

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

Date: Monday, 18 to Thursday, 21 September 2023
Monday, 25 to Thursday, 28 September 2023
Monday, 2 to Thursday, 5 October 2023
Monday, 9 to Thursday, 12 October 2023
Time: 9:30am
Meeting Room: Henderson Council Chambers
Venue: Level 2, 3 Smythe Road, Henderson
(potentially the week of 25 Sept in Kumeu)

**HEARING REPORT
TRIG ROAD CORRIDOR UPGRADE
SUPPORTING GROWTH ALLIANCE - NORTH-
WEST
AUCKLAND TRANSPORT AND
WAKA KOTAHI NZ TRANSPORT AGENCY**

COMMISSIONERS

Chairperson Richard Blakey
Commissioners Mark Farnsworth
Vaughan Smith

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

WHAT HAPPENS AT A HEARING

At the start of the hearing, the Chairperson will introduce the hearing panel and council staff and will briefly outline the procedure. The Chairperson may then call upon the parties present to introduce themselves to the panel. The Chairperson is addressed as Mr Chairman or Madam Chair.

Any party intending to give written or spoken evidence in Māori or speak in sign language should advise the hearings advisor at least five working days before the hearing so that a qualified interpreter can be provided.

Catering is not provided at the hearing. Please note that the hearing may be audio recorded.

Scheduling submitters to be heard

A timetable will be prepared approximately one week before the hearing for all submitters who have returned their hearing attendance form. Please note that during the course of the hearing changing circumstances may mean the proposed timetable is delayed or brought forward. Submitters wishing to be heard are requested to ensure they are available to attend the hearing and present their evidence when required. The hearings advisor will advise submitters of any changes to the timetable at the earliest possible opportunity.

The hearing procedure

The usual hearing procedure is:

- The Requiring Authority (the applicant) will be called upon to present their case. The Requiring Authority may be represented by legal counsel or consultants and may call witnesses in support of the application. After the Requiring Authority has presented their case, members of the hearing panel may ask questions to clarify the information presented.
- The relevant local board may wish to present comments. These comments do not constitute a submission however the Local Government Act allows the local board to make the interests and preferences of the people in its area known to the hearing panel. If present, the local board will speak between the applicant and any submitters.
- Submitters (for and against the application) are then called upon to speak. Submitters' active participation in the hearing process is completed after the presentation of their evidence so ensure you tell the hearing panel everything you want them to know during your presentation time. Submitters may also be represented by legal counsel or consultants and may call witnesses on their behalf. The hearing panel may then question each speaker. The council officer's report will identify any submissions received outside of the submission period. At the hearing, late submitters may be asked to address the panel on why their submission should be accepted. Late submitters can speak only if the hearing panel accepts the late submission
- Submitters wishing to present written information (evidence) in support of their applications or submissions should provide the number of copies indicated in the notification letter
- Only members of the hearing panel can ask questions about submissions or evidence. Attendees may suggest questions for the panel to ask but it does not have to ask them. No cross-examination - either by the applicant or by those who have lodged submissions – is permitted at the hearing
- After the Requiring Authority and submitters have presented their cases, the chairperson may call upon council officers to comment on any matters of fact or clarification
- When those who have lodged submissions and wish to be heard have completed their presentations, the Requiring Authority or their representative has the right to summarise the application and reply to matters raised by submitters. Hearing panel members may further question the Requiring Authority at this stage
- The chairperson then generally closes the hearing and the Requiring Authority, submitters and their representatives leave the room.
- The hearing panel will then deliberate "in committee" and make a decision on the resource consent application and a recommendation to the Requiring Authority on the Notice of Requirement. The Requiring Authority then has 30 working days to make a decision and inform council of that decision. You will be informed in writing of both decisions separately, the reasons for the decision and what your appeal rights are.
- The decision on the resource consent component is usually available within 15 working days of the hearing closing.

A NOTIFIED NOTICE OF REQUIREMENT TO THE AUCKLAND COUNCIL UNITARY PLAN BY AUCKLAND TRANSPORT AND WAKA KOTAHI NZ TRANSPORT AGENCY

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Jess Romhany, Policy Planner

Reporting on five Notice of Requirements as outlined below.

TRHIF (NoR) - NORTH WEST HIF TRIG ROAD NETWORK: TRIG ROAD CORRIDOR UPGRADE (AUCKLAND TRANSPORT)

Notice of requirement lodged by Auckland Transport for an upgrade of Trig Road, Whenuapai, to an urban arterial corridor. This includes the upgrade of the existing Hobsonville Road/Trig Road and Hobsonville Road/Luckens Road intersections.

The North West Housing Infrastructure Fund (HIF) transport project is to upgrade the section of Trig Road in Whenuapai between State Highway 18 and Hobsonville Road. This will turn Trig Road into an Arterial Road and upgrade parts of Hobsonville Road, and the Luckens Road and Trig Road intersections.

This upgrade is the section of Trig Road between State Highway 16 and 18. This project involves both a Notice of Requirement for designation and a Resource Consent.

The Notice of Requirement will provide route protection and district plan effects. The Resource Consent will involve regional plan matters (e.g. Earthwork and stream work consents)

The works described for the Projects could be carried out in stages as urban development occurs surrounding the Project area.

REQUIRING AUTHORITIES: Auckland Transport and Waka Kotahi NZ Transport Agency

Notices of requirement under section 168 of the RMA by Auckland Transport for a new designation for the Trig Road Corridor Upgrade Project

To: Hearing Commissioners

From: Jess Romhany, Policy Planner

Regional, North, West, and Islands Planning, Plans and Places

Report date: 13 July 2023

Scheduled hearing date: 18 September – 12 October 2023

Notes:

This report sets out the advice of the reporting planners.

This report has yet to be considered by the Hearing Commissioners delegated by Auckland Council (the council) to make a recommendation to the requiring authority.

The recommendations in this report are not the decisions on the notices of requirement.

A decision on the notices of requirement will be made by the requiring authority after it has considered the Hearing Commissioners' recommendations.

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Summary

Requiring authority	Auckland Transport is the requiring authority for TRHIF NoR Supporting Growth (a collaboration between Auckland Transport and Waka Kotahi NZ Transport Agency)
Notices of requirement references	TRHIF - Trig Road Corridor Upgrade (West Harbour)
Resource consent applications	<p><u>Auckland Unitary Plan (Operative in Part) (AUP(OP))</u></p> <ul style="list-style-type: none"> • Land use consent • Streamworks • Discharge permits • Water permit <p><u>National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health</u></p> <ul style="list-style-type: none"> • Land use consent <p><u>National Environmental Standards for Freshwater Regulations 2020</u></p> <ul style="list-style-type: none"> • Land use consent • Discharge permit
Reporting planner	Jess Romhany – Policy Planner Regional, North, West, and Islands – Plans and Places
Site address	The NoR applies to an area of land of approximately 67,072 square metres which includes 66 land parcels (excluding legal roads), in Whenuapai, Auckland
Lodgement date	21 December 2022
Notification date	23 March 2023
Submissions close date	24 April 2023 Further extension of time from the 4 May 2023 to 2 June 2023
Number of submissions received	16 submissions received (including 1 late submission)

Report prepared by:

Jess Romhany – Policy Planner
Regional, North, West, and Islands Planning
Plans and Places



Date:

12 July 2023

Reviewed and
approved for release
by:

Eryn Shields – Team Leader
Regional, North, West, and Islands Planning
Plans and Places



Date:

12 July 2023

Abbreviations

AEE	North West Assessment of Effects on the Environment – Trig Road Corridor Upgrade Project
ACNV	Assessment of Construction Noise and Vibration
Active Mode	Walking and cycling
AEcE	Assessment of Ecological Effects
AHHE	Assessment of Historical Heritage Effects
ALVE	Assessment of Landscape and Visual Effects
ASE	Assessment of Stormwater Effects
ATNV	Assessment of Traffic Noise and Vibration
AT	Auckland Transport
ATE	Assessment of Traffic Effects
AUP	Auckland Unitary Plan Operative in Part
CEMP	Construction Environmental Management Plan
CIA	Cultural Impact Assessment
CMP	Construction Monitoring Plan
CNVMP	Construction Noise and Vibration Management Plan
CNVMS	Construction Noise and Vibration Management Schedules
CTMP	Construction Traffic Management Plan
DSI	Detailed Site Investigation
EMP	Ecological Management Plan
ESCP	Erosion and Sediment Control Plan
FDS	Draft Future Development Strategy 2023
FULSS	Future Urban Land Supply Strategy (2017)
FUZ	Future Urban Zone
GD01	GD2017:001 Stormwater Management Devices in the Auckland Region
GD05	GD05: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region
HCGA	High Contaminant Generating Area
HHMP	Historic Heritage Management Plan
HIF	Housing Infrastructure Package
NES (Soil)	National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
NoR	Notice(s) of requirement
NPS	National Policy Statement
NPS-HPL	National Policy Statement for Highly Productive Land 2022
NPS-FW	National Policy Statement for Freshwater Management
NPS-UD	National Policy Statement on Urban Development 2020
NUMP	Network Utility Management Plan
NZDF	New Zealand Defence Force
NZS 6806	Standards New Zealand (2010) NZS 6806:2010 Acoustics – road-traffic noise – new and altered road
NZTA	New Zealand Transport Agency
OPW	Outline plan of works
PC5	Proposed Plan Change 5 Whenuapai (Withdrawn)

PC78	Proposed Plan Change 78 Intensification
PSI	Preliminary Site Investigation
RA	Requiring Authority
RMA	Resource Management Act 1991 and all amendments
RPS	Regional Policy Statement
SCEMP	Stakeholder Engagement and Communications Management Plan
SGA	Supporting Growth Alliance
the council	Auckland Council
the Project	TRCU Project (TRHIF NoR)
TMP	Tree Management Plan
TRCU	Trig Road Corridor Upgrade
ULDMP	Urban and Landscape Design Management Plan
WREP	Wetland Restoration and Enhancement Plan
WSP	Whenuapai Structure Plan 2016

References to SGA or Requiring Authority

Te Tupu Ngātahi Supporting Growth Alliance comprises Waka Kotahi and Auckland Transport, as Requiring Authorities under section 167 of the RMA (**SGA**).

They have applied for a Notices of Requirement (**NoR**) associated with the North West Transport Network.

1. Introduction

1.1. Report Author

My name is Jessica Rose Romhany.

I hold a Bachelor of Urban Planning with Honours from the University of Auckland (2019). I am also a graduate member of the New Zealand Planning Institute.

From 2020-2021, I worked as a graduate planner at Auckland Council, rotating between a variety of different planning roles. Since November 2021, I have been working as a policy planner in the Plans and Places department at Auckland Council.

1.2. Code of Conduct for Expert Witnesses

I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this planning report (being also expert evidence), and I agree to comply with it when giving any oral evidence during this hearing. Except where I state that I am relying on the evidence of another person, my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

2. The Notice of Requirement

2.1. North West Trig Road Corridor Upgrade Notice of Requirement

Pursuant to Section 168 of the RMA, Auckland Transport ('AT') as the requiring authority¹, has lodged a notice of requirement ('NoR') for a new designation in the Auckland Unitary Plan (Operative in Part) ('AUP'). This report relates to one notice requirement that was lodged as part of the Supporting Growth Programme in the north-west region of Auckland. The NoR is for the Trig Road Corridor Upgrade ('TRCU') Project ('the Project'). The NoR is described in Table 1 below.

Notice	Project Name	Description	Requiring Authority
TRHIF (NoR)	Trig Road Corridor Upgrade	An upgrade of Trig Road to an urban arterial corridor. This includes the upgrade of the road that runs between the State Highway 18 Trig Road on and off ramps and the existing Hobsonville Road/Trig Road intersection, upgrading the Luckens Road/Hobsonville Road intersection and the small length of Hobsonville Road either side to these two intersections.	Auckland Transport

¹ Te Tupu Ngātahi Growth Supporting Growth Alliance (SGA) includes Auckland Transport as a requiring authority under section 167 of the RMA. References used in this report are SGA, Auckland Transport, and the requiring authority and these are to be interpreted as being interchangeable.

The NoR is part of a wider package of nineteen notices of requirement sought by the Supporting Growth Alliance ('SGA') on behalf of Waka Kotahi NZ Transport Agency and Auckland Transport, for the:

- Housing Infrastructure Funded (HIF) package (subject to this report)
- North West Local Arterial package (subject of a separate report)
- Strategic Package (subject of a separate report).

The TRHIF NoR seeks the route protection of a transport corridor to enable the future construction, operation and maintenance of transport infrastructure to support future urban growth in the North West area of Auckland.

2.2. North West Trig Road Corridor Upgrade Resource Consent

The requiring authority has also applied for resource consents to undertake works associated with the construction, operation, and maintenance of the Project. The consideration of all relevant resource consents is the subject of a separate report, authored by Mr Alex Hall. This report only considers the TRHIF NoR.

2.3. Locality plan

The general location of the TRHIF NoR Project is shown in Figure 1 below. The reader is also referred to the general arrangement plans that support the NoR and outlines the extent of the NoR. The General Arrangement Plans for the TRHIF NoR NoR can be found at the following link:

<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/auckland-unitary-plan-modifications/supporting-growth-programme/Pages/transport-projects-north-west-auckland.aspx>



Figure 1: TRHIF NoR Locality Plan

The reader is also referred to the NoR plan set ('Indicative Design and Designation Drawings', included as Volume 3 of the lodgement package) which provides detailed plans showing the extent of the NoR.

2.4. Notice of requirement documents

The lodged NoR consists of the following documents:

- 00 North West HIF NoR Lodgement Cover Letter
- 01 Form 18 – Trig Road
- 02 Assessment of Environmental Effects – Trig Road
- 03 Appendix A - Assessment of Alternatives (Trig Road)
- 04 Appendix B - Statutory Assessment (Trig Road)
- 05 Appendix C - Rules Assessment (Trig Road)
- 06 Appendix D - Matters of discretion and assessment criteria (Trig Road)
- 07 Appendix E - Proposed Designation Conditions (Trig Road)
- 08 Appendix F - Draft Consent Conditions (Trig Road)
- 09 Indicative Design and Designation Drawings - Trig Road
- 10 Transport - Trig Road
- 11 Construction Noise and Vibration - Trig Road
- 12 Traffic Noise and Vibration - Trig Rd
- 13 Historic Heritage Assessment - Trig Road
- 14 Landscape and Visual Assessment - Trig Road
- 15 Ecology - Trig Road
- 16 Stormwater - Trig Road
- 17 Erosion and Sediment Control Plan - Trig Road
- 18 PSI - Trig Road
- 19 Geotechnical Factual Report - Trig Road
- 20 Geotechnical Interpretive Report - Trig Road
- 21 Records of Title - Trig Road

Given the large quantum of information supporting the NoR, it has not been attached to this report. Instead, the information can be found on the Auckland Council website: Supporting Growth Programme (Projects North West Auckland) under the heading of North West Housing Infrastructure Fund (HIF): projects in Redhills:

<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/auckland-unitary-plan-modifications/Pages/details.aspx?UnitaryPlanId=176>

2.5. Section 92 requests and responses

Section 92 of the RMA allows councils to request further information from a requiring authority and/or commission a report, at any reasonable time before the hearing.

The council made further information requests and received responses as shown in Table 2 below. The further information requests were forwarded to SGA as they were received from various specialists contracted for this task by council. This means that the dates for each of the requests and responses may be different. The specialist's requests are combined requests, unless otherwise stated, across the three projects (Local Arterials, Strategic, HIF). The SGA has also combined its responses and/or provided individual responses to particular NoRs.

Table 2: Section 92 requests for NW Projects

Section 92 request		section 92 response
Ecology	23/1/2023	Supporting Growth Alliance North West - Heritage Section Supporting Growth Alliance North West – Transport
Transport and traffic	24/1/2023 (Local and HIF) 25/1/2023 (Strategic)	Supporting Growth Alliance – Noise and Vibration Memo Supporting Growth Social Impact Assessment Addendum Supporting Growth Alliance Noise Contours – Trig Road North (W1)
Built Heritage	24/1/2023	Supporting Growth Alliance Noise Contours – Māmari Road (W2)
Archaeology	24/1/2023	Supporting Growth Alliance Noise Contours – Brigham Creek (W3)
Lighting	24/1/2023	Supporting Growth Alliance Noise Contours – Spedding Road (W4)
Social Impact	24/1/2023	Supporting Growth Alliance Noise Contours – Hobsonville Road (W5) Supporting Growth Alliance Noise Contours – Don Buck Road (RE1)
Landscape/Visual	24/1/2023 (Strategic) 25/1/2023 (Local)	Supporting Growth Alliance Noise Contours – Fred Taylor Drive (RE2) Supporting Growth Alliance Noise Contours – Coatesville-Riverhead Highway (R1) Supporting Growth Alliance North West – Addendum to Trig Road Landscape Visual Supporting Growth Alliance – Trig Road Appendix 1 – Representative Viewpoints Supporting Growth Alliance – Lighting Response (misnamed on webpage as Auckland Council Light request)

The council's section 92 requests and the requiring authority's responses are included in Attachment 1 of this report.

2.6. Specialist reviews

The assessment in this report integrates the reviews and advice from the technical specialists listed in the table below.

Table 3: Specialist input

Specialist	Specialty
Andrew Temperley (Local Arterials and HIF) (External Consultants - Traffic Planning Consultants (TPC))	Transport effects
Jon Styles (External Consultant - Styles Group Limited)	Noise and vibration effects
Jennifer Esterman (External Consultant - Mein Urban Design and Planning Limited)	Urban design effects
Peter Kensington (External Consultant - Kensington Planning and Landscape Consultants Limited)	Landscape and visual effects
Susan Andrews, Principal Planning, Healthy Waters, Auckland Council	Flooding and stormwater effects
Danny Curtis, Principal – Catchment Planning, Healthy Waters, Auckland Council	
Jason Smith (External Consultant - Morphem Environmental Limited)	Ecology effects
Dan Windwood, Senior Built Heritage, Auckland Council	Built heritage effects
Mica Plowman, Principal Heritage Advisor West, Auckland Council	Cultural heritage effects

The specialist reviews are provided in Attachment 3 to this report. The order of the specialist reviews corresponds with the order in the assessment of effects in section 6.4 of this report.

3. Notice of requirement description

3.1. Background

The background and context to the NoR is outlined in sections 2 (Introduction) and 4 (Supporting Growth Programme) of the Assessment of Effects on the Environment ('AEE') prepared by Supporting Growth Alliance. This is summarised below.

The Auckland Plan 2050 signals that Auckland could grow by 720,000 people over the next 30 years, generating demand for more than 400,000 additional homes and requiring land for 270,000 more jobs. Around a third of this growth is expected to occur in Future Urban zoned areas identified within the AUP.

As stated in Section 4 of the AEE, the Future Urban Land Supply Strategy (2017) (FULSS) was updated to align with the operative AUP zonings, with approximately 15,000 hectares of land zoned for future urbanisation. The FULSS provides for sequenced and accelerated greenfield growth in ten areas of Auckland.

The Supporting Growth Programme has been prepared to investigate, plan and deliver the key components of the future transport network necessary to support greenfield growth in Auckland's future urban areas. SGA is a collaboration between Auckland Transport and Waka Kotahi NZ Transport Agency² created to undertake this work. SGA advise that the early protection of critical transport routes is necessary to provide certainty for all stakeholders about the alignment, nature and timing of the future transport network. Designations also provide increased certainty for Auckland Transport and/or Waka Kotahi so that it can implement the works provided for by the designation.

As stated in section 4.2 of the AEE, the North West growth areas are approximately 30 kilometres north west of Auckland's Central Business District (CBD). It will make a significant contribution to the future growth of Auckland's population by providing for approximately 42,355 new dwellings and employment opportunities that will contribute 13,000 new jobs across the North West. The growth areas are as follows:

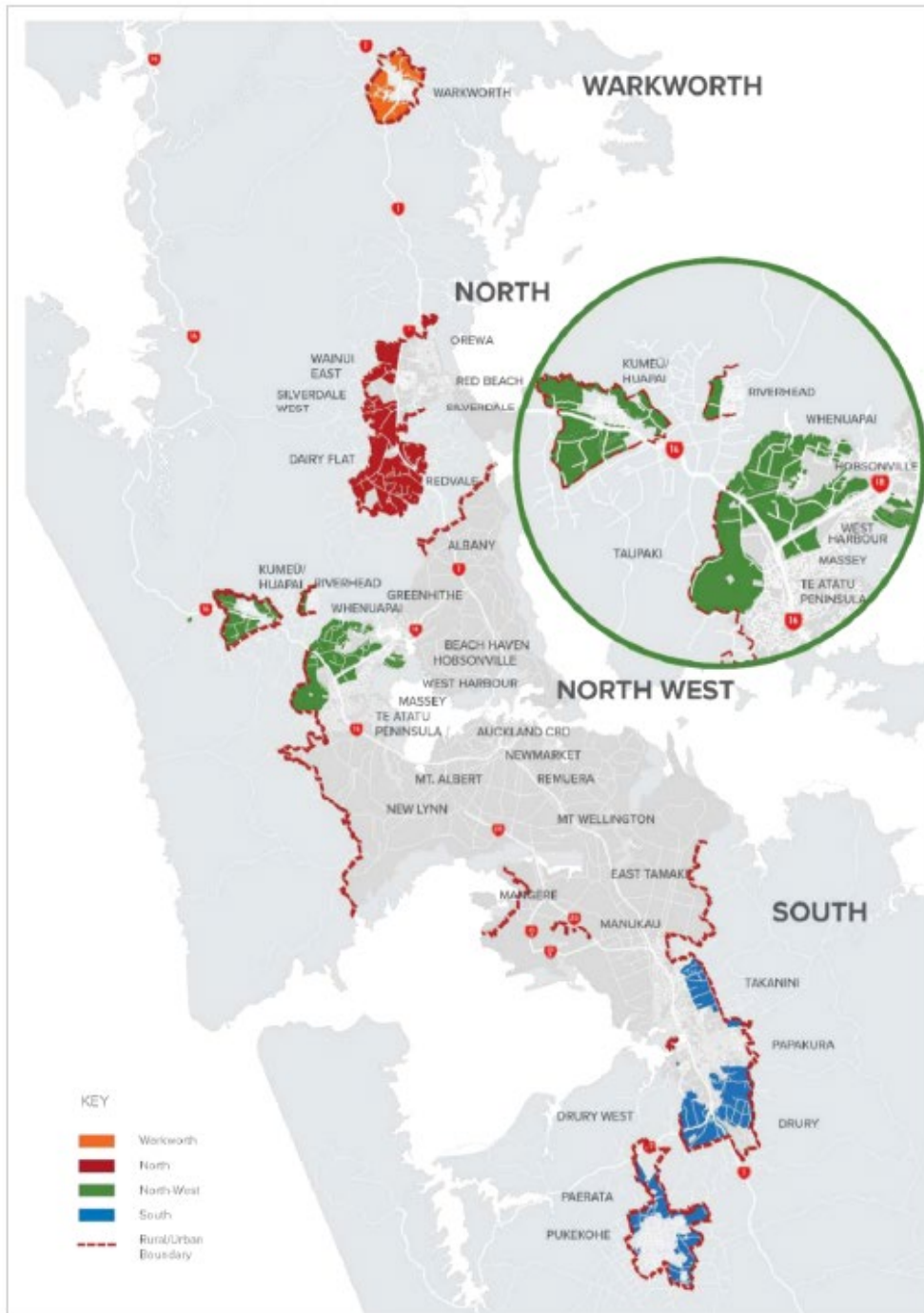
- Kumeū-Huapai
- Whenuapai
- Redhills and Redhills North
- Riverhead.

Staging is based on the FULSS and was tested in SGA's DBC modelling to confirm assumptions based on growth need and related projects delivery (refer to Section 4 of the AEE for further information). Table 4.1 of the AEE, as provided below, shows the FULSS predictions of when areas will be development ready.

The staging is specific to the North West area and accounted for other strategic network projects (outside the scope of SGA) and transport demand models.

² In partnership with Auckland Council, Mana Whenua and Kiwirail Holdings Limited

The North West Transport Network consists of the Housing Infrastructure Fund (HIF) Package (subject of this report) as well as the Local Arterials Package and the NW Strategic Package (subject of separate reports). The network is designed to support the North West growth area as shown below in Figure 2 (the North West growth areas are shown in green).



3.2. Project objectives

Figure 3 on Page 20 of the AEE sets out the objectives for the TRHIF NoR. The objectives of the Project are:

- **Objective 1:** Provide an urban arterial transport corridor between State Highway 18 and Hobsonville Road to support and integrate with planned urban residential growth in Whenuapai.
- **Objective 2:** Provide arterial transport corridors that are safe for all transport users.
- **Objective 3:** Contribute to mode shift by providing a choice of transport options including walking, cycling, and public transport.

