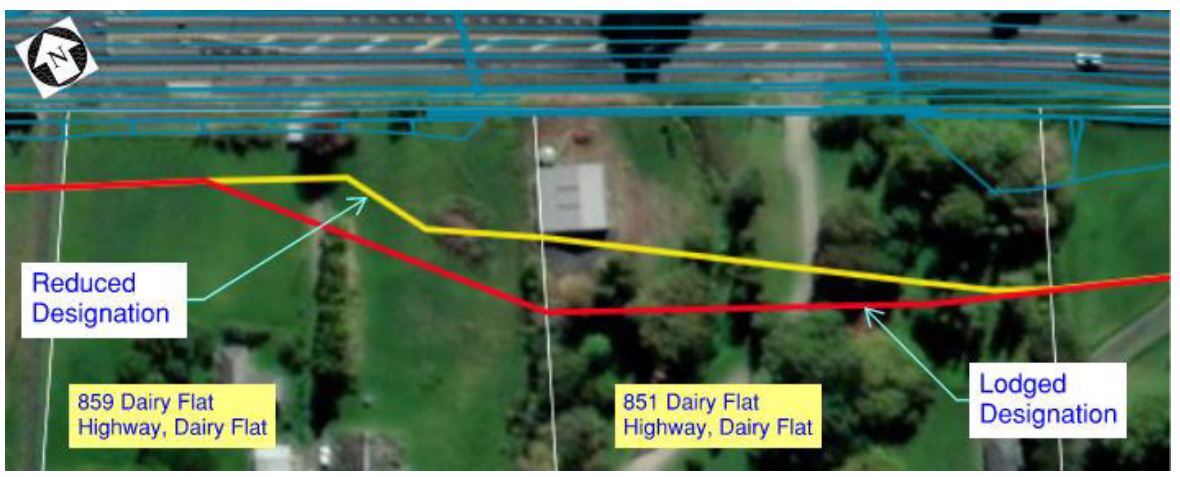
NoR 1	
Property	**Location**
1546 Dairy Flat Highway, Dairy Flat	
26 Redvale Rise, Redvale	 Note: also results in a reduction to designation over a zone of significant ecological area (SEA).

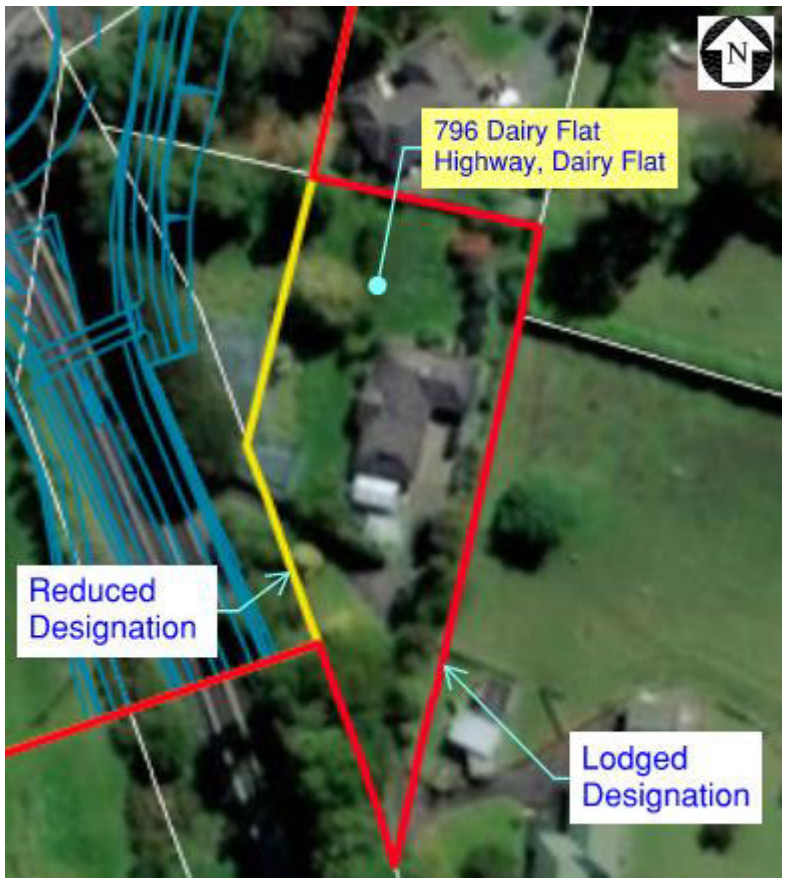
NoR 5	
Property	**Location**
1787 East Coast Road, Dairy Flat	

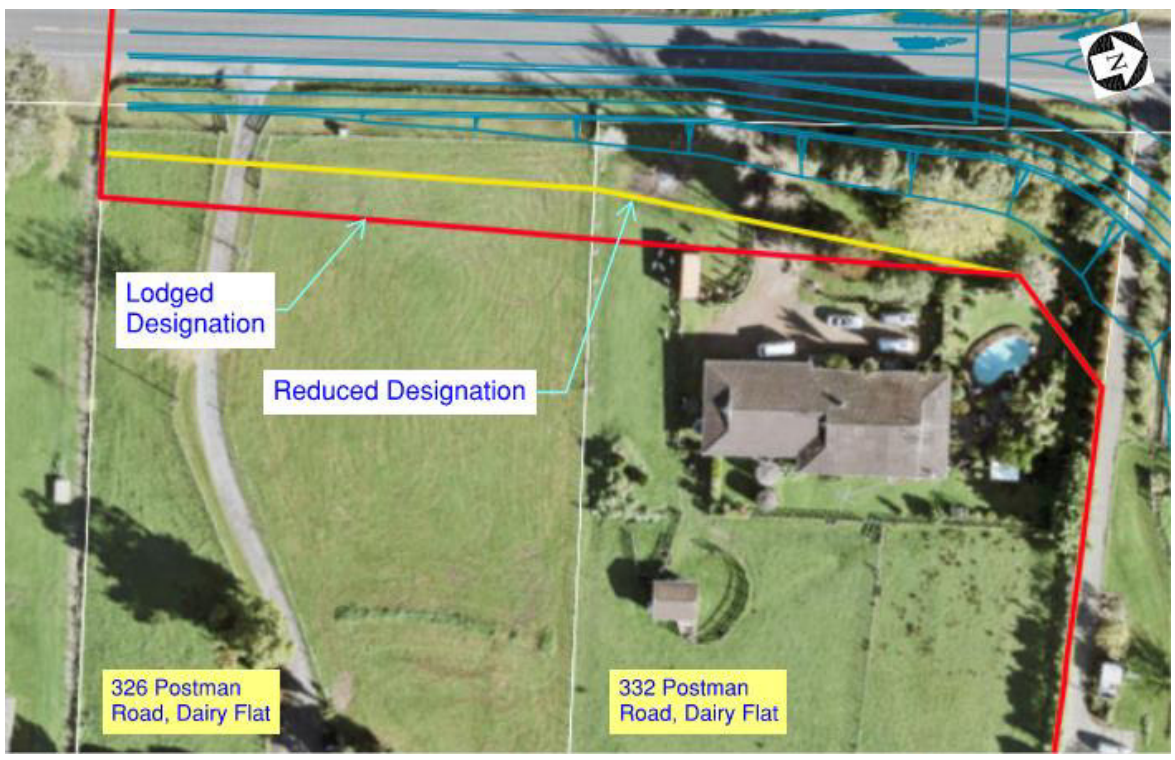
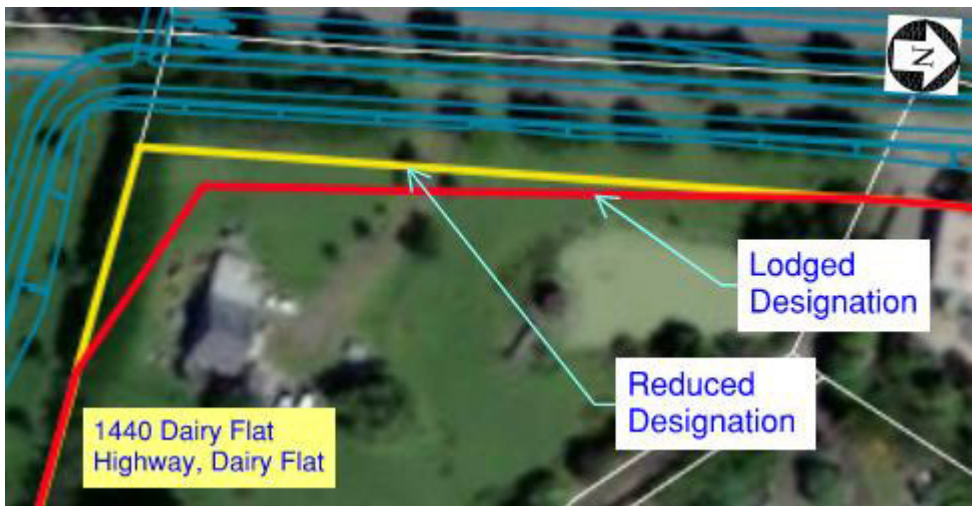
NoR 6	
Property	**Location**
88 Upper Orewa Road, Upper Orewa	