The AEE states that the Project will provide the following:

- the widening and upgrade of the existing Trig Road transport corridor from a 20m wide, two-lane rural road to a 24m wide two-lane arterial standard transport corridor between the SH18 off-ramps and Hobsonville Road
- widening of the transport corridor, which will provide for an urban standard arterial which includes walking, cycling and public transport provisions
- signalisation of the intersections at Trig Road/Hobsonville Road and Luckens Road/Hobsonville Road and a similar upgrade of Hobsonville Road between these intersections
- the Project will also include changes to the SH18 bridge layout to accommodate walking and cycling facility upgrades and tie in works within the existing road reserve north of SH18.

3.3. Lapse dates

Section 184 of the RMA provides for a designation to lapse five years after it is included in the District Plan unless:

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

SGA states that a key objective of the Te Tupu Ngātahi Supporting Growth Programme is to identify and protect land now for future transport networks. SGA has sought an extended lapse period of 15 years for the TRHIF NoR.

3.4. SGA rationale for extended lapse periods

The SGA rationale for extended lapse periods relates to the predicted land use and staging of transport projects.

Section 4.3 of the AEE sets out the rationale for the extended lapse period. The AEE states:

“A key objective of the Te Tupu Ngātahi Supporting Growth Programme is to identify and protect land now for future transport networks. We consider that an extended lapse period of 15 years is a method that is reasonably necessary to achieve this key objective as it provides statutory protection of the future transport corridors in a manner that enables a flexible and efficient infrastructure response to land use.”

As enabled by section 184(c) of the RMA, a lapse period of 15 years is required for the NoR.” (AEE, pg. 34).

There are submissions seeking relief in relation to the lapse periods for the NoR. The appropriateness of the proposed lapse date is assessed in section 7.11 of this report.

3.5. Extent of proposed designation

Designation plans (provided as Attachment A in Form 18 of the NoR) together with the schedule of directly affected properties (provided as Attachment B in Form 18 of the NoR) describe the land that will be directly affected and required for the project and associated works.

The extent of the proposed designations includes land for both temporary (construction) and permanent occupation. On completion of the works, AT will review the extent of the designation footprint and will uplift the designation, under section 182 of the RMA, from those areas not required for the on-going operation, maintenance or effects mitigation associated with the road corridors. Private land which is not required post-construction will be reintegrated in coordination and discussion with directly affected landowners.

There are submissions seeking relief in relation to the extent of the proposed designations. This matter is discussed/assessed in section 6.4.10 of this report.

3.6. Resource consents and approvals

Resource Consents

Activities that are necessary for the construction, operation and maintenance of the Project that cannot be provided for by a designation require resource consent. As part of the TRCU Project, SGA is seeking regional resource consents under the AUP, the NES:Soil and NES:FW. The specific triggers for resource consent are detailed in Table 4 below. Resource consent is sought as a discretionary activity. The resource consent has been assessed separately and is not the subject of this report.

Table 4: Reasons for resource consent

Auckland Unitary Plan (Operative in Part) (AUP(OP))
<ul style="list-style-type: none"> • Land use consent: vegetation clearance; earthworks; and management of stormwater. • Streamworks: New structures, and associated bed disturbance or depositing any substance, reclamation, diversion of water, and incidental temporary damming of water. • Discharge permits: Contaminated land discharge and stormwater discharge and diversion. • Water permit: Groundwater take / Dewatering.
NES for Assessing and Managing Contaminants in Soil to Protect Human Health
<ul style="list-style-type: none"> • Land use consent: The disturbance of contaminated land.
NES for Freshwater Regulations 2020
<ul style="list-style-type: none"> • Land use consent: <ul style="list-style-type: none"> - Vegetation clearance within, or within a 10m setback from a wetland. - Earthworks or land disturbance within, or within a 10m setback from, a wetland.

- Earthworks or land disturbance outside 10m, but within a 100m, setback from a wetland
- Discharge permit:
 - The proposed ongoing discharge of stormwater within 100m of a natural wetland.
 - The proposed ongoing diversion of stormwater within 100m of a natural wetland.
 - The proposed temporary discharge of stormwater and treated sediment-laden water for the purpose of undertaking earthworks within 100m of a natural wetland.
- Water permit:
 - The proposed long-term take/dewatering and groundwater diversion associated with permanent drainage that may change the water level range or hydrological function of the wetland.
 - The proposed temporary (short-term) take/dewatering and groundwater diversion associated with undertaking earthworks that may change the water level range or hydrological function of the wetland.
 - The proposed temporary diversion of stormwater and sediment laden water for the purpose of undertaking earthworks within 100m of a natural wetland

Other statutory approvals required to give effect to the designation include:

Outline Plan of Works

The AEE states in Section 6 that the final design details for the Project will be refined and confirmed before construction as part of the Outline Plan (or Plans if the Outline Plans are staged to reflect Project phases or construction sequencing) which will be submitted to Council as set out in section 176A of the RMA. The various Management Plans required for the proposed designations and resource consents, and future Outline Plans of Works will be submitted to Auckland Council prior to the commencement of construction (Section 71. of AEE).

Land subject to other designations

Some land to be designated for the transport corridors is subject to existing designations by other requiring authorities (e.g. Ministry of Education and network utilities), as detailed in Section 5.2 of the AEE. To undertake work in accordance with a designation on land with an existing designation, written consent from every requiring authority that has an earlier designation is required under section 177(1)(a).

While written consent is required in order to undertake works within the existing designations where those works may prevent or hinder the earlier designation's purpose or project, it is not required to designate the land. For this reason, the requiring authority states that written approval will be sought from these requiring authorities with existing designations in the Project area prior to construction in accordance with section 177 of the RMA.

3.7. Plan changes required

A plan change will be required in the future to rezone land located adjacent to the TRHIF NoR that is currently zoned Future Urban Zone (FUZ). Land to the both the east and west of the Trig Road corridor is currently subject to the FUZ zone.

4. Proposal

4.1. Overview of the proposal

The proposal for the TRHIF is summarised in Section 3 of the Form 18. A more detailed description of the NoR can be found in Section 3 the AEE. A summary of the key features of the NoR is provided below:

NoR	Key features of proposed upgrades
TRHIF: Trig Road	<ul style="list-style-type: none"> • <i>The widening and upgrading of the existing Trig Road transport corridor to accommodate a 24m wide, two-lane arterial standard transport corridor between the SH18 off-ramps and Hobsonville Road. A dedicated, bi-directional cycleway is proposed on the eastern side of the Trig Road corridor as well as footpaths on either side of the corridor.</i> • <i>Changes to the SH18 bridge layout to accommodate walking and cycling facility upgrades and tie in works within the existing road reserve north of SH18.</i> • <i>The upgrade and widening of Hobsonville Road generally between Cyril Crescent and Luckens Road to provide a four-lane corridor, which is generally 25m in width. These works include separated cycle paths and footpaths on both sides of the corridor. The widening will require land to provide for the construction and operation of the corridor including earthworks and driveway modifications.</i> • <i>Two staggered signalised T-intersections at the Hobsonville Road / Trig Road and Hobsonville Road/Luckens Road intersections.</i> • <i>Provision for public transport to improve bus travel time and reliability. This includes providing for bus only through movements in the left-turn lanes on Hobsonville Road at the intersections of Luckens Road and Trig Road, providing a dedicated kerb-side lane on both sides of Hobsonville Road and providing a right-turn bus advance lane on Trig Road.</i> • <i>Upgrades to the existing stormwater culverts that cross beneath Trig Road.</i> • <i>Fill embankment over a groundwater seepage area just off the eastern side of Trig Road at the upper branch of Trig Stream, and appropriate groundwater management to capture and convey the constant groundwater feed out of the fill embankment.</i> • <i>The provision of new stormwater management devices. This includes a dry pond for the attenuation of additional post-development peak flows and to meet water sensitive design requirements. Raingardens are proposed to provide stormwater treatment and retention, with “at source” treatment within the berms along the carriageway as well as “end of pipe” treatment in larger raingardens.</i> • <i>Bulk earthworks.</i> • <i>Removal and relocation of existing utilities.</i> • <i>Other construction related activities required outside the permanent corridor including re-grading of driveways, construction traffic manoeuvring and construction laydown areas.</i>

4.2. Affected land

Designation plans (provided as Attachment A in Form 18 of the NoRs) together with the schedule of directly affected properties (provided as Attachment B in Form 18 of the NoRs) describe the land that will be directly affected and will be required for the project and associated works.

4.3. Site, locality, catchment, and environment description

This report relies on the site and environment descriptions provided by the requiring authority in Section 5 of the AEE.

4.4. Other designations, notices of requirements, plan changes and consent applications

As stated above, some land to be designated for the transport corridors is subject to existing designations by other requiring authorities, as detailed in Section 5.2 of the AEE.

Section 5.2 of the AEE also includes details on known plan changes. This includes Proposed Plan Change 5 (PC5) Whenuapai and Proposed Plan Change 78 (PC78) Intensification.

The AEE notes that PC5 was withdrawn by the Council in mid-2022, but states that “...*given the proximity to the existing urban area along Hobsonville Road this area of FUZ land is expected to be subject to private development initiatives in the near future*” (AEE, pg. 49).

In relation to PC78, the AEE states that some properties at the southern end of the Project area will be subject to upzoning as part of this plan change, to both the Mixed Housing Urban and Terrace Housing and Apartment Buildings zones.

The AEE also recognises the Whenuapai Structure Plan (WSP)³. The Project area (north of Hobsonville Road) is included in the WSP area. In relation to this the AEE states that “*the Whenuapai Structure Plan was completed in 2016 by the Council and sets out the framework for transforming Whenuapai from a semi-rural environment to an urbanised community over the next 10 to 20 years. The structure plan will be implemented through a statutory plan change process to the AUP:OIP to rezone land within the area from FUZ to different urban zones*” (AEE, pg. 49).

³ Auckland Council. Whenuapai Structure Plan. September 2016.
<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/place-based-plans/Documents/whenuapai-structure-plan-september-2016.pdf>



5. Notification, submissions, and local board views

5.1. Notification

The TRHIF NoR was publicly notified on 23 March 2023.

The closing date for submissions was 24 April 2023.

The notification period for the TRHIF NoR had an extension of time (from the 4 May 2023 to 2 June 2023) due to a number of properties within the NoR not receiving a notification letter.

5.2. Consideration of submissions

The consideration of submissions has been included within Section 6.4 alongside the analysis of environmental effects. The submissions have either been grouped where they are raising matters or seeking relief on the same theme or addressed individually where it relates to a specific matter (i.e., network utility/infrastructure providers). A summary of the submissions is attached as Attachment 2. The individual submissions can be found at the following link:

<https://www.aucklandcouncil.govt.nz/have-your-say/hearings/find-hearing/Pages/Hearing-documents.aspx?HearingId=690>

5.2.1. Late submissions

Table 5 below lists submissions received after the closing date for submissions.

Table 5: Summary of late submissions TRHIF

Submitters name	Date submission received by the council
Kāinga Ora Homes and Communities	11 May 2023

At the start of the hearing, the Hearing Commissioners must decide whether to extend the closing date for late submissions. Under section 37A of the RMA, the Hearing Commissioners must take into account:

- a) the interests of any persons who, in the Hearing Commissioners opinion, may be directly affected by the extension or waiver; and
- b) the interests of the community in achieving adequate assessment of the effects of the proposal; and
- c) the duty under section 21 of the RMA to avoid unreasonable delay.

Under s37 and s37A of the RMA I recommend that the late submission from Kāinga Ora Homes and Communities be accepted. The reason for this recommendation is:

- the submission is within scope;
- the matters raised in the submission are similar to other submissions that were received during the submission period and therefore do not disadvantage other directly affected parties;
- I do not consider that the waiver would directly affect the interests of any person; and
- It is considered that including the late submissions will not cause any unreasonable delay

5.2.2. Assessment of submissions seeking the same relief across the three SGA North West packages of NoRs

The following submitters have submitted across multiple/all nineteen Strategic Growth North-West NoRs (Local Arterials, Strategic and Housing Infrastructure Funded):

- Heritage New Zealand Pouhere Taonga (all nineteen, excl. TRHIF)
- Kāinga Ora (LATE submission on all nineteen)
- Ministry of Education (TRHIF, NoR1, NoR2a, NoR2b, NoR2c, S2, S3, W1, W3, W4, W5, RE1)
- NZPRG (submission on all nineteen)
- Telecommunications Submitters (all nineteen)
- Watercare Services Limited (all nineteen)

These submissions will be dealt with separately (and consistently within each report) as the relief being sought is either the same or similar across the NoRs.

5.2.3. Submission assessment for North West Trig Road Corridor Upgrade NoR

16 submissions were received on TRHIF NoR as summarised below:

- Support/Support in part – 3 submissions
- Oppose/Oppose in part – 9 submissions
- Neutral/Not stated – 4 submissions

The Summary of Submissions (included as Attachment 4) is a summary of the relief sought from each of the submitters and has been prepared to assist with reviewing the submissions received on the NoR(s).

The issues raised in submissions have been considered in the assessment of the TRHIF NoR, including by each of the Council specialists where they relate to the specialists' professional discipline. The matters raised in submissions have been included in section 6.4 of this report alongside the assessment of adverse effects, the relevant statutory provisions, and the recommended conditions to be included for the NoR.

5.3. Local Board views

The TRHIF NoR is located on the boundary of the Upper Harbour and Henderson-Massey Local Board areas, with parts of the Project located within each. Views were sought from the Henderson-Massey and Upper Harbour Local Boards following the close of submissions. Both Local Boards have resolved to speak to their views on various NoRs at the hearing. Local Board views are provided in Attachment 2 of this report.

5.3.1. Upper Harbour Local Board

The Upper Harbour Local Board provided their views at a local board meeting on 22 June 2023 (included in Attachment 2). Their comments were only made in relation to those NoRs located within the Upper Harbour Local Board boundary. The local board stated the following:

- i. the local board supports the aims of the Supporting Growth Alliance to enable better public and active modes of transportation, better roads and safer intersections. We do wish that in some areas this was completed prior to the already completed intensification and development*
- ii. the current Local Board Plan 2020 Outcome 2 is for "An efficient and accessible travel network" One objective is to 'Improve roads and connections in Upper Harbour'. We note that these transportation projections will lead to some achievement of this outcome*
- iii. note that Whenuapai is currently zoned Future Urban and there is currently a Future Development Strategy consultation running which aims to provide long term guidance on how the council plans for development*
- iv. request that the Supporting Growth projects around the Whenuapai and Hobsonville area are prioritized as that is where growth is currently occurring. The local board consider that development of roading infrastructure including public and active transport should be done prior to further housing and business intensification*
- v. note that many intersections in the Whenuapai and Hobsonville area are unsafe and upgrades need to happen as soon as possible. We hear from many residents in Hobsonville, Scott Point and Whenuapai about the dangerous intersections and congestion along these key roads*
- vi. request safe crossing points at key pedestrian locations as many of the new roads are extremely wide.*
- vii. the local board acknowledges concerns raised by submitters. We therefore ask that as the project moves into detailed design that the following issues are considered:*
 - a. the effect this will have on induced traffic and the need to reduce emissions*
 - b. effects on individual properties*
 - c. the potential that a motorway interchange in Whenuapai will not add to the liveability of the area unless driving a car.*

- viii. *many areas around Whenuapai have a deficit of trees and biodiversity. While acknowledging that the New Zealand Defence Force is of strategic importance nationally and their concerns around bird strike, we request that where possible berms are planted rather than grassed. This would be in a similar manner to the recent upgrades around State Highway One near Albany as part of the Northern Corridor Alignment Project*
- ix. *request that planning to upgrading the public and active transport components, and road safety components especially around intersections can be prioritized.*

5.3.2. Henderson Massey Local Board

The Henderson-Massey Board provided their views at a local board meeting on 20 June 2023 (included in Attachment 2). The local board stated the following about the wider packs of 19 NoRs:

- a) *whakarite / provide the following feedback on the 19 Notices of Requirement lodged by the Supporting Growth Alliance for new transportation projects in the Northwest:*
 - i. *tautoko / support the Supporting Growth Alliance (SGA) 19 transportation related Notices of Requirement (NOR) in the Northwest*
 - ii. *recognise the plans for growth in the Auckland Unitary Plan require long-term transport planning and the designations will provide route protection.*
 - iii. *kohuki / consider that water quality and healthy ecosystems and wider ecological values are important in the context of Notices of Requirement (NOR) in the Northwest.*
 - iv. *kohuki / consider that the aquifers in the NOR area must not be affected by planned stormwater run-off or flood attenuation, as they flow to the Upper Waitemata Harbour catchment, which is already struggling with sedimentation and pollution issues.*

6. Consideration of the notice of requirement

6.1. Designations under the Resource Management Act 1991

The RMA provides that the procedures adopted in processing a notice of requirement are generally those adopted for processing a resource consent application. This includes lodgement, requiring further information, notification, receiving and hearing of submissions. In respect of this NoR, all of those processes have been followed.

The NoR process differs from the resource consent process in respect of the council consideration of the NoR. Section 171(1) of the RMA states:

- (1A) *When considering a requirement and any submissions received, a territorial authority must not have regard to trade competition or the effects of trade competition.*
- (1) *When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to—*

- (a) *any relevant provisions of—*
 - (i) *a national policy statement:*
 - (ii) *a New Zealand coastal policy statement:*
 - (iii) *a regional policy statement or proposed regional policy statement:*
 - (iv) *a plan or proposed plan; and*
- (b) *whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—*
 - (i) *the requiring authority does not have an interest in the land sufficient for undertaking the work; or*
 - (ii) *it is likely that the work will have a significant adverse effect on the environment; and*
- (c) *whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and*
- (d) *any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.*

(1B) The effects to be considered under subsection (1) may include any positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from the activity enabled by the designation, as long as those effects result from measures proposed or agreed to by the requiring authority.

Section 171(1)(a) is addressed in section 7.1-7.6 of this report. Section 171(1)(b) is addressed in section 7.8 of this report. Section 171(1)(c) is addressed in section 7.9 of this report below. Section 171(1)(d) is addressed in section 7.10 of this report.

Section 171(1) is subject to Part 2 of the RMA. Part 2 contains the purpose and principles of the RMA. It has been confirmed by the Environment Court that, in relation to a designation matter:

...all considerations, whether favouring or negating the designation, are secondary to the requirement that the provisions of Part II of the RMA must be fulfilled by the proposal.⁴

After considering these matters, the council needs to make a recommendation to the requiring authority under section 171(2) of the RMA which states:

- (2) *The territorial authority may recommend to the requiring authority that it –*
 - (a) *confirm the requirement:*

⁴ See Estate of P.A. Moran and Others v Transit NZ (W55/99)

- (b) *modify the requirement:*
- (c) *impose conditions:*
- (d) *withdraw the requirement.*

Reasons must be given for the recommendation under section 171(3) of the RMA. Refer to section 9 for my recommendation.

6.2. Effects on the environment

I note that the requiring authority's AEE uses the term 'environmental impact' with regard to how the NoRs affect the environment. As the RMA, and in particular section 171 of the RMA, uses the term 'effects on the environment, I have taken the approach that references to 'environmental impacts' in the SGA documents are to be read as 'environmental effects'.

6.2.1. SGA's approach to the assessment of environmental effects

The requiring authority's approach to the assessment of environmental effects is set out in section 9 of the AEE. The requiring authority has limited its assessment to matters that trigger a district plan resource consent under the AUP. The requiring authority's AEE states the reasons for limiting its assessment are that district plan resource consents are the only activities authorised by the proposed designations and alterations. The AEE goes on to state that NES or regional plan consenting requirements, where these are triggered, are not authorised by the designations and will require future resource consents.

The requiring authority's approach takes into consideration the likely future environment. The requiring authority considers that assessing the effects solely as it exists today (i.e., at the time of this assessment for the TRCU Project) will not provide an accurate reflection of the environment. The approach taken by the requiring authority within the AEE is that the environmental effects for each NoR have been assessed against the existing and likely future environments. In relation to the TRHIF NoR, the requiring authority states that the Project area intersects a range of zones under the AUP which influence the existing and likely future land use patterns for assessment purposes.

The AEE discusses the identified environmental effects as a whole across the NoRs with references to specific NoRs where the requiring authority considers that the environmental effect(s) needs to be taken into account. Should the NoRs be confirmed the outline plan of works process under section 176A of the RMA would apply to the detailed design and implementation of the works needed to implement the works. That said, it is a responsibility of the requiring authority to demonstrate that the effects of the designation, including its implementation have been assessed and appropriate conditions to manage those effects have been applied to the designation.

The assessment of effects in this report considers the effects on the environment of allowing the requirement, having particular regard to the matters set out in sections 171(1)(a) to (d) and 181 of the RMA.

6.2.2. Effects to be disregarded – trade competition

I do not consider that there are any trade competition effects that should be disregarded. The submissions do not raise any trade competition issues.

6.2.3. Effects that may be disregarded – permitted baseline assessment

The permitted baseline refers to the adverse effects of permitted activities by the AUP on a site. In this case the NoR applies to multiple sites with residential, open space and future urban zoning, and combinations of permitted activities.

The Environment Court in *Beadle v Minister of Corrections* A074/02 accepted that the obligation to apply permitted baseline comparisons extended to Notices of Requirement. In *Nelson Intermediate School v Transit NZ* (2004) 10 ELRNZ 369, the Court accepted that the permitted baseline must define the “environment” under section 5(2) (b) and (c) and from that section 171(1). When considering the adverse environmental effects of a proposal, the effects may be considered against those from permitted baseline activities. As the effects resultant from permitted baseline activities may be disregarded, only those environmental effects which are of greater significance need be considered.

In *Lloyd v Gisborne District Council* [2005] W106/05, the Court summed up the three categories of activity that needed to be considered as part of the permitted baseline as being:

1. What lawfully exists on the site at present
2. Activities (being non-fanciful activities) which could be conducted on the site as of right; i.e., without having to obtain a resource consent (see for example *Barrett v Wellington City Council* [2000] CP31/00).
3. Activities which could be carried out under granted, but as yet unexercised, resource consent.

Application of the permitted baseline approach is optional depending on its merits in the circumstances of the NoR.

I do not consider that the permitted baseline approach is appropriate in the case of the Trig Road NoR. There are a range of permitted activities that apply to the various zones, including permitted levels of earthworks, vegetation clearance, construction noise, and the establishment of roads. However, the permitted thresholds and associated effects that apply throughout the AUP zones are significantly lower than the scale and intensity of activities proposed by the NoR.

I do not consider that a comparison between the effects of what is permitted and what is proposed can be of use when considering the NoR. Therefore, I recommend that the permitted baseline be disregarded. I also note that the requiring authority has not put forward this argument in its assessment of effects.

6.2.4. Effects that may be disregarded – written approvals

Any effect on a person who has given written approval to the NoR may be disregarded if it is appropriate to do so. No written approvals were included in the NoR.

6.2.5. Use of management plans

The requiring authority proposes to use various management plans to address the majority of anticipated environmental effects, and these have been offered as conditions placed on the NoRs. If confirmed, the management plans would provide the framework to guide the final design of the various components of the transport corridors as well as to avoid, remedy, mitigate or manage the adverse effects of the construction activities associated with the implementation of the project. The following management plans have been offered by the requiring authority:

- Construction Environmental Management Plan (CEMP)
- Cultural Monitoring Plan (CMP)
- Construction Noise and Vibration Management Plan (CNVMP)
- Construction Traffic Management Plan (CTMP)
- Ecological Management Plan (EMP)
- Stakeholder Communication and Engagement Management Plan (SCEMP)
- Tree Management Plan (TMP)
- Urban and Landscape Design Management Plan (ULDMP)

This approach has been taken across the three NoR Packages (Local Arterials, Strategic, and HIF).

The use of management plans at the NoR stage of a designation is generally supported, and Council officers have had regard to the structure, scope, adequacy and efficacy of each management plan offered as part of the assessment of this NoR. In a number of circumstances, we have recommended amendments to aspects of the management plans to address certain adverse effects and/or make the management plans more effective.

It is acknowledged that the NoR process is primarily about route protection rather than implementation. A management plan process is therefore accepted as an appropriate method, given that detailed assessment and implementation would occur at the Outline Plan of Works stage.

However, it is important that the NoR conditions set out a robust resource management process for the preparation of management plans. Council considers that use the use of management plan conditions needs to be certain and enforceable. In that regard management plan conditions should have a clear objective as to what it is to be achieved as a result of implementing the plan as well as specific measures to avoid or mitigate potentially adverse effects. Management plans should also avoid delegation of decision-making requirements to a Council officer.

In my view, the following matters need to be considered in the preparation of management plans conditions:

1. Management plan purpose – clear and specific purpose and outcome;

2. Adoption of Best Practicable Option where appropriate especially for construction related management plan (noise and vibration, construction traffic, construction management);
3. Inform the duration, frequency and timing of works to manage disruption on affected receivers;
4. Engagement with affected receivers;
5. Specific details relating to avoiding, remedying or mitigating adverse various effects on the environment and neighbouring properties;
6. Complaints procedure;
7. Details on the monitoring of effects (and how these would inform the management plan going forward); and
8. Details on the process to amend, update or review any management plans.

Generally, it is my view that SGA has adopted these principles in its preparation of recommended management plan conditions. In several circumstances Council officers have recommended amendments to the conditions associated with management plans to address certain adverse effects and/or make the management plans more effective.

It is general practice for the Council to certify any management plans that form conditions of designations. In the case of these NoRs, a great deal of reliance is being placed on management plans as the principal method to avoid, remedy or mitigate adverse effects on the environment. In my view, it is important that the council retains the ability to review any management plan for completeness and to request changes to the management plans without the need for formal review of the conditions. Accordingly, I have added a certification clause to each management plan condition.

6.3. Positive effects

6.3.1. Application

The AEE states that the Project will deliver a range of positive effects for the area, including the provision of appropriate infrastructure to accommodate anticipated growth in Whenuapai. In relation to this, the AEE states that:

"...the Project supports the ongoing urbanisation of the area, by providing improved accessibility to the FUZ surrounding the Project area through an upgraded urban transport corridor and greater connectivity between SH18 and Hobsonville Road.

...

Overall, the Project will provide significant benefits to the local community and wider North West area, supporting the Council's growth strategy. In providing an urban transport corridor that responds to the growth demand in the area, the Project will improve transport network functions and contribute to a high-quality urban environment for local residents, businesses and road users." (AEE, pg. 70).

The positive effects associated with the Project are primarily related to transportation matters, and have therefore been addressed in Section 6.4.2, below.

6.3.2. Submissions

There was one submitter on the TRHIF NoR who stated that they supported the proposal in principle, so long as the rights of property owners were upheld throughout the planning and construction of the project. Other submissions noted some of the positive effects that would arise from the Project, including:

- Supports continued growth in the north-west
- Improved connectivity between Redhills, Westgate, Kumeu and Whenuapai
- Improved safety outcomes for all users
- Provision of active mode facilities
- Improvements to existing traffic and congestion

6.3.3. Planning assessment

I generally agree with the SGA assessment of positive effects and acknowledge the positive effects of the NoRs as described above. I also acknowledge that these positive effects must be considered when assessing any adverse effects on the environment.

6.4. Actual and potential adverse effects

Effects on the environment are addressed in Section 9 of the AEE. The following discussion addresses the actual and potential adverse effects of the TRHIF NoR. The relevant specialists' reports are referred to and are provided in Attachment 3. Submissions have also been considered and are referred to where relevant.

6.4.1. Construction and earthworks effects

Construction works are addressed in sections 7.1 of the AEE.

6.4.1.1. Application

The AEE states that an indicative construction methodology has been developed, as construction activities may not occur for some time and details are subject to change. The total construction phase of the TRCU Project is expected to take approximately 18 to 24 months, with works to be broken down into separate construction zones. The anticipated zones are:

- Zone 1: Trig Road North of the SH18 bridge
- Zone 2: Trig Road South including the SH18 bridge
- Zone 3: Hobsonville Road

Effects associated with construction works could include:

- site establishment and clearance

- earthworks, and temporary erosion and settlement release
- construction noise and vibration
- network utility works
- construction air quality impacts
- stream works and stormwater
- construction traffic impacts

Effects such as construction noise and vibration, network utility works and streams works and stormwater, are addressed in other sections of this report. Bulk earthworks are proposed for construction of the TRHIF NoR. Regional resource consent is being sought for this activity.

It is further noted in the AEE that the Project will have effects on private properties along the corridor during the construction phase, including changes to property access. These matters are considered in Section 6.4.10 of this report. In relation to this matter, the AEE notes that that reinstatement will be addressed with affected property owners in accordance with the processes of the Public Works Act 1981.

6.4.1.2. Submissions

There were no submission points received on the TRHIF NoR that were seeking relief specifically in relation to construction effects.

6.4.1.3. Specialist review

There has been no specialist review completed for this section of the report.

6.4.1.4. Planning assessment

I consider that the potential adverse environmental effects associated with construction can be adequately avoided, remedied, or mitigated through the following provisions:

- the condition on each NoR (Condition 11) that requires a CEMP be prepared to set out how construction effects will be managed including dust, and hazardous substances
- the following provisions of the AUP:
 - Chapter E11 – Land disturbance - Regional
 - Chapter E14 – Air Quality in respect of both construction and operational air quality effects. I note that Chapters E11 and E14 provisions are drafted in respect of the council's regional functions under s31 RMA and regional plan under s77 RMA, and as such will continue to apply to the Project as and when the NoRs are confirmed.
- requirements under National Policy Statements/National Environmental Standards including:

- Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

No amendments to the designation conditions are proposed in relation to construction effects.

6.4.2. Transport effects

Transport effects are addressed in Section 9.2 of the AEE and are informed by the Assessment of Transport Effects ('ATE') (v1.0). The ATE considers the positive effects, the operational effects, and the construction effects on the transport network.

6.4.2.1. Application

6.4.2.1.1. Positive effects

The AEE states that the Project will have a number of positive effects on the transportation network, and will address a number of existing issues, including:

- A current lack of pedestrian, cycle and public transport facilities along Trig Road
- Existing intersections designed for low-volume rural environments
- Existing transport infrastructure is inadequate to support growth and urbanisation

Walking and Cycling

The Project proposes the following improvements:

- provision of separated protected walking and cycling facilities along Hobsonville Road and Trig Road
- signalised pedestrian and cycle crossing points at all intersections within the Project area, including the intersection of Trig Road and Luckens Road with Hobsonville Road
- dedicated walking and cycling facilities on both sides of Hobsonville Road.

The AEE states that this will result in positive effects, as there are currently no dedicated cycling facilities, and limited pedestrian facilities on both Hobsonville and Trig Road. In addition, the current road environment supports higher vehicles speeds which don't promote walking and cycling.

Overall, the AEE recognises the strategic importance of Hobsonville Road and Trig Road in relation to the wider transport network. It notes its proximity to key trip attractors such as Westgate Metropolitan Centre and public transport interchange, and planned business land in Whenuapai. In relation to this, the AEE states that the proposed upgrades will provide for alternative transport modes and encourage modal shift.

Public Transport Network

The Project is proposing to replace existing bus stops and provide for new bus stops along the corridor to respond to the future public transport network. This is expected to improve bus travel times and reliability through prioritisation of bus movement, which is anticipated to increase the efficiency and attractiveness of public transport.

Road Safety

The Project proposes safety improvements that respond to the transition of the existing environment from rural to urban. In relation to road safety, the AEE states that “...*the Project is well aligned with the principles of AT’s Vision Zero and will improve the existing transport corridor to provide high levels of road safety in the Project area. Detailed design investigations will be completed to further support safety outcomes*” (AEE, pg. 72). Improvements are proposed through the provision of protected active mode facilities, safe intersection design with crossing facilities, and minimised vehicle lane widths and corridors to support a lower speed environment.

In relation to the positive ecological effects of the Project, the AEE states that, “...*currently the potentially affected wetlands in the project area, are dominated by exotic plant species, with effects of grazing and pugging from livestock. The proposal includes planting and fencing and protection of two wetlands in perpetuity.*” (AEE, pg. 70).

6.4.2.1.2. Construction traffic effects

In relation to construction traffic effects, the AEE states that the assessment has been based on the indicative construction methodology, with further details around delivery of works to be confirmed during the detailed design stage (AEE, section 9.2.1).

The AEE also states that construction traffic movement to accommodate earthworks is likely to result in increased traffic volumes along construction routes. Affected routes are currently uncertain, due to construction timing and project staging being undetermined. However, the requiring authority considers that connectivity to the strategic transport network will mean that construction traffic can be accommodated.

Overall, the AEE notes that “...*the ATE does not identify any significant adverse impacts on the wider transport network as a result of the construction traffic; however, it does identify the potential for localised changes to traffic movement and property access. Measures to mitigate these potential effects will be secured through a designation condition requiring preparation and implementation of a CTMP, such that the adverse effects are no more than minor*” (AEE, pg. 72). This is further discussed within the specialist review and planning assessment sections below.

6.4.2.1.3. Operational traffic effects

The operational traffic effects associated with the TRHIF NoR are summarised below:

Walking and Cycling

A two-way cycle facility is proposed on the eastern side of Trig Road. Provision of cycle facilities on the western side of Trig Road has been avoided due to the high number of existing vehicle crossings on the western side. In relation to this, the AEE states that “...locating the cycleway on the eastern side of Trig Road means that cycle facility users will not have to cross multiple vehicle crossings, reducing the potential for conflict and accidents” (AEE, 73). It is also noted that Trig Road School is located on the eastern side of Trig Road (at 15 Trig Road), meaning that upgrade active mode facilities will provide a safer environment for children going to school. Overall, the anticipated effects on walking and cycling are expected to be positive.

Access – Driveways and access movements

Hobsonville Road already has ‘arterial’ classification, and Trig Road is proposed to also have an arterial function although it is not identified as an arterial road in the AUP. If a road is classified as an arterial in the AUP, property access is restricted. In regard to access, SGA’s overarching design philosophy for the network has been to maintain driveway access where practicable. The AEE notes that there are several properties where a replacement property access will not be possible to implement. Where this has been identified, these properties have been included within the proposed designation boundary.

The AEE notes that the design of signalised intersections which incorporate raised islands will mean that several existing property accessways will no longer be able to turn right when leaving the site and will (in effect) be a left-in left-out access only. In relation to the TRCU Project, this will directly affect existing property accesses between 72 to 78 Hobsonville Road and 87 to 111 Hobsonville Road. In relation to the effects anticipated from this restriction, the AEE states that:

“The ATE provides an evaluation of this change and how the restriction to right-turn movements is likely to affect vehicle access to these properties. This evaluation has concluded that there are sufficient alternative routes within the local transport network to mitigate the restriction on right-turn movements on these properties. The local transport network provides a range of alternative route options (regardless of destination or direction of approach) which work for left-in left-out movements. Accordingly, any additional travel time to complete these manoeuvres are considered to be minimal”. (AEE, pg. 74).

General Traffic – Network performance and surrounding network connections

The AEE notes that the Project will change the local transport environment, which has the potential to affect network performance through greater travel times. Aspects of the Project which may result in greater travel times are summarised in Table 6 below.

Table 6: Effects of the Project on general traffic

Cause	Effect
Speed reduction from 80km/h to 50km/h over approximately 600 metres of Trig Road	Minor increase in travel time, estimated to be an additional 10 seconds.
Provision of signalised intersections along Hobsonville Road	Delays to vehicles travelling along Hobsonville Road, beyond what is currently experienced

Given the above, the AEE states that, balancing the adverse effects of the Project (as detailed in Table 6 above) with the increased efficiency of public transport (due to advanced bus lanes and provision of dedicated walking and cycling facility improvements), the resulting effects on network performance are considered to be negligible.

The AEE states that “a collector road network is not provided for by the Project as the alignment and delivery of these will be the responsibility of developers at the time of urbanisation. The design of arterial roads within the TRHIF does not preclude intersections with collector roads being provided by developers at a later time” (AEE, pg. 75).

Overall, while the future collector and local transport network is yet to be determined, the Project design provides sufficient flexibility to enable these connections to be formed as the surrounding land is developed. As such, the Project will have no adverse effects on the future network connectivity.

6.4.2.1.4. Mitigation Measures

The SGA propose to remedy or mitigate potential adverse construction effects through conditions requiring the preparation of a Construction Traffic Management Plan (‘CTMP’) to be prepared closer to the time of construction. Any potential construction effects will be reassessed prior to construction taking into account the specific construction methodology and traffic environment at the time of construction.

The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects. To achieve this objective, the CTMP will include:

- a) *methods to manage the effects of temporary traffic management activities on traffic*
- b) *measures to ensure the safety of all transport users*
- c) *the estimated numbers, frequencies, routes, and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion*
- d) *size access routes and access points for all construction vehicles, the size and location of parking areas for plant, construction vehicles, and the vehicles of workers and visitors*
- e) *identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads*
- f) *methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be*
- g) *the management approach to loads on heavy construction vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads*
- h) *the method that will be undertaken to communicate traffic management measures to affected road users e.g. residents, public, stakeholders, emergency services.*

6.4.2.2. Submissions

There were 14 submission points received on the TRHIF NoR which raised matters relating to the traffic effects of the Project. The key issues raised in submissions are listed below:

- **Access**

Six submissions received on the TRHIF NoR raised the matter of access. The main concerns raised were:

- permanent limitations to property access due to implementation of raised medians
- restrictions on the provision of future access to land due to arterial road status
- access to property, both during construction and post-construction
- provision of property access upon completion to enable development
- ongoing access to infrastructure assets during and after construction
- safe alternative access to be addressed in OPW.

- **Alternative routes/design of elements of traffic infrastructure**

Six submissions received on the TRHIF NoR that sought the implementation of alternatives to what the Project has proposed. These included:

- Alternatives (e.g., bypass road or roundabout) to the provision of signalised (traffic light) intersections
- Improvements to motorway access
- Adoption of Option C (as detailed in the Assessment of Alternatives) as the preferred option for the NoR
- Alternative methods to achieve road widening other than what has been proposed

- **Wider transport network**

One submitter, New Zealand Retail Property Group, raised matters regarding the wider transport network. The matters raised in the submission include:

- prioritisation and integration with existing transport infrastructure
- connections around, and to, the Westgate Metropolitan Centre, and other proposed or outstanding projects in the north-west area including Northside Drive (bridge and ramp connections to SH16), and the Westgate Bus Station interchange.

- **Construction traffic effects**

There were several submissions received on the TRHIF NoR which raised matters relating to construction traffic effects. The matters raised included:

- further information required on how traffic effects generated during construction will be managed generally and on specific properties, including through additional conditions in the CTMP
- mitigation of construction traffic effects, including:
 - construction vehicle movement throughout the construction period

- increased congestion resulting from construction works
- increased traffic volumes once operational.

- **Safety around schools**

One submitter, the Ministry of Education, raised matters relating to:

- a. *Lack of detail regarding the volume of truck movements that are likely to pass Trig Road School. The Ministry is concerned with the potential high volume of truck movements that could pose a threat to students walking or cycling to school, or students getting out of cars at peak pick-up and drop-off times.*
- b. *The Ministry of Education supports the establishment of a CTMP. However, the proposed CTMP condition (Condition 15) does not specifically outline details about the management of heavy construction traffic including non-working or non-movement hours to manage vehicular and pedestrian traffic near schools. The relief sought is through amendments to the CTMP condition, with the wording being dependent on the school that will be affected by the NoR.*

- **Amendments to conditions**

There were three different submission points received on the TRHIF NoR that were seeking relief in the form of amendments to conditions, or new conditions, to address transport matters or effects. Where amendments to conditions have been sought, and specific wording has been proposed by a submitter, these has been considered in this report. Where amendments to conditions have been sought, but no specific wording has been proposed, it is recommended that the submitter provides amended wording in their evidence or at the hearing, for further consideration.

The Ministry of Education sought the following relief in relation to the proposed CTMP condition (Condition 15). The relief sought is through amendments to the CTMP condition in relation to Trig Road School.

A CTMP shall be prepared prior to the Start of Construction for a Stage of Work.

- (a) *The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects. To achieve this objective, the CTMP shall include:*

...

- (iii) *the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion*

- a. *How heavy vehicles will avoid travelling along Trig Road, between State Highway 16 and Hobsonville Road, during school pick up and drop off time (between 8.15am and 9.10am and 3.00pm to 3.30pm), during term time. Engagement should be undertaken with the school prior to construction to confirm the restricted times still reflect the school's peak before-school and after-school travel times. It is noted that new schools could establish around the project area*

before construction commences. Any new school on an identified construction route must be engaged and added to the table below. Heavy vehicles movements must also avoid these new schools at their peak pick up and drop off time.

- b. Details of consultation (including outcomes agreed) with the applicant and Trig Road School with regard to maintaining the safety of school students during construction. Details of all safety measures and interventions will be documented in the Construction Traffic Management Plan.
- c. Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving past both school, and to look out for school children and reversing vehicles at all times.

CDL Land New Zealand Limited is seeking new or amended conditions to ensure that:

- a. *Future access from Trig Road into the CDL land is protected, including the possibility of access via a collector road from Trig Road and a new intersection north of Ryans Road*
- b. *Trig Road is classified as a local arterial road, rather than a limited access road under section 346C of the Local Government Act 1974.*

Kāinga Ora Homes and Communities is seeking the provision of condition which requires that:

- a. *Where property access that exists at the time of submitting the OPW is altered by the Project, that the Requiring Authority shall consult with the directly affected land owner regarding the changes required and the OPW should demonstrate how safe alternative access will be provided.*

The key themes across the submissions received relating to transport effects, as well as any relief sought in relation to conditions, is discussed in the planning assessment in section 6.4.2.

6.4.2.3. Specialist review

Assessment

Mr Andrew Temperley, Council's consultant traffic specialist, has reviewed the TRHIF NoR, including the AEE and associated technical reports, and provided a response on 22 June 2023 which is included in Attachment 3. Mr Temperley's assessment and conclusion, regarding the TRHIF, states the following:

"...based on information provided by SGA to date, I consider that the evidence provided by SGA confirms that the future arterial road corridors are necessary to support traffic growth arising from future urban development in the area. However, I do not consider that sufficient information has been provided to guarantee that the proposed NORs will deliver a fit for purpose road network ensuring safe and efficient operation for all road users" (para. 1.4, pg. 2).

Mr Temperley’s primary concern is around the interdependence between combinations of NoRs and the consequential effects on transportation performance and the operation of individual NoRs, which may be affected by timing of delivery. In particular, Mr Temperley states that:

“Future arterial roads within the Whenuapai area in particular include combinations of routes with an east-west or north-south traffic carrying function, which have a high interdependence on one another in order to achieve forecast future traffic flows which are premised on the full network being developed.” (para. 1.6, pg. 2)

Although it is located to the south of Whenuapai, the above comments also relate to TRHIF, as the whole of Trig Road, which links to Whenuapai at its northern end at the intersection with Brigham Creek Road, functions as one continuous north-south transport corridor.

In reviewing SGA’s assessment of the transportation effects of the NoR corridors, Mr Temperley identified several information gaps. Additional information was subsequently provided in the Section 92 response from SGA. After a review of the further information provided, Mr Temperley was generally satisfied with responses to the following matters:

- a. inconsistencies in intersection form along most of the future arterial road corridors
- b. poor Level of Services (LOSs) at key intersections, with no interventions or mitigation proposed
- c. assessments of safety
- d. construction traffic effects.

Mr Temperley has stated that there are still outstanding information gaps regarding the interdependency of NoR corridors. In Mr Temperley’s view, this is the key issue affecting the transportation performance and operation of individual NoR projects, particularly for NoRs in the Whenuapai. In relation to this, Mr Temperley states that:

“...the lodgement of each of the NoRs separately... fails to guarantee the fulfilment of key transport outcomes which are reliant on an eventual full network being delivered. I consider insufficient information has been provided by SGA to demonstrate the ability of individual road corridors to function adequately under an appropriate ‘worst case scenario’, which considers the absence of other key elements of the proposed future road network” (pg. 34).

Submissions

Section 5.0 of Mr Temperley’s assessment considers the submissions received on the TRHIF NoR. Mr Temperley has also provided a response to each of the key issues raised in the submissions on pages 26 to 27 of this memo dated 22 June 2023 (included in Attachment 3A). Mr Temperley has considered the matters raised in the submissions in forming his conclusions and recommendations. Some of the key points that came through in Mr Temperley’s assessment of the submissions are noted below:

- Mr Temperley does not identify any with the requiring authority’s approach to managing effects on access (para. 5.66).

- Mr Temperley states that both an off-line realignment of Trig Road to the east and west was considered by the requiring authority in their assessment of alternatives, with both options not-preferred due to various constraints (para. 5.68).
- That additional traffic is likely to occur with or without the proposed widening of Hobsonville Road, due to the future level of urban growth that is anticipated in the area (para. 5.69).

In response to the Ministry of Education's submission, which sought amendments to the CTMP condition (Condition) for the TRHIF NoR, Mr Temperley has stated that he agrees with the Ministry of Education's proposed amendment and has recommended a further addition (as below) to address the maintenance of safe routes for pedestrians and cyclists to and from school:

- c. Ensuring that safe routes to schools for pedestrians and cyclists are maintained, or equivalent alternative routes are provided.*

Summary

Mr Temperley has been unable to conclude that acceptable transport outcomes can be achieved in the instance that not all of the NoRs are approved. This is because the further information still does not fully assess the transport effects of individual arterial corridors, including performance of key intersections under an appropriate 'worst case scenario'.

To ensure that the NoRs deliver a future fit for purpose road network, Mr Temperley makes the following recommendations:

- *that the NORs either be approved in their entirety, or that further information be required on transport performance, the possible need to increase transport capacity, and the ability of that additional capacity to be provided within the proposed NOR designations, should any individual NOR not be approved*
- *site access routes and access points provided during the construction phase to comply with appropriate provisions of the Auckland Unitary Plan Transport Chapter.*

Mr Temperley also recommends amendments to the CTMP condition (Condition 15) across for the TRHIF NoR, as below:

- a) How heavy vehicles will avoid travelling past the schools listed in the table below during before-school and after-school travel times, during term time. Engagement should be undertaken with each school prior to construction to confirm the restricted times still reflect the school's peak before-school and after-school travel times. It is noted that new schools could establish around the project area before construction commences. Any new school on an identified construction route must be consulted and added to the table below [see table in submission]. Heavy vehicles movements must also avoid these new schools at their peak pick up and drop off time.*
- b) Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving past both schools, and to look out for school children and reversing vehicles at all times.*

- c) *Details of consultation (including outcomes agreed) with the applicant and [affected schools] with regard to maintaining the safety of school students during construction. Details of all safety measures and interventions will be documented in the Construction Traffic Management Plan.*
- d) *Any CTMP 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.*
- e) *Ensuring that safe routes to schools for pedestrians and cyclists are maintained, or equivalent alternative routes are provided.*

6.4.2.4. Planning assessment

I rely on the expert opinion of Mr Temperley that the NoR meets the RMA requirement to be 'reasonably necessary' to accommodate future growth within the areas served by the new transport corridors.

In relation to the relief sought by CDL Land New Zealand Limited, I consider that the requiring authority has addressed the matter of future access to land in Section 9.2.2.2 of the AEE. In relation to this, the requiring authority states (on pg. 53) that "*there are future urban areas immediately adjacent to Trig Road, and future developments will be able to connect to this key corridor via future developer delivered collector roads*".

The AEE further notes that the Project will not preclude intersections from being provided with collector roads, and the provision of these at a later stage.

I do not have any comment to make in relation to CDL Land's second point, regarding the classification of Trig Road as a local arterial road and suggest that this is a matter best addressed by the requiring authority.

The relief sought by Kāinga Ora is addressed in Section 6.4.13 of this report.

I further agree with and adopt Mr Temperley's assessment of the submission points that were received on the TRHIF NoR in relation to transport effects, as provided on Pages 26 to 28 of his memo. No outstanding matters of concern were identified by Mr Temperley in his assessment of these submissions. However, I note that some of his amendments to the proposed conditions integrate the relief sought by the submitters. I consider that the existing conditions, as well as the proposed amendments to the CTMP condition, address majority of the concerns that have been raised by the submitters.

Overall, Mr Temperley has been unable to conclude that acceptable transport outcomes can be achieved if not all of the NoRs are approved. This is because the further information provided by SGA still does not fully assess the transport effects of individual arterial corridors, including performance of key intersections under an appropriate 'worst case scenario'.

To ensure that the NoRs deliver a future fit for purpose road network, Mr Temperley makes the following recommendations:

- that the NORs either be approved in their entirety, or that further information be required on transport performance, the possible need to increase transport capacity, and the ability of that additional capacity to be provided within the proposed NOR designations, should any individual NOR not be approved
- site access routes and access points provided during the construction phase to comply with appropriate provisions of the Auckland Unitary Plan Transport Chapter.

Mr Temperley also recommends amendments to the CTMP condition (Condition 15) for the TRHIF NoR. These amendments have been included in Attachment 5 of this report.

Having reviewed the application material and, taking into consideration the expert opinion of Mr Temperley, I consider that TRHIF NoR is unlikely to have any effects that will be more than minor. I am confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated through the amended conditions that have been included in Attachment 5.

6.4.3. Noise and vibration effects

6.4.3.1. Application

The actual and potential effects of noise and vibration associated with the construction, operation, and maintenance of the Project are addressed in Section 9.3.1 of the AEE. The assessment is informed by the Trig Road Corridor Upgrade: Assessment of Construction Noise and Vibration (ACNV) and the Trig Road Corridor Upgrade: Assessment of Traffic Noise and Vibration (ATNV). Noise and vibration effects have been assessed in relation to the construction and operational phases of the Project and are summarised below.

6.4.3.1.1. Construction Noise and Vibration Effects

Construction Noise Effects

The ACNV (on pg. 17) states that construction noise effects have been assessed against the “long-duration noise criteria for works greater than 20 weeks under NZS 6803:1999. The predicted effects are based on indicative information for the Project, and therefore the ACNV considers that the effects will need to be reassessed at the time of construction.