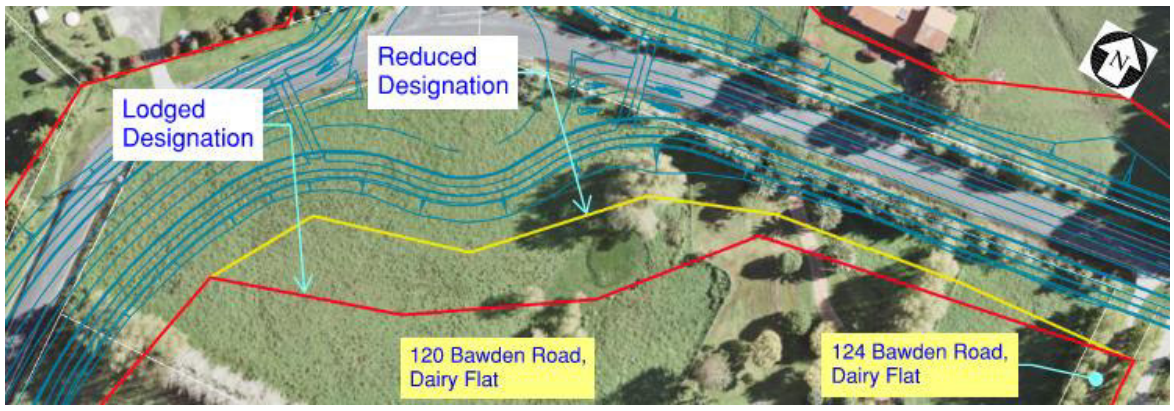
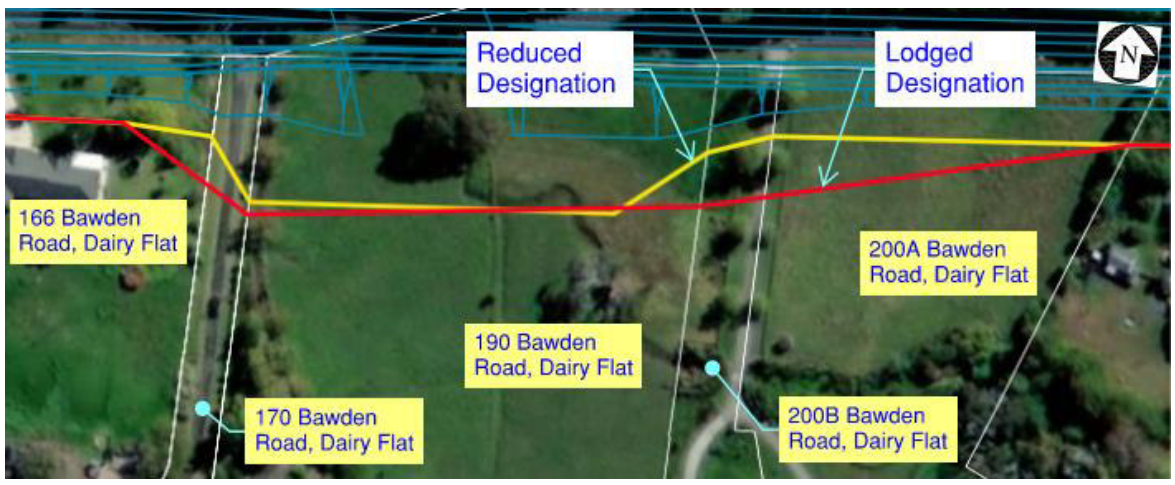
NoR 7	
Property	**Location**
202 Pine Valley Road, Dairy Flat	