Majority of noisy works to be carried out between 7am-6pm on weekdays, with some night time and weekend works for the pavement and surfacing stage as required, especially to tie in to the existing network (ACNV, pg. 17).

In relation to the TRHIF Project, the AEE has stated that “*the closest properties outside the designation boundary and adjacent to the Project area could experience worst-case noise levels up to 90 decibels equivalent continuous sound level (dB LAeq) with mitigation, which does not comply with the AUP:OIP day-time noise criterion. This has the potential to result in noise disturbance effects (e.g., loss of concentration, annoyance a reduction in speech intelligibility and reduced productivity) without appropriate mitigation*” (AEE, pg.76).

I also direct the reader to the ACNV which includes a table (Table 7-1) on page 20 that provides a more thorough description of the different levels of noise relative to potential effects.

The AEE further states (on pg. 77) that worst-case mitigated noise levels are likely to be infrequent due to setback distances from the works and the use of alternative equipment that has lower source noise levels. Noise associated with the use of construction equipment is said to be intermittent with noise levels expected to reduce as noise-generating equipment moves away from receivers. Construction noise levels are expected to comply with the 70 dB LAeq daytime noise criterion for most of the construction works.

The ACNV adopts the construction noise standards provided by Rules E25.6.27(1) and E25.6.27(2) of the AUP for its assessment (ACNV, pg. 8).

Overall, the AEE states that “...*construction noise will be temporary and construction noise levels can be significantly reduced through the implementation of the hierarchy of mitigation measures...the potential construction noise effects will be no more than minor*” (AEE, pg. 77).

Construction Vibration Effects

The ACNV states that, due to the highly site specific nature of vibration generation and propagation, and to account for the inaccuracies in the prediction of vibration, the likely worst-case vibration has been calculated in order to assess the likely effects of the Project.

The AEE states that “...*in worst case circumstances (without mitigation) 36 residential dwellings adjacent to the Project area may experience vibration levels of 5 mm/s or above, exceeding the criteria for residential properties. 5mm/s is the threshold above which cosmetic building damage may occur, such as cracking*” (AEE, pg. 77).

It further states that “...*vibration amenity criteria (vibration levels of 0.3mm/s for night time and 2 mm/s during the day) could be exceeded in existing or future buildings if they are occupied during the works and within 21m of the roller compactor (high vibratory equipment) or within the emission radii identified for the other vibration generating equipment (refer to Volume 4 for details).*” (AEE, pg. 77).

The AEE notes that adverse effects associated with excessive vibration may include:

- cosmetic damage to buildings (e.g., cracking)
- annoyance and loss of amenity
- inability to carry out work.

However, I direct the reader to the ACNV which includes a table (Table 7-2) on pages 23-24 that provides a more thorough description of the different levels of vibration relative to the potential vibration effects on human perception.

The AEE notes (on pg.77) that vibration effects will reduce with distance from the source and the level of vibration transmission into a building will depend on a number of factors, such as the foundation type and building construction. It further notes that structural damage to buildings is not anticipated.

Overall, the AEE states that “...construction vibration will be temporary and through the implementation of the hierarchy of mitigation measures, the risk of significant adverse effects associated with excessive construction vibration levels can be avoided. Accordingly, by providing appropriate mitigation and construction management the potential construction noise effects will be no more than minor.” (AEE, pg. 105).

Mitigation Measures (construction noise and vibration)

The CNVE and AEE propose to manage noise and vibration effects across the N-S and E-W Project through a suite of conditions to the NoRs:

- Specifying noise and vibration standards for the Project;
- Requiring a Construction Noise and Vibration Management Plan (‘CNVMP’) to provide a framework for developing and implementing the Best Practicable Option (‘BPO’) for preventing and minimising construction noise and vibration effects, in order to achieve the proposed standard noise and vibration standards;
- Requiring a Schedule to the CNVMP to be prepared where construction noise or vibration is anticipated to exceed the proposed standards, in order to set out the BPO for managing noise and/or vibration effects beyond the measures set out in the CNVMP.

Mitigation measures, as described in the CNVMP could include:

- Managing times of activities to avoid night works and other sensitive times
- Liasing with neighbours so they can work around specific activities
- Selecting equipment and methodologies to restrict noise
- Screening/enclosures/barriers, and
- Offering neighbours temporary relocation.

Regarding potential effects from construction vibration the AEE states that “...in order to manage the potential for cosmetic damage to buildings, a building condition survey will be offered to be carried out before and after construction works at properties where predictions indicate the relevant building damage criteria may be exceeded, to determine if any damage has been caused” (AEE, pg. 77). This is included in (c)(xii)(b) of the CNVMP condition.

Increased communication with stakeholders and regular monitoring is also proposed to manage effects associated with night works during the construction stage, particularly where there is no practicable alternative to undertaking night works.

6.4.3.1.2. Traffic Noise and Vibration Effects

The assessment of traffic noise effects discusses effects in relation to 'protected premises and facilities ('PPFs'), in accordance with the requirements of NZS 6806⁵. The ATNV states that PPFs:

- include existing houses, schools, marae, and various other premises
- exclude commercial and industrial premises, as well as future (unbuilt) noise-sensitive premises, unless they have already been granted building consent at the time of the assessment (in which case they form part of the existing environment).
- Include properties which are:
 - in urban areas, those properties that are 100 metres from the edge of the nearside traffic lane; and
 - in rural areas, those properties that are 200 metres from the edge of the nearside traffic lane.

Given that the Project applies to properties within the urban area, the assessment has included PPFs within 100 metres of the proposed road alignments.

The AEE states (on pg. 80) that, following implementation of mitigation measures, majority (104 out of 106) PPFs will experience Category A (negligible to minor) criteria for traffic noise, with two PPFs subject to Category B (perceptible increase in noise) criteria, due to building demolition resulting in a loss of screening.

In relation to the overall level of effect associated with traffic noise, the AEE states that traffic volumes used for the assessment are based on the anticipated urbanisation of the surrounding area, which is likely to result in an increase in noise levels due to greater levels of activity. As such, increased traffic noise is expected to not represent such a significant change. As a result, the requiring authority concludes that "*...resulting noise levels will be reasonable in a residential context at the majority of PPFs assessed and no further noise mitigation is deemed necessary at this stage*" (AEE, pg.80).

Traffic Vibration Effects

The AEE states (on pg. 80) that traffic generated from new or upgraded roading projects is not expected to create any adverse vibration effects due to the use of smooth surface materials. Therefore, operational vibration effects have not been assessed in the AEE.

Mitigation Measures (traffic noise effects)

The AEE states that, according to the NZS6806, the three key measures that affect operational noise effects are:

- Choice of road surface material
- Installation of noise barriers on roadside or property boundary

⁵ NZS 6806, August 2016

<https://www.nzta.govt.nz/assets/resources/guide-to-assessing-road-traffic-noise/docs/guide-to-assessing-road-traffic-noise.pdf>

- Building modification measures.

The use of a low noise road surface was determined to be the best practicable solution by the requiring authority in terms of traffic noise reduction and is the proposed mitigation method. Implementation of a low noise road surface, where an upgrade or extension to an existing road is within or adjacent to an urban zone, is required by Condition 21 of the NoR. No further mitigation measures are proposed.

The AEE states that “...where future developments are not yet implemented, the road controlling authorities and developers have a shared responsibility to implement reasonable and appropriate mitigation” (AEE, pg. 74). This matter is further discussed in the specialist review and planning assessment sections below.

6.4.3.2. Submissions

There were three submission points received on the TRHIF NoR that sought relief in relation to noise and vibration effects. The relief sought across these submissions was:

- A re-assessment of the noise and vibration effects/standards of the Project and shortened construction times if the Project is approved.
- Provision of a condition that requires operational noise levels to not exceed 5dBA beyond the boundaries of the designation and, where exceeded at a sensitive receiver, mitigation to then be provided by the requiring authority.
- That where the operational noise effects require mitigation, the offer for mitigation is retained in perpetuity, until an offer is taken up.
- That the low noise road surface condition is amended to require this to be on all roads within the designation.

Kāinga Ora Homes and Communities submitted across all 19 NoRs, seeking the same relief across all in relation to operational noise and vibration effects, as below:

- c) *The provision of a condition requiring operational noise levels to not exceed 55dBA beyond the boundaries of the designation and, where exceeded at a sensitive receiver, mitigation to then be provided by the Requiring Authority.*
- d) *That where the operational noise effects require mitigation that the offer for mitigation is retained in perpetuity, until an offer is taken up.*
- e) *That low noise road surface condition is amended to require this to be on all roads within the designation.*

No specific condition wording was provided by Kāinga Ora in relation to their relief sought.

Submissions in relation to noise and vibration effects are addressed below in both the specialist review and planning assessment.

6.4.3.3. Specialist review

Mr Jon Styles, Council's consultant noise and vibration specialist, has reviewed the TRHIF NoR, including the AEE and associated technical reports, and provided a response on 12 July 2023 which is included in Attachment 3B. Mr Styles' assessment of the application, submissions, and proposed conditions, is summarised below. His assessment addresses construction noise and vibration effects and traffic noise and vibration effects separately.

Application – Construction Noise

Mr Styles has provided a review of the application and submissions relevant to construction noise effects in his report dated 13 July 2023, included in Attachment 3B.

In relation to construction noise effects, Mr Styles states “...*the often-heavy nature of [construction] works and close proximity to receivers often results in the generation of noise and vibration effects that are high enough to cause significant disruption to normal business or residential activity*” (Section 8.0).

Mr Styles further states that the assessment provided in relation to construction noise and vibration effects is generally comprehensive, however notes that there is a lack of detail on certain matters, and therefore on the overall level of construction noise and vibration effects. He further acknowledges that it would be difficult for the requiring authority to provide a more accurate assessment at this time, given the long duration of the proposed lapse periods and the difficulty in confirming specific construction methods for special features along the routes, such as bridges, retaining walls and other structures.

In relation to the requiring authority's approach towards using the CNVMP (and associated Schedules) to address situations where construction noise and vibration standards are exceeded, Mr Styles states the following in Section 8.0 of this review:

“I consider that this arrangement is inappropriate, as it allows the CNVMP to be drafted in a way that allows infringements of the construction noise and vibration standards in wide-ranging circumstances with a relatively ‘open’ framework for permitting the infringements.”

In response to these matters, Mr Styles has proposed amendments to the Conditions. These amendments are included in Attachment 5. In relation to the amendments proposed, he states that “*these amendments are generally designed to deliver a greater level of certainty in the way that the construction noise and vibration standards apply and how infringements to those standards are handled*” (Section 8.0).

Overall, Mr Styles expects that the construction noise and vibration effects associated with the Project will be typical of those associated with a large roading project.

Submissions – Construction Noise

Mr Styles, in section 6.1 of his assessment, has provided a general response to submissions received from the owners and occupants of dwellings, businesses and vacant land in relation to construction noise and vibration effects. In relation to these submissions, Mr Styles recommends that the requiring authority addresses the specific concerns raised in submissions from the owners and occupiers of land affected by the NoRs. He states that this should provide a more site-specific assessment of the potential adverse construction noise and vibration effects for the specific properties.

In relation to the submission point received from Kāinga Ora, Mr Styles states that he supports the outcome, being a condition that requires the preparation of a CNVMP and Schedules to manage construction noise and vibration effects. In relation to this, he notes that he has proposed amendments to the CNVMP Condition (included in Attachment 5).

Application – Traffic Noise

Mr Styles has provided a review of the application and submissions relevant to construction noise effects in his report dated 12 July 2023, included in Attachment 3B.

Mr Styles recognises that the AEE relies on NZS6806:2010 – Road Traffic Noise but also notes several limitations with its use. He states:

“I consider it critical that the limitations of NZS6806:2010 are clearly understood in this decision-making process, along with the additional assessment that is necessary to ensure that the limitations are addressed for these projects”.

Mr Styles further notes the following as being limitations of the standard:

- Significant adverse effects can arise
- No assessment of the effects of noise on people
- Noise barriers not fully supported
- Existing environment inconsistent with general practice

In relation to the assessment provided by the requiring authority, Mr Styles states that he considered the technical acoustic aspects of the assessment are generally robust (Section 4.1), however notes that the noise modelling inputs and outputs are focussed primarily on the physically existing receiving environment (Section 4.2). In relation to this, Mr Styles states that *“the assessment of the planned environment is very brief and there is no meaningful assessment of noise effects for the future planned environment”* and that *“the assessment and s92 response both fail to address the way that the design of the Projects are intended to integrate with the future environment”* (Section 4.2).

Based on the information provided in the AEE and s92 responses, Mr Styles has concluded that a significant number of existing PPFs will be exposed to noise levels that are greater than the World Health Organisation (**WHO**) interim targets, even if the identified options to minimise noise inside the road corridor are adopted.

He adds that there will be a significant number of PPFs proximate to all NoRs that will be exposed to noise levels well above the WHO target levels whether or not there is a change in noise level or not.

In Mr Styles' view this supports the adoption of a BPO that includes a future environment and that with no acoustic treatment to those PPFs, I consider that there is a strong likelihood of significant adverse effects arising in the population. Mr Styles recommends that SGA's proposed conditions should be revised to require a BPO assessment prior to construction in the future that recognises the receiving environment as it exists at the time.

- 1) *The future BPO assessment recognises all 2022 PPFs that are still present when the final design is confirmed;*
- 2) *The future BPO assessment properly recognises the future planned environment/receiving environment as it will exist at the time of the future assessment; and*
- 3) *The future BPO assessment will be capable of taking advantage of any opportunities that may arise between now and the final design process. These opportunities may arise from new land development or changes to the AUP. One example could be a situation where numerous sites are developed in a way that avoids the need for vehicle access to the A2B alignment, making noise barriers practicable and worthwhile.*

To achieve this, Mr Styles recommends a number of modest changes to the proposed conditions are recommended and these summarised as:

- 1) *The conditions requiring the future BPO assessment should be amended to ensure they have proper regard to the receiving environment that exists or is provided for at the time the future BPO assessment is undertaken.*
- 2) *The 'low noise pavement' conditions for the other NoRs should be amended to remove the unnecessary qualifiers and to increase the certainty to the type of pavement that will be implemented;*
- 3) *The conditions should include a requirement to ensure that the predicted noise level contours across FUZ or live-zoned Residential land do not increase.*
- 4) *The conditions should require barriers where the process in NZS6806:2010 would require them for a single-storey dwelling, regardless of whether the dwelling is in fact multi-storey.*

These amendments are included in Attachment 5.

Submissions – Traffic Noise

Mr Styles, in section 8.1 of his assessment, has provided a general response to submissions received from the owners and occupants of dwellings in relation to traffic noise and vibration effects. He notes that several submissions have been received across the Local and HIF Project NoRs, raising concerns about exposure to increased noise effects. In relation to these submissions, he notes that any increase in noise level is undesirable and recommends that the requiring authority responds to the specific concerns raised by the submitters.

Mr Styles has also provided a response to the submission received from Kāinga Ora, as it relates to operational noise effects, as detailed in Section 8.2 of his assessment. In summary, Mr Styles states that he generally agrees with many of the points made by Kāinga Ora in their submission. His response to these points is further detailed in Section 8.2 of his review.

Proposed Noise Mitigation Measures

Based on the information provided in the AEE and s92 responses, Mr Styles has concluded that a significant number of existing PPFs will be exposed to noise levels that are greater than the World Health Organisation (**WHO**) interim targets, even if the identified options to minimise noise inside the road corridor are adopted.^[10] He adds that there will be a significant number of PPFs proximate to all NoRs that will be exposed to noise levels well above the WHO target levels whether or not there is a change in noise level or not. In Mr Styles' view this supports the adoption of a BPO that includes a future environment and that with no acoustic treatment to those PPFs, I consider that there is a strong likelihood of significant adverse effects arising in the population. Mr Styles recommends that the above BPO approach be adopted for circumstances where roadside noise barriers are required and he states:

I consider that the future BPO assessment should require the implementation of roadside barriers where they are required by NZS6806:2010 and where the effects on the ground floor and any outdoor areas at ground level are the primary focus.

Recommended Amendments to the Noise Conditions

Mr Styles recommends that SGA's proposed conditions should be revised to require a BPO assessment prior to construction in the future that recognises the receiving environment as it exists at the time.

- 4) *The future BPO assessment recognises all 2022 PPFs that are still present when the final design is confirmed;*
- 5) *The future BPO assessment properly recognises the future planned environment/receiving environment as it will exist at the time of the future assessment; and*
- 6) *The future BPO assessment will be capable of taking advantage of any opportunities that may arise between now and the final design process. These opportunities may arise from new land development or changes to the AUP. One example could be a situation where numerous sites are developed in a way that avoids the need for vehicle access to the A2B alignment, making noise barriers practicable and worthwhile.*

^[10] Council noise assessment – Styles Group - section 4.5

To achieve this, Mr Styles recommends a number of modest changes to the proposed conditions are recommended and these summarised as:

- 5) *The conditions requiring the future BPO assessment should be amended to ensure they have proper regard to the receiving environment that exists or is provided for at the time the future BPO assessment is undertaken.*
- 6) *The 'low noise pavement' conditions for the other NoRs should be amended to remove the unnecessary qualifiers and to increase the certainty to the type of pavement that will be implemented;*
- 7) *The conditions should include a requirement to ensure that the predicted noise level contours across FUZ or live-zoned Residential land do not increase.*
- 8) *The conditions should require barriers where the process in NZS6806:2010 would require them for a single-storey dwelling, regardless of whether the dwelling is in fact multi-storey.*

6.4.3.4. Planning assessment

I rely on the expert opinion of Mr Styles in relation to his assessment of the noise and vibration effects associated with the TRHIF NoR. Mr Styles has proposed amendments to the following conditions across the TRHIF NoR:

- Construction Noise Standards (Condition 16)
- Construction Vibration Standards (Condition 17)
- Construction Noise and Vibration Management Plan (CNVMP) (Condition 18)
- Schedule to a CNVMP (Condition 19)
- Low Noise Road Surface (Condition 21)
- Traffic Noise (Condition 22)
- Conditions 25, 26, 35
- Addition of Condition 36

These amendments are included in Attachment 5.

Having reviewed the application material and, taking into consideration the expert opinion of Mr Styles, I am confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated through the amended conditions that have been included in Attachment 5.

6.4.4. Archaeology and heritage effects

6.4.4.1. Application

Archaeology and heritage effects are addressed in Section 9.4 of the AEE, and in the Assessment of Historic Heritage Effects ('AHHE') contained in Volume 4.

The AEE notes that assessment of actual and potential effects on archaeology and heritage resulting from the construction, operation, and maintenance of the TRCU has been prepared based on several sources, as well as a visual inspection of the project area. The key conclusions drawn from the AHHE are that:

- No archaeological sites or historic heritage sites recorded within or near the TRCU Project area, with the nearest site being more than 1.5km to the west and 1km to the south, along the Manutewhau inlet and stream.
- The exposure of unrecorded subsurface remains during development is unlikely given the distance of the project from the coast and waterways, and due to the project following an existing road alignment which has already been modified.

Mitigation Measures

The AEE states “*to mitigate the very limited potential for unidentified archaeological remains to be exposed during construction, the conditions include an advice note referring to the AUP:OIP Accidental Discovery Rule (ADR) (E12.6.1)*” (AEE, pg. 75). No further mitigation is proposed.

6.4.4.2. Submissions

There were no submissions on the TRCU Project in relation to archaeology and heritage effects.

6.4.4.3. Specialist review – Archaeology

Ms Mica Plowman, council’s archaeology specialist has reviewed the TRHIF NoR and provided a response on 12 June 2023 which is included in Attachment 5. To supplement her assessment, Ms Plowman also undertook a site visit to the project area on 12 and 13 December 2022.

Application

Ms Plowman states that she concurs with conclusions and recommendations provided in the applicant’s historic heritage assessment, as it relates to the archaeological matters stated in the AEE and AHHE.

Ms Plowman agrees that the proposed mitigation approach, being reliance on the Accidental Discovery Protocol, is an appropriate measure for ensuring that any adverse effects relating to archaeological matters is appropriately remedied, mitigated or avoided.

On page 8 of her memo, Ms Plowman notes that there is one recorded historic heritage site (as recorded in the Auckland Council Cultural Heritage Inventory) located within the project area, at 80 Hobsonville Road. Ms Plowman notes that the house has no associated archaeological value. In relation to effects, Ms Plowman states that front section of the property may be subject to temporary effects during construction, however, no effects on the building are noted.

Ms Plowman’s assessment concludes that there are no outstanding issues to be addressed in relation to historic heritage and archaeology matters, and recommends that the NoR be accepted, subject to the inclusion of the conditions (Condition 37 and 38) and advice notes stated on pages 13 to 15 of her memo, and included in Attachment 5.

6.4.4.4. Planning assessment

I rely on the expert opinion of Ms Plowman in that the adverse effects on historic heritage are less than minor. In accordance with Ms Plowman's assessment, I recommend that the amendments to the proposed conditions, as shown in Attachment 5, are accepted.

I also recommend that the requiring authority have regard to some of the points raised by Ms Plowman in her assessment, for which she has proposed a condition:

- *"It is important to note that archaeological/historic heritage sites (such as WW1 or WW2 military sites) that do not meet the definition of an archaeological site in the AUP OIP or meet the definitions provided in the Protected Objects Act 1975 are not covered by the ADR and additional management processes need to be considered where there is reasonable cause to suspect the presence of these sites."* (Para. 6.8, pg. 13).
- *"Within the RATN and TRCU, historic heritage sites that fall outside of the definition of an archaeological site could include domestic settlement features relating to the early 20th century. Additional management processes need to be considered where there is reasonable cause to suspect the presence of these sites."* (Para 6.9, pg. 13).

Having reviewed the application material and, taking into consideration the expert opinion of Ms Plowman, I consider that the TRCU Project is unlikely to have any effects on known archaeological or other historic heritage values. I am confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated through the accidental discovery protocols and the amendments conditions that have been included in Attachment 5.

6.4.5. Cultural effects

Cultural effects are addressed in Section 9.5 of the AEE. A Cultural Impact Assessment (CIA) was also produced by Ngāti Whātua o Kaipara and Te Kawerau ā Maki. This can be found at the following link, under Notification Documents:

<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/auckland-unitary-plan-modifications/Pages/details.aspx?UnitaryPlanId=168>

The existing cultural environment is also detailed in Section 5.1.5 of the AEE.

6.4.5.1. Application

The AEE notes that Ngāti Whātua o Kaipara and Te Kawerau ā Maki are the predominant iwi groups with an interest in the area. The TRCU Project falls partially within, and the remainder of the project area is in proximity to, Te Kawerau ā Maki's statutory acknowledgement area.

In the CIA prepared by Te Kawerau ā Maki, the effects of the wider north-west project have been defined in terms of their significance, in relation to the level of impact (potential direct, indirect, and cumulative) and cultural value. The CIA addresses the entire north-west project, including the TRCU Project.

The AEE notes that Te Kawerau ā Maki does not oppose the TRCU and acknowledges some of the positive operational effects of the Project.

In relation to adverse effects, Te Kawerau ā Maki is concerned about the effects on whenua (productive soils), particularly in relation to bulk earthworks. It is noted that bulk earthworks are proposed for the Project. The residual effects on whenua, following the implementation of proposed mitigation measures, were identified by Te Kawerau ā Maki as being 'large adverse'.

Further concerns are also raised in relation to the effect of earthworks on Wai Māori (fresh water), resulting from earthworks in proximity to watercourses and vegetation clearance along watercourse embankments. In particular, the CIA raises concerns around the impact on Waiteputa (a tributary of the Ngongetepara Stream), due to earthworks activity in proximity to the awa, permanent fill/batter slopes in proximity to the awa, and net increases in impervious surface area. The significance of effects on Waiteputa were identified by Te Kawerau ā Maki as being 'moderate adverse', with residual effects being 'minor adverse' following the implementation of proposed mitigation measures.

Mitigation Measures

The AEE summarises the proposed measures to mitigate cultural effects arising from the TRHIF NoR in Section 9.5.3. These include:

- Ongoing engagement with mana whenua
- Preparation of a Cultural Advisory Report prior to detailed design
- Cultural design and expression through the development of the ULDMP in participation with mana whenua
- Preparation of a Cultural Monitoring Plan in participation with mana whenua to manage risk associated with accidental archaeological discovery
- Adherence with Accidental Discovery Protocols
- Preparation and implementation of a CEMP (and future regional consents) to address concerns relating to construction works and impacts on streams and wetlands
- Ecological mitigation secured through various conditions, including preparation of an EMP, to manage effects on fish, lizards, birds and bats
- Provision of mitigation planting to manage effects on riparian vegetation and streams.

6.4.5.2. Submissions

There were no submissions on the TRCU NoR that raised points in relation to cultural effects.

6.4.5.3. Specialist review

There is no specialist assessment for this section of the report.