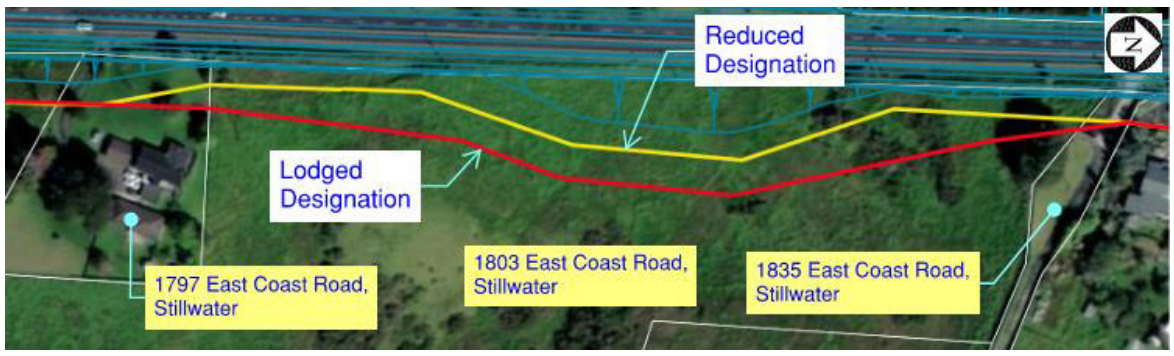
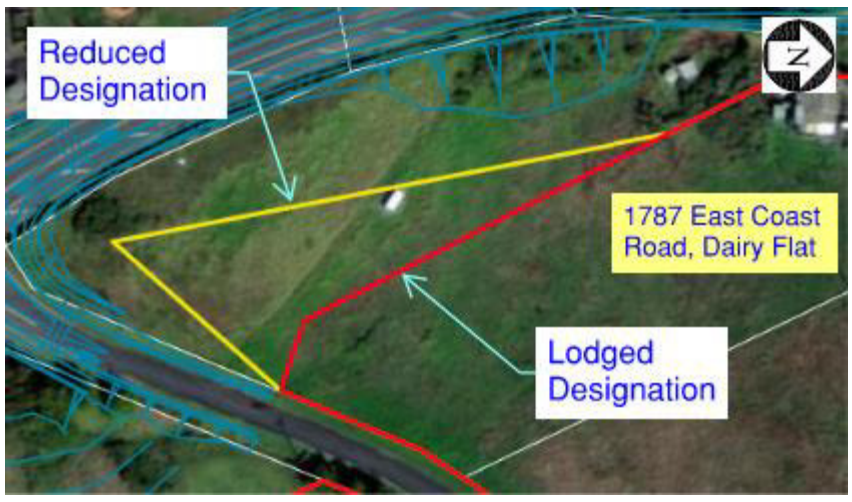
NoR 8	
Property	**Location**
1236 Dairy Flat Highway, Dairy Flat 1248A Dairy Flat Highway, Dairy Flat	

NoR 8	
Property	**Location**
1182 Dairy Flat Highway, Dairy Flat	
1032 Dairy Flat Highway, Dairy Flat 17 Lower Jeffs Road, Dairy Flat	
851 Dairy Flat Highway, Dairy Flat 859 Dairy Flat Highway, Dairy Flat	

NoR 8	
Property	**Location**
796 Dairy Flat Highway, Dairy Flat	

NoR 11	
Property	**Location**
326 Postman Road, Dairy Flat 332 Postman Road, Dairy Flat	
1440 Dairy Flat Highway, Dairy Flat	

NoR 12	
Property	**Location**
120 Bawden Road, Dairy Flat 124 Bawden Road, Dairy Flat	
166 Bawden Road, Dairy Flat 170 Bawden Road, Dairy Flat 190 Bawden Road, Dairy Flat 200B Bawden Road, Dairy Flat 200A Bawden Road, Dairy Flat	

NoR 13	
Property	**Location**
1797 East Coast Road, Stillwater 1803 East Coast Road, Stillwater 1835 East Coast Road, Stillwater	
1787 East Coast Road, Dairy Flat	

NoR 13	
Property	**Location**
Lot 6 DP 209610, Worsnop Way, Dairy Flat Lot 8 DP 209610, Worsnop Way, Dairy Flat