6.4.5.4. Planning assessment

There is no planning assessment for this section of the report. As identified by the requiring authority, only mana whenua can speak to the effect that a project may have on their cultural values, heritage, and aspirations. In relation to cultural effects, the AEE does recognise that while the TRHIF NoR will not affect any identified Sites of Significance to mana whenua under the AUP, there is the potential for effects on cultural values to the natural environment and cultural landscape context.

I note that the proposed Management Plans Condition (Condition 7 across the four NoRs) states that:

(a) any management plan shall:

...

(iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have:

- a. Been incorporated; and
- b. Where not incorporated, the reasons why.

The proposed conditions that mention mana whenua are noted in Table 7 below.

Table 7: Proposed TRHIF NoR conditions that directly reference mana whenua

Management Plan	Relevant section of condition
<p style="text-align: center;">Condition 8 Cultural Advisory Report</p>	<p>(iii) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project.</p> <p>(iv) The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that:</p> <ul style="list-style-type: none"> a. Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project; b. Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values; c. Identifies traditional cultural practices within the area that may be impacted by the Project; d. Identifies opportunities for restoration and enhancement of identified cultural sites landscapes and values within the Project area; e. Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan, Stakeholder and Communication and Engagement Management Plan, and the Cultural Monitoring Plan referred to in Condition 14. f. Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making. <p>(c) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable.</p>

	<p>(d) <i>Conditions 8(b) and (c) above will cease to apply if:</i></p> <p>(i) <i>Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and</i></p> <p>(ii) <i>Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.</i></p>
<p>Condition 9 Urban and Landscape Design Management Plan (ULDMP)</p>	<p>(b) <i>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 8(c) may be reflected in the ULDMP. The objective of the ULDMP(s) is to:</i></p> <p>(i) <i>Enable integration of the Project's permanent works into the surrounding landscape and urban context; and</i></p> <p>(ii) <i>Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment.</i></p>
<p>Condition 12 Stakeholder and Communication and Engagement Management Plan (SCEMP)</p>	<p>(iii) <i>methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua;</i></p>
<p>Condition 14 Cultural Monitoring Plan</p>	<p>(a) <i>Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua.</i></p> <p>(b) <i>The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works.</i></p> <p>(c) <i>The Cultural Monitoring Plan shall include:</i></p> <p>(i) <i>Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua;</i></p> <p>(ii) <i>Requirements and protocols for cultural inductions for contractors and subcontractors;</i></p> <p>(iii) <i>Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works;</i></p> <p>(iv) <i>Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities; and</i></p> <p>(v) <i>Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol</i></p> <p>(d) <i>If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan.</i></p> <p>Advice Note: <i>Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.</i></p>

I recommend that the SGA continues to engage directly with mana whenua in relation to any cultural effects associated with the construction, operation, and maintenance of the TRCU Project, as well as any additional mitigation measures that could be implemented to address these effects.

6.4.6. Landscape and visual effects

6.4.6.1. Application

Landscape and visual effects are addressed in Section 9.6 of the AEE, and in the Assessment of Landscape and Visual Effects ('ALVE') (v1.0) included in Volume 4. The adverse landscape and visual effects that are anticipated during the construction and operational phases of the TRCU Project are summarised below.

The adverse landscape and visual effects that are anticipated during the construction and operational phases of the TRCU project are summarised below.

6.4.6.1.1. Construction effects

The AEE notes that construction of the Project will be taking place in a predominantly rural environment during its period of transition into an urban environment. Changes to the environment, including physical changes to the landscape and temporary changes to visual amenity during construction, have the potential to result in temporary adverse landscape and visual effects. Ongoing adverse effects resulting from these changes are most likely to be experienced by properties immediately adjacent to the Project boundary (pg. 85).

In summary, the requiring authority considers that there will be minor adverse effects on visual amenity during construction, but that these will mostly be temporary and confined to the construction period (pg. 86). The changing nature of the landscape surrounding the project area is expected to further mitigate any adverse effects.

6.4.6.1.2. Operational effects

The AEE considers the landscape and visual effects arising from the operational phase (i.e. post-construction) of the Project in the context of an urbanised landscape.

The Project has the potential to result in adverse effects on landscape character, natural character, and visual amenity, from longer-term changes to the landscape context. Changes include clearance and/or disturbance of vegetation, re-profiling of the existing road surface and adjacent land, and removal and/or modification of existing structures along parts of the Project area alongside the introduction of new structures (e.g., retaining walls).

The requiring authority considers that the Project area has high tolerance to these changes. One reason provided for this is the AUP zoning of adjacent and surrounding land, to which the requiring authority states that:

"FUZ development areas on adjacent land will, over time, substantially change the scale and character of the adjacent landscape as experience from within the road and absorb the landscape and visual changes proposed within the Project area. As such, the Project will contribute to an improvement of the landscape values for the urban context of the area" (AEE pg. 86).

Other reasons include the project's utilisation of existing infrastructure, the low botanical value of existing land cover and the absence of regionally or nationally significant landscapes within, or in proximity to, the Project area.

Mitigation Measures

Mitigation and design considerations proposed to minimise potential adverse effects during the construction period include:

- Cut and fill slopes are proposed be shaped to a natural slope to integrate with the surrounding landform and reinstated with appropriate landscaping.
- Localised planting is proposed to mitigate physical landscape effects and to assist with integrating the larger fill slopes further into adjacent landscape and ecological mitigation measures along Trig Road.
- Existing fences and garden plantings (removed through the Project works) are proposed to be reinstated.
- Integration of any retaining walls or noise mitigation walls with private boundary fencing (i.e., to avoid double layering of noise walls and boundary fences). It is also proposed that retaining walls and/or noise walls incorporate any reinstatement planting required to replace vegetation that may be lost through the Project works.
- Reinstatement of the Project area following the completion of construction, including the removal of residual fill and gravel from construction laydown areas and reinstatement with grass and landscaping.

The requiring authority proposes to remedy or mitigate potential adverse effects during the operational phase of the Project via conditions requiring the preparation of an Urban and Landscape Design Management Plan. The objectives of the ULDMP are to:

- enable integration of permanent works into the surrounding landscape and urban context
- ensure potential adverse landscape and visual effects are managed as far as practicable, contributing to a quality urban environment.

Summary of landscape and visual effects

Overall, the requiring authority considers that “...*the magnitude and nature of landscape character, natural character and visual change... are considered to accord with that which will occur throughout the adjacent development of the Redhills area*” (AEE, pg. 80).

Temporary adverse effects are stated to be appropriately managed through mitigation measures. In addition, the AEE states that the TRHIF will contribute to an improvement in landscape values within the future urban context.

6.4.6.2. Submissions

There were three submissions received on the TRCU Project in relation to landscape and visual effects. Two submissions referred to the same property on Trig Road and were seeking identical relief which was that further research be conducted into the visual effects (as well as other effects noted) that the Project was likely to have on the identified property. In particular, the submitter was concerned that the effects of the Project (visual effects included) would have an adverse effect on the submitter’s business, requiring them to have to re-locate.

6.4.6.3. Specialist review

Mr Peter Kensington, a consultant for the Council, has provided an assessment of the application material. His full assessment is provided in Attachment 3 of this report. In relation to the landscape and visual effects of the Project, Mr Kensington has stated that he agrees with the following aspects of the AEE and ALVE:

- with the approach to assessment utilising ‘future receiving landscape’ and the assumptions used.
- that there are likely to be low adverse landscape effects from earthworks activity / vegetation clearance.
- that there will be moderate adverse visual effects during construction.
- that there will be very-low adverse effects on natural character and adverse visual effects overall.
- that there will be low initial then very-low adverse visual effects for private viewing audiences.
- that the inclusion of landscape mitigation measures will likely result in improved natural character, landscape and amenity values in an area that will transition to urban over time.
- with the ULDMP condition to capture requirements.
 - Specific recommendations under section 7.1(a)-(j) and 7.2(a)-(d) of the March 2023; and sections 7.1.4 and 7.2.3 of the August 2020 assessment for inclusion.

In his assessment, Mr Kensington has included a note stating that a ULDMP condition has not been provided in the current version of the proposed conditions. However, I note that Attachment E does propose a condition for the preparation of a ULDMP as Condition 9.

Mr Kensington has also provided a response to the two submissions that were received on the TRCU Project that were relevant to landscape and visual matters. He agrees with the submitter(s), stating that adverse visual effects will arise from the Project, but further states that these effects are able to be mitigated via the implementation of the ULDMP.

6.4.6.4. Planning assessment

Overall, I agree with Mr Kensington's analysis of the requiring authority's analysis regarding the anticipated landscape and visual effects that the Project is likely to have on the surrounding area. I particularly agree with the statement regarding the zoning of land adjacent to the Project area being Future Urban (pg. 86). I note that the likelihood of this land being rezoned for urban purposes is relatively high, given the significant rate of urbanisation that has occurred in nearby suburbs such as Hobsonville, Westgate and Whenuapai.

I acknowledge the concerns raised by the submitter in relation to the visual effects that are likely to arise from the Project, particularly during the construction period. However, I agree with Mr Kensington's response to this matter, in which he states that effects can be mitigated via the ULDMP. I also note that the proposed amendments to the ULDMP condition (Condition 9) will require the requiring authority to develop the ULDMP in consultation with stakeholders, which include directly affected landowners (see Attachment 5 for proposed amendments, with additions shown in underline).

Having reviewed the application material and, taking into consideration the expert opinion of Mr Kensington, I consider that the TRCU Project is unlikely to have any landscape and visual effects that will be more than minor. I am confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated through the amended conditions that have been included in Attachment 5.

6.4.7. Urban design effects

6.4.7.1. Application

Urban design input has been provided in Section 6.5 of the AEE. The AEE states that, in recognition of the potential for the project to contribute to high quality liveable places, the Te Tupu Ngātahi Design Framework (the Design Framework) has been established for the wider north west programme. It is stated that:

"The Design Framework provides measurable guidance for outcomes based decisions throughout each phase of the Programme delivery" (pg. 57).

There are several design principles that make up the design framework. These are listed on pages 57-58 of the AEE. In relation to the urban design context of the TRCU, the AEE states that the surrounding context of the Trig Road corridor has few distinguishing urban form characteristics in its current semi-rural setting and is further constrained by SH18 to the north-west (pg.58).

The AEE states (on pg. 59) that the Project will provide the following urban form outcomes:

- *Provides opportunities for integrated ecological and stormwater outcomes based on the enhancement of the wetland and use of raingardens*
- *Improved sense of belonging and participation of the new urban residents*
- *Improved community resilience by supporting access to the proposed local centre on Hobsonville Road and connection with the wider open space network*
- *Servicing of higher density residential development, business and employment opportunities in the north west and Whenuapai*
- *Clear and flexible allocation of street space, and provision of separated modes*
- *Provides tangible and direct connectivity for all modes*

6.4.7.2. Submissions

There were no submissions received on the TRHIF NoR that raised matters specifically in relation to urban design.

6.4.7.3. Specialist review

Ms Jennifer Esterman, a consultant for the Council, has undertaken an assessment of the application material, as it relates to urban design matters. Her full assessment is provided in Attachment 3H of this report. Ms Esterman states that, while no urban design evaluation was provided for the Trig Road corridor upgrade, that urban design input was provided within the AEE. She considers that the level of urban design input is adequate, as Trig Road is an existing corridor that is proposed to be upgraded.

Ms Esterman states that she agrees with the urban design section of the AEE, and supports the route proposed, subject to her recommendation that a pedestrian link be provided back to Hilda Griffin Reserve (located south of Trig Road, across Hobsonville Road).

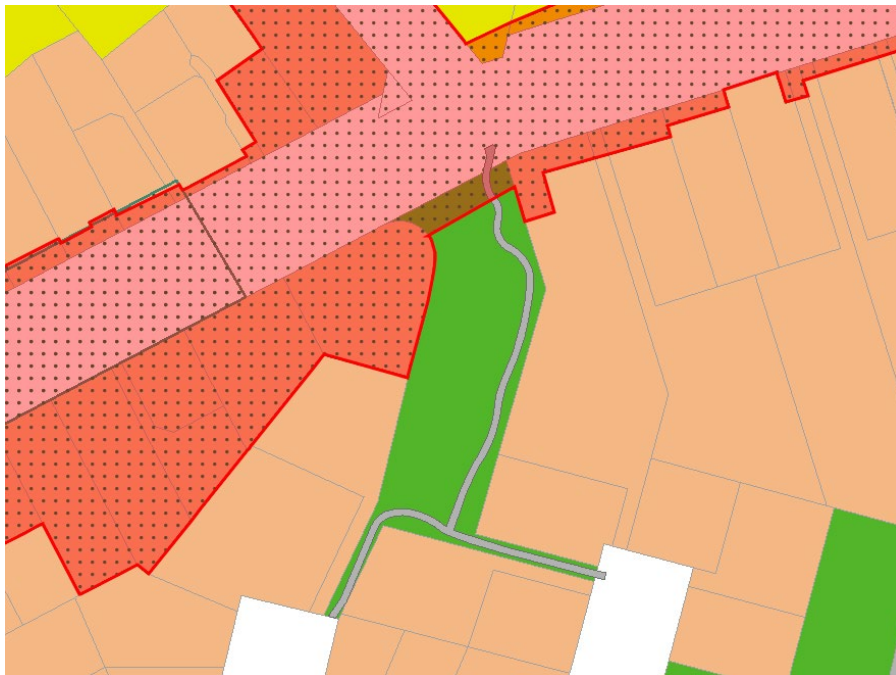


Figure 3: AUP maps showing designation boundary in relation to Hilda Griffin Reserve

In relation to this, Ms Esterman states that “...this pedestrian link is required as it is part of a green link that runs from Hobsonville Road to Louise Place, Mona Vale and Midgley Road, connecting the cul de sacs within West Harbour back to Hobsonville Road” (pg. 29). In relation to this matter, she further recommends an amendment to Condition 9 (ULDMP) of the NoR, as below:

(d) To achieve the objective, the ULDMP(s) shall provide details of how the project:

- (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e., centres and density of built form), natural environment, landscape character and open space zones;

- (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections, including Hilda Griffin Reserve.*

While there were no submissions received on the TRCU NoR that raised matters specifically in relation to urban design, Ms Esterman has identified in her specialist review that submissions that raised concerns in relation to property access and the extent of the designation boundary are of relevance from an urban design perspective.

In response to the submissions received seeking relief in relation to matters concerning property access and designation extent, Ms Esterman recommends that the requiring authority reviews the extent of the designation in relation to those properties that have been the subject of submissions, to ensure that suitable access can be retained. She further recommends that any earthworks and battering that extends beyond existing property boundaries be designed in consultation with the relevant property owners to minimise any impact to private land.

Having reviewed the application material and relevant submissions, Ms Esterman provides the following recommendations:

- 1) No pedestrian or cycle connection is shown back to Hilda Griffin Reserve. It is recommended the proposed pedestrian and cycle paths link back into the reserve as this provides a connection to the residential area of West Harbour.*
- 2) The frontage of Hobsonville Kindergarten, on Ryans Road is shown adjoining the designated area but no changes are proposed to the frontage of the kindergarten or the parking area on Ryans Road.*
- 3) That the requiring authority reviews the extent of the designation in relation to those properties that have been the subject of submissions, to ensure that suitable access can be retained.*
- 4) that any earthworks and battering that extends beyond existing property boundaries be designed in consultation with the relevant property owners to minimise any impact to private land.*

6.4.7.4. Planning assessment

I rely on the expert opinion of Ms Esterman, regarding her assessment of the submissions and the recommendations for amended/new conditions. Ms Esterman has recommended amendments to the ULDMP condition, as shown above in Section 6.4.7.3. I agree with Ms Esterman's proposed amendments to Condition 9. These amendments are shown in Attachment 5.

Ms Esterman has proposed also amendments to the Designation Review condition (Condition 3), to be applied across all 19 NoRs. I support in part Ms Esterman's recommended amendments to part (a)(ii) of this condition however, I do not support the recommended amendment to part (a) of this condition. While the requiring authority will have a final design when the Outline Plan of Works is submitted, changes during construction, with timeframes for completion ranging from 2 to 5 years, may mean that the extent of the designation, as notified, may be required to complete the proposed works. I recommend the following wording as an alternative:

The Requiring Authority shall within 6 months of Completion of Construction of a Stage of Works, or as soon as otherwise practicable:

- (i) in conjunction with the landowner(s), review the extent of the designation required for construction purposes and identify any areas that are no longer required for the on-going operation, maintenance or mitigation of effects of the Project*
- (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.*

I agree with Ms Esterman's recommendation regarding the re-establishment of a pedestrian connection back into Hilda Griffin Reserve. I note that the proposed designation boundary does apply to the front part of Hilda Griffin Reserve and includes a section of existing path that connects with the footpath (as shown in Figure 3 above).

It is not clear in the Indicative Design and Designation Drawings what level of effect the proposed works are likely to have on this existing connection, although it is noted that fill batter is proposed along the front section of the reserve. In support of Ms Esterman's recommendation, I consider that the requiring authority should ensure that any damage caused to the existing pedestrian/cycle path resulting from works within the designation boundary is mitigated through appropriate reinstatement, to ensure that the pedestrian link through Hilda Griffin Reserve remains accessible. I further support Ms Esterman's proposed amendment to part (d)(ii) of Condition 9 (ULDMP) in relation to this matter. This amendment is shown in Attachment 5.

Having reviewed the application material and, taking into consideration the expert opinion of Ms Esterman, I consider that the TRCU Project is unlikely to have any urban design effects that will be more than minor. I suggest that the requiring authority considers the recommendations made by Ms Esterman in her specialist review and consider that it is appropriate for the requiring authority to provide a response at the hearing on the following matters:

- the effect of the Project on the pedestrian link through Hilda Griffin Reserve, both during and after construction
- the relief sought in the submissions
- Ms Esterman's assessment of the submissions
- the amendments to the ULDMP and Designation review conditions.

Overall, I am reasonably confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated through the amended conditions that have been included in Attachment 5.

6.4.8. Ecological effects

6.4.8.1. Application

Ecological effects are addressed in Section 9.7 of the AEE, and in the Ecological Impact Assessment ('AEcE') (v1.0) included in Volume 4. The existing ecological environment is also detailed in Section 5.1.3 of the AEE. This section notes that there are no Significant Ecological Areas ('SEAs') within the project area (although there are three within 2km of the Project).

The AEcE identifies the project's 'ecological baseline' which was based on ecological surveys of the project area to identify habitat value and ecological features. The ecological value of the identified habitats or species within the project area ranged from low to moderate, with only wetlands being classified as low-moderate, and all other features (including terrestrial habitats, bats, birds, lizards, and fish) classified as low.

The AEE discusses the ecological effects of the TRCU Project in relation to construction and operational ecological effects. These are summarised below.

6.4.8.1.1. Construction effects

The AEE identifies that there are seven wetlands that will be potentially affected by the project, five of which exist within the project area and two directly adjacent to it. All affected wetlands are classified as natural wetlands in accordance with the NPS-FM. The ecological assessment completed classifies the affected wetlands as having low to moderate ecological value, due to the dominance of exotic species, grazing activity, pugging and largely modified ecological conditions (AEE, pg. 88)

Overall, it is noted that Project will result in the permanent loss of approximately 0.178ha. of natural wetland habitat across two different wetlands (TR-W1 and TR-W4), whereby mitigation is not possible. The requiring authority's proposed offsetting of effects is discussed below, under the section on mitigation measures.

The AEE notes that there are no construction effects on terrestrial ecology where the level of effects was assessed to be moderate or higher. As such, no mitigation measures are proposed, in accordance with the Environment Institute of Australia and New Zealand (EIANZ) guidelines.

6.4.8.1.2. Operational effects

The AEE notes that direct adverse effects resulting from the operation of the Project may include vegetation removal resulting in loss of ecological connectivity (AEE, pg. 89). In relation to indirect operational adverse effects, the AEE notes that these may include:

- Increased presence of invasive plants in areas subject to vegetation removal

- Increased noise, light and vibration from operational road, resulting in disturbance and displacement of indigenous fauna
- Modification of hydrological flow paths required for maintenance of downslope wetland habitat for Wetland 1 and 2
- Reduction in water quality via stormwater discharges from release of contaminants through road operation.

Overall, the AEE concludes that the potential operational effects on ecology are low within the context of the future urban receiving environment. In terms of mitigation, the construction of stormwater management devices to avoid effects on stream quality are considered appropriate, with no further mitigation measures proposed to manage effects on ecology during the operational period of the Project.

6.4.8.1.3. Mitigation Measures

The AEE states that mitigation of natural wetland habitat loss within the Project area is not possible, and offsetting of the associated effects is therefore proposed. In relation to offsetting proposed, the AEE states the following:

“...the proposed location for this offset is within the downslope areas of the remaining portions of wetland habitat associated with both wetlands (TR-W1 and TR-W4). The area of wetland enhancement/planting has been calculated to ensure no net loss in ecological value is achieved. A Wetland Offset/Compensation Restoration Plan has been prepared, with initial calculations showing that restoration of 2,700 m² (TR-W1) and 1,000 m² (TR-W4) is required to provide a no net loss. The proposed designation provides sufficient room for this offset to be finalised at the detailed design stage” (AEE, pg.88).

To ensure that there is no net loss of wetland environment, total restoration of 3,700m² is proposed across the two affected wetland habitats.

Preparation of a Wetland Restoration and Enhancement Plan (‘WREP’) will be finalised prior to construction. Preparation of a WERP is required via a condition of the resource consent. The AEE states that proposed wetland restoration is expected to achieve net gain in wetland value and extent.

In Section 9.1 of the AEE, the requiring authority also notes that potentially affected wetlands in the Project area are currently dominated by exotic plants species and subject to the effects of grazing and pugging from livestock. The Project proposes planting and fencing around the two existing wetlands, in perpetuity.

No further mitigation is proposed to manage the construction or operational effects of the Project, as the scale of identified effects has been assessed as low.

6.4.8.2. Submissions

There were two submissions on the TRCU NoR that related to ecological effects. Both submissions were seeking the same relief, as detailed below:

“Decline the Notice of Requirement and conduct further research into whether the widening of Hobsonville Road is necessary to make room for more traffic and conduct further research into the effects on the current environment, visually, ecologically, and economically”.

6.4.8.3. Specialist review

A council’s consultant specialist, Mr Jason Smith, has reviewed the NoR and provided a response on 16 June 2023 which is included in Attachment 3.

Mr Smith’s review is in relation to the freshwater and terrestrial ecological effects of the Project. In relation to the application, Mr Smith considers that:

- Methodologies, standards, and guidelines used to assess the terrestrial and freshwater values are appropriate and conform to industry best practice.
- Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects.
- Reported results are transparent, accurate and a fair representation of the ecological values.

Overall, Mr Smith has concluded that he concurs with the applicant’s description of the current ecological values, the potential effects, and the magnitude of those effects on terrestrial and aquatic ecology.

Mr Smith states that the assessment provided is appropriate and that *“...sufficient evidence has been provided to demonstrate that the proposed effects management measures would appropriately manage any effect on ecological values that may arise from the proposal”* (pg. 5).

Mr Smith states that he has no specific concerns with the conditions proposed for the TFHIF and does not recommend any amendments to these.

In relation to the two submissions received on the TRHIF NoR that relate to ecological effects, Mr Smith has provided the following response:

- Methodologies, standards and guidelines used to assess the terrestrial and freshwater values are appropriate and conform to industry best practice.
- Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects.
- Reported results are transparent, accurate and a fair representation of the on-site values.

I concur with Mr Smith’s review of the Applicant’s description of the current ecological values, the potential effects, and the magnitude of those effects on terrestrial and aquatic ecology.

In my opinion, sufficient evidence has been provided to demonstrate that the proposed management actions would appropriately manage any effect on ecological values that may arise from the proposal.

6.4.8.4. Planning assessment

I rely on the expert opinion of Mr Smith, regarding his assessment of the application and submissions relevant to the ecological effects of the Project. Mr Smith has not identified any concerns regarding the ecological effects of the TRCU Project and has not recommended any amendments to the proposed conditions.

Having reviewed the application material and, taking into consideration the expert opinion of Mr Smith, I consider that the TRCU Project is unlikely to have any effects on ecology that will be more than minor. I am confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated.

6.4.9. Stormwater and flooding effects

6.4.9.1. Application

Stormwater and flooding effects are addressed in Section 9.9 of the AEE, and in the Assessment of Stormwater Effects ('ASE') (v1.0) included in Volume 4. The AEE assesses the actual and potential stormwater and flooding effects resulting from the operation and maintenance of the project.

6.4.9.1.1. Flooding risk

The ASE notes that the Trig Road Corridor is predominantly located on a ridgeline, with surrounding areas falling away from the road. It further notes that there are two flood prone areas along Trig Road, at localised low points. In relation to this, the requiring authority states that "...existing drainage crossings will be upgraded as part of the Project, to better cater for these low-lying areas and mitigate any extended negative effects of flooding these areas might have on future urban development as a result of the road widening" (ASE, pg. 19).

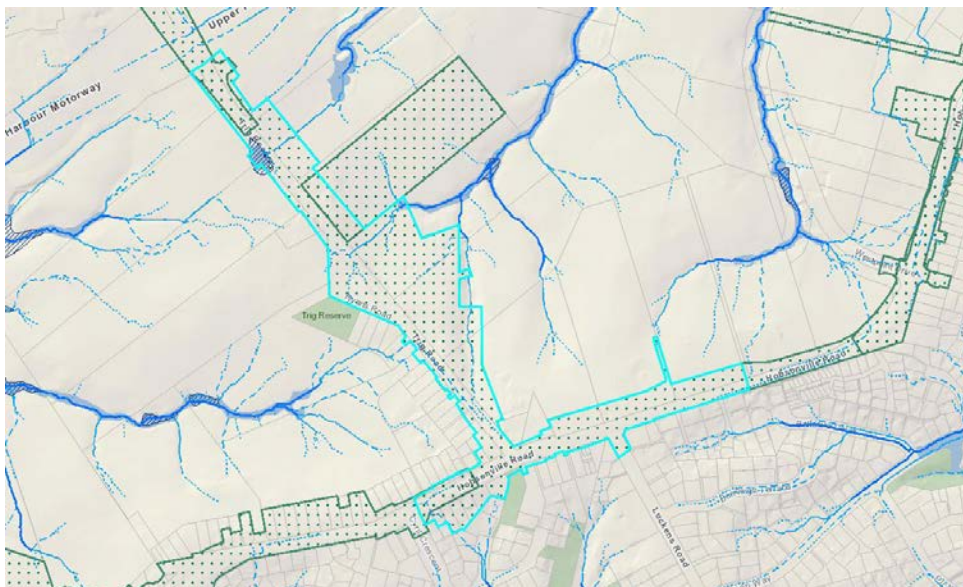


Figure 4: TRCU NoR in relation to catchment and hydrology features, as shown in the AUP maps.

Given the topography of the land and the location of flood plain and flood prone areas, the requiring authority states that the risk of flooding within Trig Road and surrounding catchments is low. Flooding effects are proposed to be managed via Condition 10 of the NoR, which details how the project shall be designed to achieve the specified flood risk outcomes listed in (i)-(v) of the condition. Upgrading of two existing stormwater culverts and one stormwater pipe which cross beneath Trig Road is also proposed to cater for post-development flows and enhance the drainage of flood prone areas.

Overall, in relation to flooding, the AEE states that “...*potential flooding effects will be appropriately managed and are expected to result in negligible up to minor effects*” (pg. 93).

6.4.9.1.2. Stormwater

The AEE states that the Project will increase the percentage of imperviousness from 47% pre-development to 73% post-development (AEE, pg.94). An increase in impervious area could result in additional runoff of contaminants from the transport corridor, resulting in adverse effects on water quality.

A stormwater dry pond for on-site attenuation and proposed outfall structures are proposed to manage effects associated with increased stormwater flow (AEE, pg. 94). The Project proposes the use of raingardens to provide ‘at-source’ treatment within berms, as well as ‘end of pipe’ treatment in larger raingardens. The AEE further states that all water treatment and stormwater design measures will be developed in accordance with GD01⁶, which is the council’s best practice guide for stormwater management (AEE, pg. 94).

The AEE concludes that “*while subject to refinement in detailed design stage the indicative design demonstrates the stormwater needs of the Project can be met, whilst catering to both current land use and for the expected future development upstream and downstream of the Project area*” (Page. 94).

6.4.9.2. Submissions

There was one submission point from Kāinga Ora Homes and Communities that raised concerns in relation to flooding. The submission stated that the project should be required to manage the flooding effects within its own boundary. To address this matter, Kāinga Ora are seeking that:

“...the flooding condition [Condition 10 Flood Hazard] is amended to requiring the Requiring Authority to ensure that the Project does not worsen any flooding effects onto neighbouring properties and appropriately avoids, remedies and/or mitigates the effects of their construction activities”.

⁶<https://knowledgeauckland.org.nz/media/1703/gd2017-001-stormwater-management-devices-in-the-auckland-region.pdf>

There was one submission that raised concerns in relation to stormwater management, specifically regarding the project's effect on existing civil infrastructure (including existing stormwater infrastructure) and how this might affect future development potential on adjacent land. To address these matters, the submitter was seeking that improvements to the stormwater (and wastewater) system be facilitated through the project, to ensure that future development can be appropriately serviced.

6.4.9.3. Specialist review – Flooding and stormwater

A council's consultant specialist, Mr Danny Curtis, has reviewed the NoR and provided a response which is included in Attachment 3. Ms Lee Te from Healthy Waters has also provided input in relation to amendments to the amended conditions.

In relation to the broader package of 19 NoRs, Mr Curtis states:

- that the SGA's proposed approach towards stormwater management is appropriate for the NoRs, but further consideration and detailed design still needs to occur
- that site walkovers be completed as the design proceeds, to confirm the location of culverts and catchments, and;
- that any stormwater management issues are discussed with Healthy Waters (noting that stormwater management requirements may alter to reflect the changes in vertical alignment that occur through the design process).

In relation to the assessment undertaken by the requiring authority regarding the TRCU NoR, Mr Curtis states that "*...the assessment considers the existing stormwater infrastructure on the road and does not consider potential effects of earthworks from future developments*" (pg. 4). However, given the topography of the land subject to and surrounding the project area, Mr Curtis does not consider that this matter will pose any significant risk.

Mr Curtis considers that the assessment to determine the effects of the project needs to be undertaken by the requiring authority, particularly in relation to whether 100-year attenuation is required. This is a matter that the requiring authority has sought advice on from Healthy Waters. Despite this, Mr Curtis states that the sizing of the proposed dry detention pond is a conservative approach for the NoR.

He also states that conceptual design and sizing of the detention/attenuation basin has been incorporated into the designation plans, confirming that there is sufficient space within the designation boundary to provide for this, as well as any alterations to the size and shape of the device.

In relation to the specialist assessment completed by Mr Curtis, it is recommended that the requiring authority considers and responds to the comments raised, as below:

- that the infrastructure indicated on GeoMaps is reviewed on site to ensure it is correct.
- design of the detention basin's performance will need to meet operational requirements as set out by the New Zealand Defence Force (NZDF) due to the proximity of the project to the Whenuapai Airforce Base.

- in relation to the part of Hobsonville Road that will remain connected to the existing stormwater drainage network, it is recommended that the requiring authority provides justification as to why this development area will not be providing stormwater management, particularly as Hobsonville Road will be a High Contaminant Generating Area (HCGA) by definition in the AUP.

Ms Te from Healthy Waters has recommended amendments to the Flood Hazard condition (Condition 10) and CEMP condition (Condition 11), that have been reviewed and confirmed by Mr Curtis. The conditions, with the recommended amendments, are shown below:

Flood Hazard

(a) The Project shall be designed to achieve the following flood risk outcomes:

- (i) no increase in flood levels in a 1% AEP event for existing authorised habitable floors that are already subject to flooding or have a freeboard less than 150mm;*
- (ii) no more than a 10% reduction in freeboard in a 1% AEP event for existing authorised habitable floors with a freeboard of over 150mm;*
- (iii) no increase in 1% AEP flood levels for existing authorised community, commercial and industrial building floors that are already subject to flooding;*
- (iv) no more than a 10% reduction in freeboard in a 1% AEP event for existing authorised community, commercial and industrial building floors;*
- (v) no increase of more than 50mm in flood level in a 1% AEP event on land zoned for urban or future urban development ~~where there is no existing dwelling;~~*
- (vi) no increase in flood levels in a 1% AEP event for infrastructure;*
- (vii) no loss in overland flow path capacity, unless provided by other means;*
- (viii) no new flood prone areas; and*
- ~~(vii)-(ix)~~ (ix) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. The assessment should be undertaken for the 50%, 20%, 10% and 1% AEP rainfall events.*

(b) Compliance with (a) and this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100-year ARI 10% and 1% AEP flood levels (for Maximum Probable Development land use and including climate change effects). The flood modelling details shall be reviewed and agreed with Auckland Council Healthy Waters (or its equivalent) during the preparation of the Outline Plan.

(c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.

Construction Environment Management Plan (CEMP)

(a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work

(b) The CEMP development must include input from an experienced Stormwater Engineer and will consider the effects of temporary works, earthworks, storage materials and temporary diversion and drainage on flow paths, flow level and velocity, and details of the construction and upgrades of culverts, culvert crossings, drains, stormwater wetlands and dry ponds, and bridges.

Including:

(i) siting construction yards and stockpiles outside the flood plain

(ii) diverting overland flow paths away from area of work

(iii) minimizing the physical obstruction to flood flows at the road sag points

(iv) staging and programming to provide new drainage prior to raising road design levels and carry out work when there is less risk of high flow events

(v) methods to reduce the conveyance of materials and plant that is considered necessary to be stored or sited within the flood plain (e.g. actions to take in response to the warning of heavy rainfall events)

(c) The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include:

(i) the roles and responsibilities of staff and contractors

(ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address)

(iii) the Construction Works programmes and the staging approach, and the proposed hours of work

(iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, locations of refuelling activities and construction lighting

(v) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places

(vi) methods to manage flood risk during construction, including methods to respond to warnings of heavy rain

(vi) methods for providing for the health and safety of the general public

(vii) procedures for incident management

(viii) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses

(ix) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up

(x) procedures for responding to complaints about Construction Works

(xi) methods for amending and updating the CEMP as required.

6.4.9.4. Planning assessment

I rely on the expert opinion of Mr Curtis, regarding his assessment of the application and submissions relevant to the stormwater and flooding effects of the Project. I further adopt the amendments that Mr Curtis and Ms Te have proposed to Conditions 9 and 10 of the TRHIF NoR, and suggest the requiring authority responds to these amendments at the hearing.

In relation to the submission received, I note that Kāinga Ora has not sought any specific wording for Condition 10 to address the matters raised in their submission. Therefore, I recommend that the requiring authority initiates discussions with Kāinga Ora in relation to how this condition could be amended to take into consideration the relief sought.

In relation to the submission point seeking improvements to the stormwater system, I note the following comment made in Section 8 of the ASE:

“While subject to refinement in detailed design stage the indicative design demonstrates the stormwater needs of the Project can be met, whilst catering to both current land use and for the expected future development upstream and downstream of the Project area” (ASE, pg. 47).

Noting the above, I consider that the submitter’s relief sought has been appropriately addressed. However, I would recommend that the SGA engages with landowners to address any effects that the Project may have on specific properties identified in the submissions.

Having reviewed the application material and, taking into consideration the expert opinion of Mr Curtis, I consider that the TRCU Project is unlikely to have any adverse effects on stormwater and flooding that will be more than minor. I am confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated through the proposed conditions included in Attachment 5.

6.4.10. Property, land use and business effects

Property, land use and business effects are addressed in Section 9.8 of the AEE, and are also discussed in the assessment of alternatives, as summarised in Section 8 of the AEE, and detailed in Appendix A.

6.4.10.1. Application

It is noted that property, land use and business effects overlap considerably with both social and economic effects. While the AEE has provided brief comment regarding positive economic and community effects resulting from the TRCU Project, it has not provided a detailed assessment of adverse effects in relation to these matters.

The AEE states *“the Project design philosophy has been to avoid and minimise potential adverse effects on private properties and businesses through alignment and project design, where practicable”* (AEE, pg. 89).

There are 66 properties directly affected by the TRHIF NoR. The Form 18 includes a schedule of directed affected property (Attachment B of the Form 18).

The AEE identifies pre-construction, construction, and post-construction effects for the Project. These are summarised generally below.

6.4.10.1.1. Pre-construction effects

The TRHIF NoR has a proposed lapse period of 15-years. The primary reason for this timeframe being that *“...it provides statutory protection of the future transport corridors in a manner that enables a flexible and efficient infrastructure response to land use”* (AEE, pg. 34). The most notable pre-construction effect is ‘blighting’ of properties that are subject to the designated area for the project. In relation to this, the AEE states that the Project will not preclude the continued use of any directly affected properties prior to construction, although written consent for works that would ‘prevent or hinder’ the Project, including development, would be required subject to section 176 of the RMA. The AEE notes that:

“...The areas of the Project along the south-western area of Trig Road and Hobsonville Road are expected to have a lesser scale of development change as this area is an existing residential environment...” (AEE, pg. 91).

The requiring authority states that engagement with developers will continue once the designation is confirmed, using section 176 of the RMA as the mechanism for approval.

Overall, the requiring authority concludes in their AEE that the pre-construction effects of the Project will have no more than minor effects on property, land use and business.

6.4.10.1.2. Construction effects

The AEE states that during construction the Project will temporarily require land to enable construction activities, noting that there are a variety of existing land uses within the Project area, including residential, rural, pastoral, and agricultural. In relation to effects resulting from the temporary requirement of land during construction, the AEE notes the following:

- temporary loss of grazing pasture
- fencing
- disruption to access
- changes to driveway gradient
- loss of vegetation
- amenity.

The designation extent is proposed to be altered post-construction in accordance with Condition 3 of the NoR, with site-specific effects from construction to be managed through arrangements with individual landowners.

Construction effects are further addressed in Section 9 of the AEE, with various effects mitigation and management proposed through implementation of the CTMP, CNVMS, CNVMP and SCEMP.

Overall, the requiring authority concludes that the measures proposed “*will appropriately minimise disruption to affected properties and allow the continued use of properties where possible. Potential effects will be temporary and therefore it is considered that they will be less than minor*” (AEE, pg. 92).

6.4.10.1.3. Post-construction effects

The most notable post-construction effect is the permanent acquisition of land that is required for the operation of the Project, resulting in an overall loss of residential and productive land. The AEE notes that residual land that is not permanently required will be reinstated in co-ordination with landowners. Loss of land is proposed to be managed through the processes detailed in the Public Works Act, which includes compensation for loss of land, which is to be negotiated between affected landowners and the requiring authority. It further notes that the viability of residual land will be evaluated against the principles of the ULDMP.

Overall, the requiring authority concludes that “*...the ULDMP will ensure that the Project appropriately integrates with future land uses which are directly adjacent to the corridor and avoids, where possible, the potential to create residual land as a result of the Project. It is therefore considered that the effects of land requirement will be no more than minor on these landowners*” (AEE, pg. 92).

6.4.10.1.4. Effects of proximity

The AEE also recognises effects on properties that are not directly affected by the Project but affected due to their proximity to the Project boundary, and in particular, construction activities associated with the Project.

Overall, the requiring authority states that “*... the potential adverse effects to properties and businesses in proximity to the Project area would be temporary and through the implementation of appropriate construction management, can be avoided or minimised, such that they are no more than minor*” (AEE, pg. 93).

6.4.10.2. Submissions

Eleven of the sixteen submissions received on the TRHIF NoR were in relation to specific properties. The key themes across these submissions have been listed below:

- General relief to decline the NoRs
- Compensation requests
- Spatial extent of designations
- Consideration of alternative routes and options

- Effects on:
 - residential property values and development potential
 - property rights
 - business
 - infrastructure
 - existing or planned development
- Further information, engagement, and consultation on the Project
- Lapse periods

The key issues raised in submissions are discussed below. I consider that some of the issues listed above may overlap i.e., the extent of a designation and the proposed lapse period (which can in turn affect how land within the designation can be used in the interim).

A) General relief to decline or withdraw the NoRs

Six submissions points on the TRHIF NoR sought that the NoR be declined, primarily due to preference for alternative options to be pursued, and in relation to adverse effects.

B) Compensation requests

Eight submissions received on the TRHIF NoR sought compensation from the requiring authority for:

- partial or full acquisition of land;
- reinstatement of property features (e.g., driveway, gates, trees, buildings);
- exposure to adverse effects (e.g., noise, dust, pollution);
- costs associated with mitigating adverse effects;
- effects on business
- adverse effects on amenity (e.g., effects on mental health, loss of privacy)
- losses resulting from inability to implement consented development plans

C) Effects on residential property values and development potential

Submission points received on the TRHIF NoR raised concerns about potential reductions in property value, including the potential for the NoRs to impose 'property blight' on directly affected properties, and effects on development potential.

Submitters were concerned about the effect of the NoR designation boundary, and how these boundaries may adversely affect the ability for private landowners to develop or sell their property. The effect of property blight has been a key consideration when assessing the proposed lapse periods, due to the level of uncertainty that an extended lapse period causes for property owners. This is addressed in Section 7.11 below.

D) Effects on business

Three submissions received on the TRHIF NoR raised concerns about effects on business. Reasons for these submissions included, but were not limited to, partial or full loss of property/business premises meaning that business cannot operate, termination of lease and exposure to adverse effects.

E) Spatial extent of the designations

Four submissions were received on the TRHIF NoR that raised points in relation to the extent of the proposed NoR boundary. Relief sought in relation to this matter included:

- General relief to reduce the designation boundary
- Designation boundary to apply to the whole of a property, rather than a part of it
- Removal of the designation from identified properties
- Amendments proposed to the condition relating to review of designation extent.

General reasons for the relief sought included, but were not limited to, property blight, adverse effects on development potential, and adverse effects on business.

F) Further information, engagement, and consultation on the Project

Eight submissions were received on the TRHIF NoR that sought further information, engagement, and consultation on the Project. The majority of these requests were in relation to individual properties and in relation to the general process used by SGA to date. Some of the key points raised were:

- lack of transparency throughout the process to date, particularly following public consultation
- lack of engagement with directly affected properties or properties within the vicinity of the proposed works who will also be affected.
- early consultation and engagement with directly affected property owners is vital due to the effects on directly affected properties, restrictions on development, and the length of lapse periods.

6.4.10.3. Specialist review

No specialist assessment has been sought specifically in relation to property, land use, and business effects, however, it is noted that economic effects overlap with property, land use and business effects. While the SGA has not provided a separate assessment of economic effects, Mr Derek Foy, council's consultant economic specialist, has reviewed the AEE, associated technical reports, and the submissions received. Mr Foy's assessment is included in Attachment 3 and summarised below and has been used to inform the planning assessment in Section 6.4.10.4.

In relation to positive economic effects, Mr Foy states that the NoRs will have several outcomes resulting in significant positive effects across the entire project (all 19 NoRs). Positive effects that are relevant to the TRCU Project are summarised in Figure 2.1 of Mr Foy's memo (pages 3), and are summarised below:

- *Improved travel times and reduced congestion*
- *Improved transport network with improved safety for road users, reducing costs associated with responding to injuries and deaths associated with road use*
- *Certainty provided to property owners, business and the community regarding the location of future infrastructure, assists with making informed investment decisions*

- *Designations provide certainty to the Council as a basis for its planning in relation to future urban areas, allowing future spending to be known and prioritised*
- *Access to active modes and multi-modal journeys provide alternatives to and promote shift away from private vehicle trips, providing a greater range of transport options and different cost options*
- *Changes to traffic movement patterns, with varying outcomes for commercial centres that rely on passing traffic*
- *Improved transport network will enable development to occur in greenfield areas, supporting new urban environments and the development of new business areas, local employment opportunities and access to existing business areas*
- *Direct and indirect benefits through the economy, arising from expenditure on materials and labour.*

Mr Foy notes that the main adverse economic effects are those arising as a result of:

- Interruption to business and farming operations
- Timing uncertainty
- Changed travel patterns and travel time disruption

In relation to business effects, Mr Foy states that the AEE has not provided an assessment of the scale of potential effects on or interruption to business. He states that this is an appropriate approach, given the level of uncertainty associated with the extended lapse periods that are proposed, as well as uncertainty regarding the specific design of new infrastructure.

Mr Foy proposes one modification to the SCEMP condition (Condition 12), and requests that stakeholders include, at minimum, the community generally, and not be limited only to property owners and occupiers of land subject to the designations. Mr Foy's amendment has been included in the updated condition set in Attachment 5.

6.4.10.4. Planning assessment

The planning assessment is focussed on the following matters:

- General relief to decline the NoR
- Compensation requests
- Spatial extent of the designations
- Ongoing consultation and engagement with affected parties
- Effects on businesses
- Lapse period
- Effects on specific properties identified by submitters.

General relief to decline the NoR

In relation to submissions requesting to decline the NoRs, I consider that SGA has adequately demonstrated the need for the Project. This is outlined generally in section 2.1 of this report and explored more specifically in section 2.2 of the AEE.

Compensation Requests

As outlined in above, several submissions received on the TRHIF NoR have sought compensation for a variety of matters in relation to the Project. In relation to compensation requests, I note that this is a matter for the requiring authority to address during the detailed design of the NoR, and in direct discussions with affected landowners and those who have submitted on the NoR, in accordance with processes under the Public Works Act 1981. I recommend that discussions with affected landowners should be initiated as soon as practicably possible to reduce uncertainty.

Spatial extent of the designation(s)

The spatial extent of the designations has been discussed in Section 3.5 of this report. It is further discussed in relation to the designation extents over specific properties below. Several submissions requested revisions to the extent of the designation boundaries, for the reasons stated in Section 6.4.10.2(E), above.

I note that Condition 3 of the TRHIF NoR states that, within 6 months of construction of the NoR, the extent of the designation will be reviewed and adjusted accordingly. I consider that this measure, alongside ongoing engagement with effected landowners and/or developers, is appropriate to address this issue. In response to these submissions, it is recommended that the SGA engages directly with the effected landowners/developers to resolve these matters.

I further note that the following amendment (included in Attachment 5) has been proposed to the Designation Review condition across all 19 NoRs:

- a) *The Requiring Authority shall within 6 months of Completion of Construction of a Stage of Works or as soon as otherwise practicable:*
 - (i) *In conjunction with landowner(s) review the extent of the designation required for construction purposes and 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.*
 - (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.*

This amendment will require the requiring authority to review the designation extent in conjunction with landowners and relates the extent of the designation back to land that is required for construction purposes. I consider that this amendment addresses most of the concerns that were raised in submissions in relation to this matter, noting that this was one of the dominant themes that came through in the submissions received on the TRHIF NoR.

Consultation and Engagement

In relation to submissions on consultation and engagement on the Project, we note that the SGA proposes conditions requiring a SCEMP to be prepared prior to Project works commencing. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be communicated with throughout the Construction Works.

Amendments have been proposed to the SCEMP condition (Condition 12), as shown in Attachment 5, that will ensure consultation and engagement is undertaken with a wider range of affected parties.

Effects on business

As noted in Mr Foy's assessment, there is a large degree of uncertainty regarding effects on businesses, due to the timeframes associated with the construction of the Project, as well as the designation still being subject to further changes through the detailed design stage. Mr Foy further identifies that businesses located outside of the Project area could experience interruption during the construction phase, where access may be affected by construction works, as well as post-construction due to permanent reductions in parking (pg. 18).

The proposed amendments to the SCEMP condition (included in Attachment 5), as recommended by Mr Foy, intend to ensure that the general community is engaged in the process, in addition to property owners and occupiers. As stated by Mr Foy, this condition *"...would assist in ensuring many of the submission points raised in relation to economics are able to be responded to directly with affected parties, and that the range of stakeholders included in the SCEMP is not too narrow"*. (para. 6.3, pg. 19).

It is further recommended that SGA engages in direct discussions with business owners, both within and adjacent to the Project area, to discuss options for compensation in relation to the adverse effects of the Project.

Lapse period

The proposed lapse periods were a common theme in the submissions on the TRHIF NoR. Most submitters considered that the extended lapse period of 15 years was too long and imposed 'blight' on affected properties for an unnecessary length of time.

Mr Foy states on pages 4-5 of his assessment that timing uncertainty, related to extended lapse dates, *"...may make it more difficult to sell properties affected by the designations, or reduce their value to reflect the uncertainty"*. He further states that this outcome has the potential to create a negative economic effect for the wider environment if properties become or remain vacant and 'planning blight' takes effect in an area.

An assessment of the proposed lapse period is provided in Section 7.11 of this report, which will take into consideration the submissions which have raised concerns in relation to this matter.

Effects on specific properties identified in submissions

In relation to effects on specific properties, we generally consider that SGA has demonstrated reasonable necessity for the Project and that adequate consideration has been given to alternative sites, routes, or methods.

In addition, we consider that the CEMP, CTMP, CNVMP and SCEMP conditions, as proposed to be amended in Attachment 5 to this report, provide a robust framework for mitigation of adverse effects and consultation with directly affected parties when the detailed design of the Project has been confirmed.

An assessment of effects on specific properties identified in submissions has not been provided in this report, as it is considered that individual property effects are best addressed by the requiring authority through direct discussions with affected landowners. However, if the hearing commissioners consider that this level of assessment is necessary, then this can be provided prior to the commencement of the hearing.

Conclusion

In my opinion, there needs to be a balance between the practical needs of the requiring authority to protect and secure the route, and the effects of the extents of the designations, and the extended lapse periods, on property owners and occupiers. The concerns raised by submitters have validity and should be addressed appropriately by the requiring authority.

The determinations of the extent of the designations, and the extended lapse periods, have been made by the requiring authority to enable it to meet the objectives of the TRCU Project. It is also the responsibility of the requiring authority to avoid, remedy, or mitigate any potential environmental effects of the works provided for by a designation. Therefore, I consider it appropriate that the requiring authority address the matters raised, and relief sought, in the submissions, at the hearing. This should include:

- additional information for the justification of the extent of the TRHIF designation and the extended lapse date including in relation to the specific sites identified in submissions
- additional information on the proposed mitigation including in relation to specific sites identified in submissions e.g. reinstatement, compensation, and acquisition
- additional information about the proposed engagement and/or consultation processes for directly affected parties or other parties which are in the vicinity of the proposed works including in the period between when the designation is confirmed and the construction phase i.e., during the detailed planning and route protection phase.

In addition, I recommend that the SCEMP provides for non-virtual communication and engagement methods (in addition to the project website) acknowledging that not all affected persons may have internet access or be confident with accessing information virtually. Given that the SCEMP is one of the primary tools to mitigate the effects of the Project, we consider that it is a high priority to ensure that all affected persons have access to information about the Project.

6.4.11. Earthworks, erosion, and sediment deposition effects

Earthworks, erosion and sediment deposition effects are addressed in Sections 7.4.2 and 9.10 of the AEE, and in the Erosion and Sediment Control Plan (ESCP) and in the Construction Environment Management Plan (CEMP).

6.4.11.1. Application

The AEE states that proposed earthworks are a matter for both NoR and resource consent consideration. However no reference has been made in the AEE of Chapter E12 La disturbance – District of the AUP.

Section 7.4.2 of the AEE states that bulk earthworks are proposed for the Project, to provide for widening of the road corridor, regrading of the road alignment and construction of stormwater management devices, which are key mitigation measure proposed to manage any effects associated with stormwater and flooding.

In relation to erosion effects, the AEE states that “*erosion and the associated effects of sediment deposition have the potential to cause both physical and ecological disturbance within a watercourse/stream, and control measures (both during construction and within the design of permanent structure) need to be considered*” (AEE, pg. 95).

Mitigation measures

The AEE further notes that the key objectives of erosion and sediment control for the Project are:

- Construction methodology and staging of work
- Minimising disturbance
- Protection of exiting watercourses
- Control of pollutants and debris/construction materials
- Minimisation of earthworks and vegetation removal around and within watercourses
- Protection of receiving streams
- Protection and stabilisation of embankments
- Protection of existing watercourse embankments
- Retention devices
- Monitoring and maintenance throughout construction.

The ESCP details the measures that will be taken to achieve the objectives listed above, including an indicative Erosion and Sediment Control Plan Layout and assurances that all measures will be compliant with GD05, which is the Council’s best-practice guidance document for erosion and sediment control.

A staged approach towards bulk earthworks is proposed, to manage the effects associated with earthworks activity. The AEE states that a staged approach will be undertaken to minimise:

- the area of disturbed earth
- stockpiling
- the potential for sediment laden runoff.

Overall, the AEE states that “*the topography [of the Project area] is mostly flat to rolling landscapes, with localised areas of steepness, and can be appropriately treated by the measures. Specific measures are proposed to ensure discharges are treated prior to entering watercourses. As identified in the AEE, all works within the wetlands and watercourses can be done offline.*

The proposed earthworks are of a scale that is typical for a transport corridor upgrade in a greenfield area and can be appropriately managed by the measures outlined above and detailed in the draft ESCP. As such, the Project is expected to generate less than minor effects from earthworks” (AEE, pg. 96).

6.4.11.2. Submissions

There were no submissions on the TRHIF NoR that sought relief specifically in relation to earthworks, erosion, and sediment effects.

6.4.11.3. Specialist review

There has been no specialist review for this section.

6.4.11.4. Planning assessment

The ESCP lodged with the NoR states that it is a draft report only and that it will be subject to a contractor preparing a final ESCP and obtaining certification from Auckland Council. I note that there is no proposed condition for the NoR that requires the preparation of an ESCP, although this is a proposed condition for the resource consent (Condition 9). The ESCP should provide conditions and references to Chapter E26 Infrastructure of the AUP rules that apply to the TRHIF NoR and integrate with any resource consent conditions. For example, the AEE states the projects involves the follow earthworks:

	Approx. Cut	Approx. Fill	Approx. Area
Site Clearance	17,000m ³	17,000m ³	61,000m ²
Corridor Earthworks	3,000m ³	35,000m ³	45,000m ²

Activity (A97A) of Table E26.5.3.1 Activity table – Earthworks all zones and roads is a Restricted Discretionary Activity for ‘Earthworks greater than 2500m³ other than for maintenance, repair, renewal, minor infrastructure upgrades.’

In my view, the Requiring Authority should address these provisions in evidence and may require an additional condition for this project.

I note, I have reviewed the application material, I consider that the TRCU Project unlikely to have any adverse effects relating to earthworks, erosion and sediment deposition that will be more than minor. I am confident that any effects associated with the Project could be appropriately avoided, remedied, or mitigated through the conditions, however i require additional information to confirm this view.

6.4.12. Contamination effects

Contamination effects are addressed in Section 9.11 of the AEE and informed by the *Trig Road Corridor Upgrade: Preliminary Site Investigation (PSI)* contained within Volume 4.

6.4.12.1 Application

The AEE provides an assessment of the actual and potential contamination effects that will result from the construction, operation and maintenance of the Project, noting that resource consent is being in sought in accordance with the NES: Soil.

In relation to this matter, the AEE states that *“the PSI identified numerous activities classified in the Hazardous Industries and Activities List (HAIL) that have historically occurred or are currently being undertaken on properties adjacent to the Project area. It states that while the human and environmental risk profile associated with soil contamination of properties in the Project area is likely to be limited, soil materials scheduled for disturbance as part of the Project may have been impacted by a range of contaminants of concern associated with the storage or use of hazardous materials or disposal of hazardous wastes at the adjacent properties”* (AEE, pg. 96).

The activities that are particularly relevant to the assessment of effects include:

- Commercial nurseries and glass houses;
- Potential horticultural activities (such as orchards, glass houses and market gardens);
- Transformers outside of properties and adjacent to road corridor; and
- A Vector substation (Designation 8856 at 1 Trig Road).

The PSI lodged with the NoR recommends that a Detailed Site Investigation (DSI) be prepared to quantify the nature and extent of actual soil contaminant conditions within the Project area.

Overall, the AEE concludes that potential effects relating to contamination can be appropriately managed and potential adverse effects resulting from land disturbance are considered to be less than minor.

6.4.12.2 Submissions

There were no submissions on the TRHIF NoR that sought relief specifically in relation to contamination effects.

6.4.12.3 Specialist review

There has been no specialist review completed in relation to contamination effects.

6.4.12.4 Planning assessment

Having reviewed the application material, I consider that the TRCU Project is unlikely to have any adverse effects relating to earthworks, erosion and sediment deposition that will be more than minor. I am confident that any effects associated with the Project can be appropriately avoided, remedied, or mitigated through the proposed conditions and recommended addition included in Attachment 5.

6.4.13. Effects on network utility or other infrastructure providers

Submissions have been received across the three packages of NoRs (Local Arterials, Strategic, and Housing Infrastructure Funded Projects) from both network utility providers and other infrastructure providers. A consistent approach has been taken for this section of the report within the three separate reports for the Local Arterials, Strategic, and Housing Infrastructure Projects.

This section of the report also addresses the matters raised in submissions from other infrastructure providers such as the Ministry of Defence, Ministry of Education, and Kāinga Ora – Homes and Communities.

6.4.12.5 Application

Section 5.1.7 details the existing utilities that are located within the Project area. These are:

- Watercare Services Limited Watermains
- Power network
- Communications
- Stormwater

Details of where these utility types are located within the Project corridor are provided in Table 5 in the AEE. In Section 3.1.5 of the AEE, the requiring authority notes that the following changes are expected as a result of the permanent works associated with the Project:

- *The Watercare trunk watermains are expected to be protected during construction and will not need to be relocated as part of the Project works; however, some of the local watermains may need to be relocated.*
- *The proposed Project cross-sections include space for a utility/communications duct. Vector overhead power infrastructure can be relocated into this duct if required and will be determined at the detailed design stage. The Project works will have minimal impact on the substation with only a small section of land within the berm of the site required for the Project.*
- *Some of the existing communications infrastructure will need to be relocated and/or protected as part of the works. New communication ducts will be installed to incorporate all relevant utilities if existing ducts are removed.*

6.4.12.6 Submissions

Submissions have been received across the three packages of NoRs (Local Arterials, Strategic, and Housing Infrastructure Funded) from network utility providers and other infrastructure providers. These are addressed individually below.

Watercare Services Limited

Watercare Services Limited (**Watercare**) lodged identical submissions to all of the NoRs. Watercare takes a neutral stance with regard to these NoRs and recognises the aim of the various NoRs is to protect land for future implementation of strategic transport corridors / infrastructure. (are confirmed or not). Watercare seeks to ensure that any decisions made to confirm the NoRs responds to the issues raised in this submission and avoids, remedies or mitigates potential adverse effects on Watercare's ability to provide water and wastewater services now and in the future.

Watercare seeks that ongoing and active collaboration and consultation with AT commences before the detailed design stage so that Watercare's own plans for water infrastructure are aligned with the implementation of the NoRs.

Watercare seeks amendments to the NoRs, including by way of conditions to ensure any adverse effects on Watercare's assets and operations are avoided, remedied or mitigated. The submission states that this may include the provision of an "Infrastructure Integration Plan" as part of the suite of conditions to apply to all the NoRs. While the wording of such a condition has not been provided the submission states that the condition could include *"details of engagement undertaken (including any feedback from infrastructure providers), identify other potential infrastructure that may be developed within the NoR areas and how the requiring authorities have enabled or otherwise not precluded the development of such infrastructure within the NoR areas."*

Section 11.2.4 of the AEE states that that there has been engagement with network utility operators (including Watercare) to *"explore opportunities to work together to minimise impacts and enable positive outcomes"* (pg. 104).

As stated above, the requiring authority intends to abide by established protocols for works within the existing road reserve controlled under the Utilities Access Act 2010 and associated National Code of Practice for Utility Operators' Access to Transport Corridors. In that regard the requiring authority considers that this protocol would be sufficient to address any effects of the implementation of the NoR on network utilities such as those provided and managed by Watercare.

Planning Assessment

In my view, there appears to be commitment from the requiring authority to engage with Watercare (and others) to ensure suitable collaboration and co-ordination of infrastructure.

While Watercare is seeking amendments to the proposed conditions of the TRHIF NoR, Watercare has not provided the proposed wording for any amendments.

However, the relief sought by Watercare could provide an appropriate management structure with defined actions, roles and outcomes relating to effects of the NoRs on existing and planned infrastructure. Accordingly, I recommend that the requiring authority consider the inclusion of an Infrastructure Implementation Management Plan to guide the engagement and ongoing co-operation with infrastructure providers potentially affected by the NoRs. Such a management plan should also include other providers such as telecommunications providers.

Telecommunication submitters

A submission was received on all 19 of the NoR packages (Local Arterials, Strategic, and Housing Infrastructure Funded) from a group of telecommunications providers comprising:

- Aotearoa Towers Group (ATG)
- Chorus New Zealand Limited (Chorus)
- Connexa Limited (Connexa)
- One New Zealand (One NZ) (formally Vodafone New Zealand Ltd)
- Spark New Zealand Trading Limited (Spark)
- Two Degrees Mobile Limited (2degrees)

This group is identified in this report as the “telecommunication submitters” and their submissions relates to all the NoRs.

The telecommunications submitters take a neutral position on the NoRs projects but seek to ensure that existing and potential future telecommunications infrastructure in the project corridors are adequately addressed. This submission also recognises the Spark submission, to ensure the protection of the existing Southern Cross international cable system which is located within or adjacent the road reserves of the following NoRs.

This submission refers to protecting the Southern Cross cable but also other components of the telecommunications networks including copper and fibre cables, and mobile phone roadside cabinets and other equipment.

The telecommunications submitters seek a condition that is similar to the one adopted for the East-West Link Warkworth to Wellsford NoR projects. The submission notes that there should be reference made for the need for a Network Utility Management Plan (**NUMP**). The submission seeks that this requirement be elevated to a requirement of the NoR on the basis that engagement should be occurring ahead of the Outline Plan of Works stage of the works. This would involve the preparation of the NUMP prior to the Outline Plan of Works. The following wording for a condition has been suggested:

Network Utility Management Plan (NUMP)

- (a) *A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.*

- (b) *The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:*
- (i) *provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;*
 - (ii) *manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; and*
 - (iii) *demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical Hazards on Metallic Pipelines; and AS/NZS 2885 Pipelines – Gas and Liquid Petroleum.*
- (c) *The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s).*
- (d) *The development of the NUMP shall consider opportunities to coordinate future work programmes with other Network Utility Operator(s) where practicable.*
- (e) *The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.*
- (f) *Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.*
- (g) *Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.*

Advice Note:

For the purposes of this condition, relevant telecommunications network utility operators include companies operating both fixed line and wireless services. As at the date of designation these include Aotearoa Towers Group, Chorus New Zealand Limited, Connexa Limited, One New Zealand Limited, Spark New Zealand Trading Limited and Two Degrees Mobile Limited (and any subsequent entity for these network utility operators).

XX: The Requiring Authority shall consult with Network Utility Operators during the detailed design phase to identify opportunities to enable, or not preclude, the development of new network utility facilities including access to power and ducting within the Project, where practicable to do so. The consultation undertaken, opportunities considered, and whether or not they have been incorporated into the detailed design, shall be summarised in the Outline Plan or Plans prepared for the Project.

Planning Assessment

As stated above, the requiring authority has proposed a condition which provides for the network utility operators to be able to undertake certain works without the need for seeking written approval from the requiring authority under section 176A of the RMA. However, the telecommunications submitters are of the view that engagement and planning should be occurring at an earlier stage to better integrate the design and implementation of the corridor with their network operations.

It should be noted that it is expected that urbanisation of a number of areas adjacent to the transport corridor may also be occurring, and this would involve the implementation of significant telecommunications infrastructure. This suggests that co-ordination between communications infrastructure providers and the requiring authority should be occurring prior to the Outline Plan of Works process. In that regard, there is merit to include the need for NUMP at an earlier stage. On that basis, it is my view that the recommended conditions, as amended below, be included in the TRHIF NoR.

I have slightly amended the proposed wording in the Telecommunication submitter's submission for clarity and certainty. The additional condition requested by the submitter has been integrated into the recommended amendments below as I considered it was seeking similar outcomes to the proposed conditions.

Network Utility Management Plan (NUMP)

- (a) A NUMP shall be prepared after consultation with Network Utility Operator(s) including during the detailed design phase, and prior to the lodgement of an Outline Plan of Works for a stage of construction works. ~~Start of Construction for a Stage of Work.~~*
- (b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:
 - (i) provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;*
 - (ii) manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; and**

- (iii) *demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical Hazards on Metallic Pipelines; and AS/NZS 2885 Pipelines – Gas and Liquid Petroleum.*
- (c) *The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s).*
- (d) *The development of the NUMP shall consider opportunities to coordinate future work programmes and projects, including access to power and ducting within the Project, with other Network Utility Operator(s) where practicable.*
- (e) *The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed including whether or not the opportunities identified in (d) have been incorporated into the final detailed design.*
- (f) *Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.*
- (g) *Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.*
- (h) *The Requiring Authority shall consult with Network Utility Operators during the detailed design phase to identify opportunities to enable, or not preclude, the development of new network utility facilities including access to power and ducting within the Project, where practicable to do so. The consultation undertaken, opportunities considered, and whether or not they have been incorporated into the detailed design, shall be summarised in the Outline Plan or Plans prepared for the Project.*

Advice Note:

For the purposes of this condition, relevant telecommunications network utility operators include companies operating both fixed line and wireless services. As at the date of designation these include Aotearoa Towers Group, Chorus New Zealand Limited, Connexa Limited, One New Zealand Limited, Spark New Zealand Trading Limited and Two Degrees Mobile Limited (and any subsequent entity for these network utility operators).

~~XX: The Requiring Authority shall consult with Network Utility Operators during the detailed design phase to identify opportunities to enable, or not preclude, the development of new network utility facilities including access to power and ducting within the Project, where practicable to do so. The consultation undertaken, opportunities considered, and whether or not they have been incorporated into the detailed design, shall be summarised in the Outline Plan or Plans prepared for the Project.~~

Ministry of Education

The Ministry of Education has submitted on 12 of the 19 NoR's (Local Arterials, Strategic, and HIF). Each of the submissions raise similar concerns regarding the effects of construction traffic and the safety of students due to the increased volumes of trucks, the distraction to learning environments because of the construction activity, and consultation with the Ministry and schools.

The Ministry of Education has submitted on the TRHIF NoR. The relief sought in the submission has been addressed in section 6.4.2.

In summary, the Ministry of Education is seeking amendments to the Construction Traffic Management Plan (CTMP) which are generally the same but tailored to the particular school that is either directly affected by the NoR or in the vicinity of the works.

The planning assessment has been addressed in section 6.4.2. I am supportive of the Ministry of Education's proposed amendments to the conditions. The requiring authority's proposed conditions have been amended for TRHIF NoR (refer to Attachment 5: Recommended amendments to the proposed conditions). However, I consider that it is appropriate that the requiring authority provides a response at the hearing in regard to the proposed wording of the condition.

In regard to the other aspects of the Ministry of Education's submissions, these are addressed in the following sections:

1. Section 6.4.3 Noise and Vibration
2. Section 6.4.6 Landscape and visual effects.

Kāinga Ora Homes and Communities

Kāinga Ora Homes and Communities (Kainga Ora) has made identical submissions on all 19 of the NoR's (Local Arterials, Strategic, Housing Infrastructure Funded).

Kāinga Ora support the Project and supports the NoR's for the Project in part, including:

- Upgrade and widening the existing Trig Road corridor to an urban arterial corridor.

Kāinga Ora's support is subject the relief sought in the submissions. Kāinga Ora generally supports the proposed conditions of the designations. Kainga Ora also generally supports the use of the mechanisms outlined to avoid, remedy or mitigate the potential adverse effects, and to regularly communicate with the community. This includes the conditions relating to the submission of an OPW, and the requirement for the various management plans (SCEMP, ULDMP, CEMP, CMP, CTMP, CNVMP, CNVMS, EMP, and TMP).

However, Kāinga Ora considers that future information or details about the project are required. Kāinga Ora also considers that, depending on the outcome of these investigations, there may need to be some changes to designation and/or the design of the project to address the concerns expressed in their submissions. The following matters have been raised by Kāinga Ora:

Designation boundary review

Kāinga Ora is concerned with the lapse periods of 15 years for the TRHIF NoR. The boundaries are likely to affect future development along the Project alignment for some time which may lead to unintended consequences for that development as a result.

Kāinga Ora requests that a more refined approach is adopted to determine the designation boundary. This would ensure that the minimum amount of land required is designated (for both construction and operational needs, so that efficient and effective land use is not compromised).

Kāinga Ora proposes the incorporation of a periodic review condition where the extent of the designation boundary is reviewed every 12 months following the lodgement of OPW(s). This will ensure that the designation boundary is refined continually. As a result of the refinement, any land no longer required for the construction and operation shall be uplifted from the designation.

Flooding

Kāinga Ora is concerned that the proposed conditions manage flooding at the expense of neighbouring properties. The proposed conditions for 'Flood Hazard' would enable an increase in the level of flooding toward adjoining properties. As an example, this condition proposed that a 10% reduction in free board for existing habitable floors is permitted, and an increase in flood level of 50mm is permitted where there is no existing dwelling (among others).

Kāinga Ora opinion is that the Project should be required to manage the flooding effects within its own boundary.

Kāinga Ora request that a flood hazard condition is added which requires that the requiring authority does not worsen any flooding effects onto neighbouring properties i.e., that is appropriately avoids, remediates, and/or mitigates the effects of their construction activities.

Noise and vibration

Construction noise and vibration

Kāinga Ora acknowledges that compliance with noise and vibration standards is not always practical. Kāinga Ora supports the management of construction noise and vibration by way of a CNVMP and CNVMS, provided this is in accordance with best practical options and the construction noise and vibration effects are minimised as far as practical.

Kāinga Ora requests that they are directly consulted as part of the preparation of the CNVMP and CNVMS.

Operational Noise and Vibration

Kāinga Ora acknowledges that transport infrastructure is critical to enable a well-functioning urban environment, and that a degree of noise and vibration emissions are expected. However, Kāinga Ora is concerned to ensure that the Project does fully assess the health and well-being effects on the surrounding residential environments.

Kāinga Ora is concerned that the standard used to assess traffic noise (NZS6806) does not fully capture the potential health effects of the proposal. Kāinga Ora's submission sites the recommendation for NoRs for the Drury Arterial Network where it was noted that the standard:

- potentially discounts the adverse cumulative effects of elevated noise on recipients
- inadequately addresses those parts of s5(2)(c) of the RMA concerned with avoiding, remedying, and mitigating adverse effects
- does not engage those parts of Section 7 of the RMA concerned with amenity and the quality of the environment likely to be of concern to impact persons
- inadequately addresses Section 16 of the RMA [duty to avoid unreasonable noise].

Kāinga Ora's submission discusses:

- the operational noise level of 55 dB LAeq, used by AT, as the measure where mitigation is required to address potential adverse effects
- the operational baseline of 55 dB LAeq_(24hour) used within AT's acoustic experts evidence which considered the adverse health risk in relation to road traffic (and referenced the World Health Organisation Environmental Noise Guidelines for the European Region (2018) and Health's Effects on Environmental Noise (2018)⁷
- minimising noise and vibration at the source and the advantages of such an approach for existing and future residents to enjoy greater amenity outside their dwellings
- that there may be circumstances whereby existing dwellings experiencing increased exposure to noise and vibration would require further mitigation e.g. building modifications such as wall insulation, double glazing, forced ventilation, and temperature controls
- support for the application of structure mitigation measures (low noise and vibration road surfaces, acoustic barriers insulation, where appropriate) to all roads within the NoR.

Kāinga Ora submission requests:

- a condition requiring operational noise levels to not exceed 55 DB LAeq beyond the boundaries of the designation or, where exceeded, at a sensitive receiver, mitigation is provided
- discussion with the requiring authority about mitigation methods

⁷ EnHealth Environment Standing Committee - Australian Government - Department of Health and Aged Care <https://www.health.gov.au/sites/default/files/documents/2020/02/enhealth-guidance-the-health-effects-of-environmental-noise.pdf>.

- that offers of structural mitigation measures, where applicable along the alignment of the Project, shall stay in perpetuity i.e., not be limited to three months)
- the condition for Low Noise Road Surface is amended to require the use of low noise and vibration road surfaces, such as asphaltic mix surfaces within this designation, unless further information confirms that this is not warranted from a health and safety perspective.

Other matters

Validity of advice note – designation boundary

Kāinga Ora has concerns with the validity of the advice note associated within the condition associated with the ULDMP. The advice note states that a front yard setback is not required from the designation boundary as the designation is not specifically proposed for road widening purposes. Kāinga Ora considers that the proposal is, at least in part, for road widening to accommodate the Project. A designation cannot modify a rule in the AUP, and it is likely that Auckland Council would require the front yard to be taken from the designation boundary. This would potentially result in unintended consequences along the alignment, and compromise efficient land use and development.

Designation review

Kāinga Ora generally supports the condition which requires review of the designation extent within 6 months of completion or as soon as otherwise practicable. However, Kāinga Ora considers that the condition should also include a requirement for the requiring authority to return the land in a suitable state once the land is relinquished from the designation and surrendered, in agreement with the property owner.

Relief sought

Paragraphs 40 and 41 of Kāinga Ora's submission addresses the relief sought including further actions in relation to the NoR(s) and decisions from Auckland Council regarding the NoR(s). The decisions sought include:

- the provision of conditions
 - that the requiring authority consults with directly affected property owners on changes to property access, where property access exists at the time of submitting an OPW, and that the OPW should demonstrate how safe access will be provided
 - an amendment to the flooding condition that the requiring authority ensures that the Project does not worsen any flooding effects onto neighbouring properties and appropriately avoids, remediates and/or mitigates the effects of their construction activities
 - requiring operational noise limits to not exceed 55 dBA beyond the boundaries of the designation and, where exceeded at a sensitive receiver, mitigation to then be provided by the requiring authority

- that where operational noise effects require noise mitigation, that the offer of mitigation remain in perpetuity, until an offer is taken up
- that low noise road condition is amended to require that this be on all roads within the designation
- amendments to the review condition (Condition 3) that:
 - once any land is relinquished, that the requiring authority leaves the land in a suitable condition in agreement with the property owner/s
 - that the requiring authority assesses, in conjunction with the land owner, every 12 months following the lodgement of the OPW, whether any areas of designation that have been identified as required for construction purposes are still required. Where the land is identified as not being required, the requiring authority gives notice to Auckland Council with a section 182 request to uplift those identified parts of the designation.

Planning Assessment

While Kāinga Ora's submission requests the provision of conditions, or amendment to proposed conditions, as listed above, the submission doesn't provide recommendations of the wording of these conditions/amendment to conditions. Therefore, I consider it appropriate that Kāinga Ora, as the submitter provides proposed amendments or additions to the conditions that would satisfy the relief sought in its submission as part of its evidence for the hearing. The requiring authority would then be able to better respond to the relief sought in Kāinga Ora's submission at the hearing.

The requiring authority is responsible for both determining the extent of the designations, and the measures to avoid, remedy, or mitigate the potential adverse environmental effects arising from the proposed works for the Project. Any recommended wording for the conditions/amendments to conditions sought would require a level of agreement between Kāinga Ora, as the submitter, and the requiring authority who makes the decision on the NoRs under section 172 of the RMA.

6.4.12.7 Planning assessment

The planning assessment for this section of the report can be found at the end of each of the individual submissions.

In summary, my recommendations are as follows:

- a) that the requiring authority provides a response at the hearing in relation to the relief sought in the following submissions:
 - Watercare Services Limited, including an Infrastructure Management Plan to guide the engagement and ongoing co-operation with infrastructure providers potentially affected by the NoRs

- Kāinga Ora, including conditions/amendments to conditions, as requested in Kāinga Ora's submission, in relation to access and OPW's, review of the designation boundary, flooding, and construction and operational noise and vibration, and Low Noise Road Surface.

While the above submissions have requested amendments/new conditions, the submissions have not provided suggesting wording for conditions which would satisfy the relief sought in the submissions.

- b) that the requiring authority responds to the wording of the proposed conditions/amendments to conditions as requested by the submitters or recommended by the Council's specialist and planner, and included in Attachment 5 conditions, for:
- a NUMP condition as requested in the Telecommunication Submitter's submission, including the reporting planners' recommended amendments
 - the conditions requested in the Ministry of Education's submission

6.4.12.8 Effects conclusion

In regard to the effects of the Project, I consider that subject to the further amendments to the conditions recommended above and included in Attachment 5 to this report, the potential adverse effects on the environment from the construction and operation of the TRCU Project can be appropriately avoided, remedied or mitigated.

7. Statutory assessment

7.1. National policy statements

Section 171(1)(a)(ii) requires the council to, subject to Part 2, consider the effects on the environment of allowing the notice of requirement, having particular regard to any relevant provisions of a national policy statement.

The SGA has provided an assessment of the TRHIF Project in relation any relevant national policy statements in *Appendix B: Statutory Assessment*. I agree with and adopt the assessment undertaken by the SGA in relation to the NPS-ET, the NPS-UD, and the NPS-FW. It is noted that an assessment of the TRHIF Project against the NPS-HPL has not been provided. I have provided an assessment of this below.

7.1.1. National Policy Statement on Urban Development 2020 (NPS-UD)

The NPS-UD has the primary objective of ensuring that New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future. This also includes, amongst other things, improving housing affordability by supporting competitive land and development markets and ensuring that urban environments are integrated with infrastructure planning and funding decisions. The NPS-UD also requires that local authorities must be satisfied that additional infrastructure to service the development capacity is provided and likely to be available in addition to being resilient to the current and future effects of climate change.

The requiring authority has assessed the Project against the relevant provisions of the NPSUD in Section 13.2.5 of the AEE. In summary, the requiring authority finds that the Project will give effect to the NPS-UD because:

- *the TRHIF Project is consistent with the objectives and policies of the NPSUD by providing for the necessary transport infrastructure to support the zoning of land in the North West urban areas, and support the establishment of the necessary development capacity*
- *route protection will ensure that the necessary transport infrastructure is planned and identified in the AUP to meet the feasible development capacity targets over the next 30 years. This will support integration with future land use*
- *the NPS-UD recognises the benefits of urban development where it contributes to people's social, economic, cultural and environmental wellbeing. Of particular relevance to the TRHIF Project is the requirement that: good accessibility is provided for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport.*
- *the TRHIF Project will will deliver better accessibility and mode choice by providing upgrades which will support public transport throughout Hobsonville to Westgate Metropolitan Centre, north to Kumeu and Helensville, and to State Highways 16 and 18. Mode choice will include walking and cycling on all corridors, therefore reducing the reliance on low occupancy vehicle trips. This provides an important component to realising the regional emissions benefits of an integrated network.*
- *a number of design measures to provide resilience to flooding, inundation and climate change have been adopted across the North West network.*

I concur with these conclusions and consider that the TRHIF will support and enable future growth proposed in the North West while also promoting and providing for active modes of transport and significant public transport availability in the additional roading. In that regard, I agree that the TRHIF NoR give effect to the NPS-UD.

7.1.2. National Policy Statement on Freshwater Management 2020 (NPS-FM)

The NPS - FM endeavours to implement Te Mana o te Wai by prioritising first the health and well-being of water bodies and freshwater ecosystems followed by the health needs of people and then the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

Its objective and policies endeavour to ensure that natural and physical resources are managed in a way that prioritises the health and well-being of water bodies and freshwater ecosystems first, followed by the health needs of people and then the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future. In particular, the NPS-FW seeks to protect natural wetlands, rivers, outstanding waterbodies and habitats of indigenous freshwater species.

I note that these provisions will apply at the regional consent stage for consents sought under section 13, 14 and 15 of the RMA.

In the context of route selection and protection under this NoR the requiring authority has assessed the Project against the relevant provisions of the NPS-FW in Section 13.2.5 of the AEE. In summary, the requiring authority finds that the Project will give effect to the NPS-FW because:

- *the North West network has sought to avoid or minimise impacts on streams and high value wetlands. This is demonstrated through the comprehensive alternatives assessment process undertaken and design refinement. Specifically, high value wetland environment has been avoided and / or reduced where practicable, new bridge structures are proposed over high value streams;*
- *some freshwater environments have been impacted where there is a functional and operational need to do so. The proposed transport infrastructure is, however, critical to enable existing and future communities to provide for their social, economic, and cultural well-being. In considering the potential future effects arising from activities that may require resource consent in the future, the AEE identifies that any potential effects of the North West network on ecological features within or adjacent to transport corridors, can be adequately managed, and will be subject of assessment as part of any future consent processes. Additionally, there is flexibility in the proposed designation to further minimise impacts at detailed design stage.*

I concur with this assessment under the NPS-FW and Council's ecology specialist Mr Smith also agrees with the management approach (subject to minor additional and amendments). In that regard, I agree that the NoRs give effect to the NPS-FW.

7.1.3. National Policy Statement on Highly Productive Land 2022 (NPS-HPL)

The AEE does not provide an assessment of the Project against the NPS-HPL. The NPS-HPL came into effect on 17 October 2022 and has the broad objective that highly productive land is protected for use in land-based primary production, both now and for future generations⁸. The definition of "highly productive land" is as follows:

'highly productive land means land that has been mapped in accordance with clause 3.4 and is included in an operative regional policy statement as required by clause 3.5 (but see clause 3.5(7) for what is treated as highly productive land before the maps are included in an operative regional policy statement and clause 3.5(6) for when land is rezoned and therefore ceases to be highly productive land).'

As no mapping of highly productive land has occurred yet the definition falls under section 3.5(7) which states:

⁸ <https://environment.govt.nz/assets/publications/National-policy-statement-highly-productive-land-sept-22-dated.pdf>

(7) *Until a regional policy statement containing maps of highly productive land in the region is operative, each relevant territorial authority and consent authority must apply this National Policy Statement as if references to highly productive land were references to land that, at the commencement date:*

(a) is

- (i) zoned general rural or rural production; and*
- (ii) LUC 1, 2, or 3 land; but*

(b) is not:

- (i) identified for future urban development; or*
- (ii) subject to a Council initiated, or an adopted, notified plan change to rezone it from general rural or rural production to urban or rural lifestyle.*

The NPS-HPL contains 9 policies to implement the objective and these policies include the following relevant policies:

- **Policy 1:** Highly productive land is recognised as a resource with finite characteristics and long-term values for land-based primary production.
- **Policy 4:** The use of highly productive land for land-based primary production is prioritised and supported.
- **Policy 8:** Highly productive land is protected from inappropriate use and development.

In combination these policies set a high threshold for protection of soil, primarily for the production of food. However, the NPS-HPL also recognises land designated for infrastructure in section 3.9. This section relates to circumstances where the use or development of highly productive land is appropriate and includes the following in section 3.9(2)(h):

(h) it is for an activity by a requiring authority in relation to a designation or notice of requirement under the Act:

Section 3.9(2)(j) also provides:

(j) it is associated with one of the following, and there is a functional or operational need for the use or development to be on the highly productive land:

- (i) the maintenance, operation, upgrade, or expansion of specified infrastructure:*

The TRCU Project traverses, or is adjacent to, land zoned Future Urban (FUZ), Residential – Mixed Housing Urban Zone (MHU), and Open Space – Conservation Zone. As such, there is no land zoned general rural or rural production. In addition, it is noted that the definition “Highly Productive Land” excludes land in the FUZ. Overall, I consider that the Project is consistent with the NPS-HPL.

7.1.4. New Zealand Coastal Policy Statement (NZCPS)

The NZCPS contains objectives and policies relating to the coastal environment. In relation to the NZCPS, Section 13.2.6 of the AEE states:

“As the Project is not located in the coastal environment, the New Zealand Coastal Policy Statement is not considered to be relevant” (AEE, pg. 114).

Overall, I consider that the TRHIF NoR is consistent with the NZCPS.

7.2. National environmental standards

The SGA has provided an assessment of the TRHIF Project in relation any relevant national environmental standards in *Appendix B: Statutory Assessment (Trig Road)*.

7.2.1. National Environment Standard for Assessing and Managing Contaminants to Soil to Protect Human Health (NES: Soil)

The NES (Soil) provides a nationally consistent set of planning controls and soil contaminant values to ensure that land affected by contaminants in soil is appropriately identified and assessed before it is developed and, if necessary, the land is remediated, or the contaminants contained to make the land safe for human use.

The effects of the Project as they relate to contaminated land have been addressed in Section 6.4.12 of this report. It is noted that resource consent is sought for the Project under the NES: Soil, and a more thorough discussion of this matter will therefore be included in Mr Hall’s (reporting planner for the resource consent) report.

7.3. Regional Policy Statement (Chapter B of the AUP) (‘RPS’)

Section 104(1)(b)(v) of the RMA requires that regard is given to any relevant provisions of a regional policy statement or proposed regional policy statement.

The RPS sets the strategic direction for managing the use and development of natural and physical resources throughout Auckland. The requiring authority has assessed the TRHIF NoRs against the relevant provisions of the RPS in Appendix B: Statutory Assessment. Table 8 below shows the RPS chapters in the AUP that have been assessed.

Table 8: Sections of the RPS addressed by the RA for the TRHIF NoR

RPS Chapter	Chapter sections
Chapter B2 – Urban Growth and Form	B2.2 Urban growth and form
	B2.3 A quality built environment
	B2.4 Residential growth
Chapter B3 – Infrastructure, transport, and energy	B3.2 Infrastructure
	B3.3 Transport
Chapter B4 – Natural Heritage	B4.2 Outstanding natural features and landscapes
	B4.3 Viewshafts
	B4.5 Notable trees
Chapter B5 –	B5.2 Historic historic

Historic Heritage and Special Character	B5.3 Special character
Chapter B6 – Mana Whenua	B6.2 Recognition of Treaty of Waitangi/Te Tiriti o Waitangi partnerships and participation
	B 6.3 Recognising Mana Whenua values
	B6.5 Protection of Mana Whenua cultural heritage
Chapter B7 – Natural Resources	B7.2 Indigenous biodiversity
	B7.3 Freshwater systems
	B7.4 Coastal water, freshwater and geothermal water
	B7.5 Air
Chapter B9 – Rural Environment	B9.2 Rural activities
Chapter B10 – Environmental Risk	B10.2 Natural hazards and climate change
	B10.4 Land – contaminated

I generally agree with the requiring authority's assessment under the RPS provisions, subject to the changes recommended to conditions and the content and implementation of the various management plans and processes proposed as part of the NoR.

7.4. Auckland Unitary Plan – Chapter D Overlays

Section 104(1)(b)(vi) of the RMA requires that regard is given to any relevant provisions of a plan or proposed plan. Chapter D provisions are addressed in *Appendix B: Statutory Assessment*. The TRHIF NoR is subject to one overlay in the AUP being:

- D1: High-Use Aquifer Management Areas Overlay [rp] – Kumeu Waitemata Aquifer

The provisions of Chapter D1 are regional provisions. Therefore, an assessment of these will be required at the regional resource consent stage.

Without repeating the detail of the assessment in the AEE, the requiring authority concludes that the TRHIF NoRs are consistent within the overlay provisions. I concur with the assessment of the requiring authority and have no further comments to add.

7.5. Auckland Unitary Plan – Chapter E Auckland-wide

Section 104(1)(b)(vi) of the RMA requires that regard is given to any relevant provisions of a plan or proposed plan. The requiring authority has assessed the TRHIF NoR against the relevant provisions of Chapter E in *Appendix B: Statutory Assessment*. The following parts of Chapter E were considered relevant by the requiring authority:

- E1 Water quality and integrated management
- E3 Lakes, rivers, streams and wetlands
- E10 Stormwater management area - Flow 1 and Flow 2
- E11 Land disturbance – Regional
- E12 Land disturbance – District
- E13 Cleanfills, managed fills and landfills
- E14 Air quality

- E15 Vegetation management and biodiversity
- E17 Trees in roads
- E20 Māori Land
- E21 Treaty Settlement Land
- E24 Lighting
- E25 Noise and vibration
- E26 Infrastructure
- E27 Transport
- E30 Contaminated land
- E36 Natural hazards and flooding.

Without repeating the detail of the assessment, the requiring authority concludes that the TRHIF NoR is consistent with the provisions of the AUP. In relation to this, the AEE states:

“The Project has been designed to meet the local growth requirements of Whenuapai, where appropriate mitigation has been offered by AT and when combined with the management plans proposed, the Project will provide a positive contribution to the local community and environment” (AEE, pg. 115).

I concur with the assessment of the requiring authority and have no further comments to add.

7.6. Auckland Unitary Plan – Chapter H Zones

Section 104(1)(b)(vi) of the RMA requires that regard is given to any relevant provisions of a plan or proposed plan. The requiring authority has assessed the TRHIF NoR against the relevant provisions of Chapter H in *Appendix B: Statutory Assessment*. The relevant zones are:

- H5: Residential – Mixed Housing Urban Zone
- H7 Open Space Zones
- H18: Future Urban Zone

I concur with the requiring authority’s assessment provided in *Appendix B: Statutory Assessment* regarding the relevant provisions of Chapter H. However, I also note that the proposed designation boundary applies to a small section of open space, opposite the intersection of Trig Road and Hobsonville Road. As such I consider that H7: Open Space Zones is also a relevant AUP chapter.

7.7. Council-initiated Proposed Plan Changes to the Auckland Unitary Plan

Section 43AA of the RMA provides the meaning of proposed plan:

(1) In this Act, unless the context otherwise requires, proposed plan—

- (a) means a proposed plan, a variation to a proposed plan or change, or a change to a plan proposed by a local authority that has been notified under clause 5 of Schedule 1 or given limited notification under clause 5A of that schedule, but has not become operative in terms of clause 20 of that schedule; and*

(b) includes—

(i) a proposed plan or a change to a plan proposed by a person under Part 2 of Schedule 1 that has been adopted by the local authority under clause 25(2)(a) of Schedule 1:

(ii) an IPI notified in accordance with section 80F(1) or (2).

(2) Subsection (1) is subject to section 86B and clause 10(5) of Schedule 1.

Table 9 below lists the council-initiated proposed plan changes to the AUP that I consider are relevant to the Project. These plan changes relate to the Intensification Planning Instrument (IPI) and associated companion plan changes and give effect to the NPS-UD and RMA.

Table 9: Relevant plan changes

Plan Change	Purpose	Relevant AUP Chapters
PC 78: Intensification	<p>This proposed plan change responds to the government's National Policy Statement on Urban Development 2020 (amended in 2022) and requirements of the Resource Management Act. These mean the council must:</p> <ul style="list-style-type: none"> enable more development in the city centre and at least six-storey buildings within walkable catchments from the edge of the City Centre, Metropolitan Centres and Rapid Transit Stops enable development in and around neighbourhood, local and town centres incorporate Medium Density Residential Standards that enable three storey housing in relevant residential zones in urban Auckland implement qualifying matters to reduce the height and density of development required by the RMA to the extent necessary to accommodate a feature or value that means full intensification is not appropriate. 	<p>Chapter D: Overlays (D1) Chapter H: Zones (H5, H7, H18)) Chapter K: Designations (as it relates to being a qualifying matter)</p>
PC79: Amendments to the transport provisions	<p>This plan change aims to manage impacts of development on Auckland's transport network, with a focus on pedestrian safety, accessible car parking, loading and heavy vehicle management, and catering for EV-charging and cycle parking.</p>	<p>Chapter E27 Transport: New standards and assessment criteria to address pedestrian safety, accessible car parking, loading and heavy vehicle management, and catering for EV-charging and cycle parking</p>

		Chapter E24 Lighting: New artificial lighting standards to enhance pedestrian safety and way-finding along private accessways.
PC80: RPS Well-Functioning Urban Environment, Resilience to the Effects of Climate Change and Qualifying Matters	PC 80 integrates the concepts and terms, well-functioning urban environment, urban resilience to the effects of climate change and qualifying matters, into the objectives and policies in several chapters of the Regional Policy Statement (RPS).	Chapter B Regional Policy Statement B2. Tāhuhu whakaruruhau ā-taone - Urban growth and form B7. Toitū te whenua, toitū te taiao – Natural resources B8. Toitū te taiwhenua - Coastal environment B10. Ngā tūpono ki te taiao - Environmental risk

Various sections of the requiring authority’s AEE has identified Proposed Plan Change 78 as being relevant to the TRHIF NoRs including Section 25. Property and land use. Section 25.2 states that the proposed extension and/or upgrade of each corridor will support the intensification of land, in line with the AUP in the following scenarios:

‘ ...

- *Redevelopment and intensification may also occur as a result of the NPS-UD, enabling greater density. Auckland Council’s Plan Change 78 (Intensification), in response to the NPS-UD and Medium Density Residential Standards, is applicable to sections of Māmari Road, Brigham Creek Road, Hobsonville Road and Don Buck Road (see Section 28 for detailed NPS-UD analysis and AEE Part A for receiving environment impact)’.*

The AEE also references the withdrawn PC5, as already noted in Section 4.4 of this report.

7.8. Alternative sites, route, or methods – Section 171(1)(b)

The requiring authority does not have an interest in all the land required for the TRCU Project. Therefore, an assessment of alternative sites, routes or methods is required. The requiring authority’s assessment of alternatives is set out in Appendix A to the AEE.

In relation to this matter, the AEE states that:

“A wide range of alternatives have been investigated for addressing the transport needs for the Project area. A key driver for the assessment of alternatives was to avoid adverse effects where practicable. That evaluation confirmed that the upgrade of Trig Road and Hobsonville Road (between the intersections at Trig Road and Luckens Road) would provide a balance of strong transport and urban outcomes while minimising potential adverse effects.

A further review of AC DBC and SG DBC options was undertaken in response to introduction of the National Policy Statement for Freshwater Management 2020 (NPS-FM). It confirmed that all options considered during the business case process would result in wetland impacts, and that the rationale for discarding the other options remained valid. The alignment being progressed in this NoR remained the preferred option.

The Project supports the future development of land in Whenuapai. Its location and design represent the most appropriate approach to the changing local environment, providing a high-quality urban corridor for the urbanisation and development of the surrounding area and connecting to the future and existing transport network.

An assessment of the various alternative methods for achieving the Project was undertaken, and it was concluded that a designation is considered the most appropriate mechanism to provide for the Project” (AEE, pg. 68-69).

I agree with the assessment undertaken and conclusions reached by the AEE and Assessment of Alternatives. I consider that the information supplied demonstrates that the requiring authority has satisfied the requirements of section 171(1)(b), in that adequate consideration has been given to alternative sites, routes, or methods of undertaking the work.

7.9. Necessity for work and designation – Section 171(1)(c)

The requiring authority has set out its specific project objectives in Form 18 and section 4.2 of the AEE. The AEE concludes that the designation is reasonably necessary to achieve the project objectives. The requiring authority has provided its reasoning for this in Section 13.1 of the AEE:

- *The proposed works will assist in the efficient operation of the local transport network.*
- *The proposed works will provide additional transport network capacity for planned growth in the Whenuapai area, in particular it will enable the use and development of planned future urban land adjoining the Project in accordance with the AUP:OIP.*
- *Sufficient space and facilities will be provided to ensure that the proposed transport corridors are safe for all transport users, including vehicles, public transport, walking and cycling.*
- *The proposed works contribute to mode shift by providing a choice of transport options through the provision of separated and protected walking and cycling facilities, including signalised pedestrian/cycle crossing facilities, and public transport measures to improve bus travel time and reliability.*
- *It will allow AT and/or its authorised agents to undertake the works for the construction, operation and maintenance of the Project comprising transport corridors and associated ancillary components/ activities.*
- *It will enable works to be undertaken in a comprehensive and integrated manner.*
- *It will add protection to the route from future incompatible development which may preclude or put at risk the construction and/or operation and maintenance of the corridor.*
- *The designation will be included in the AUP:OIP providing certainty to the public as to the intended use of the land and nature of the activity authorised.*

Considering the reasons noted above in relation to the objectives of the Project, I agree that the works and designation are reasonably necessary to achieve the requiring authority's objectives.

7.10. Any other matter – Section 171(1)(d)

Section 171(1)(d) requires the council to have particular regard to any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement. In this case the non-RMA documents are considered relevant.

In Section 13.3 of the AEE, the requiring authority has had regard to the following non-RMA documents that apply at a national scale:

- Government Policy Statement on Land Transport for 2021/22-2030/31
- The Thirty-Year New Zealand Infrastructure Plan 2015
- Road to Zero: New Zealand's Road Safety Strategy
- Heritage New Zealand Pouhere Taonga Act 2014

The requiring authority has also had regard to the following non-RMA documents that apply at a regional scale:

- Auckland Transport Alignment Project 2021-2031
- Auckland Regional Land Transport Plan 2018-2028
- Auckland Future Land Supply Strategy 2017
- Hauraki Gulf Marine Park 2000
- Auckland Plan 2050
- Vision Zero for Tāmaki Makaurau: a transport safety strategy and action plan to 2030
- Te Tāruke-ā-Tāwhiri: Auckland's Climate Action Framework and Plan
- Auckland's Urban Ngahere (Forest) Strategy

The requiring authority has also had regard to the following non-RMA documents that apply at a local scale:

- Henderson-Massey Local Board Plan 2020
- Upper Harbour Local Board Plan 2020
- Whenuapai Structure Plan 2016

I agree with the requiring authority's assessment of the TRCU Project against each of the documents listed above.

7.10.1. Future Development Strategy (proposed 2023 draft)

Since the NoR was lodged, a draft of the Auckland Future Development Strategy 2023-2053 ('FDS') has been released. The FDS was released for public consultation on the 6 June 2023, noting that it is still in its draft form and has not been formally adopted by Auckland Council. Subpart 4 of the NPS-UD requires every tier 1 and tier 2 local authority to prepare an FDS for the urban environment, for the reasons set out in sub-clause 3.12.

The FDS provides an indication for how and where Auckland should grow over the next 30 years. This is a matter that is particularly relevant for the context of the TRCU Project, as the overarching purpose of the Supporting Growth Programme is to identify and plan the transport network in Auckland's identified growth areas over the next 10 to 30 years.

The draft FDS identifies Westgate as a node, as well as a spatial priority area for investment in Years 1-10 and Years 11-30. In relation to nodes, the FDS states that:

"...their scale and importance mean that significant projects and investment are needed for one or more of the nodes on an on-going basis" (FDS, pg. 51).

"The 2018 Development Strategy also highlighted the role of nodes... as places expected to undergo a significant amount of housing and business growth over the next 30 years" (FDS, pg. 35).

The TRCU Project will assist with facilitating movement to and from Westgate, and subsequently supporting the level of growth that is anticipated for this area. As such, I believe that the TRCU Project is aligned with the multi-nodal growth model that has been proposed in the draft FDS, as well as the former 2018 Development Strategy.

7.11. Designation lapse period extension – Section 184(1)(c)

Section 184 of the RMA states that designations lapse within five years, if not given effect to, or an extension has been obtained under section 184(1)(b), or unless the designation in the AUP sets a different lapse period under section 184(1)(c). This section of the Act gives discretion to alter the lapse period for a designation from the default 5 years. The Environment Court decision in *Beda Family Trust v Transit NZ A139/04* makes the following statement on the exercise of that discretion in considering a longer lapse period:

"The decision has to be exercised in a principled manner, after considering all of the circumstances of the particular case. There may be circumstances where a longer period than the statutory 5 years is required to secure the route for a major roading project. Such circumstances need to be balanced against the prejudicial effects to directly affected property owners who are required to endure the blighting effects on their properties for an indeterminate period. The exercise of the discretion needs to be underlain by fairness."

The requiring authority has requested a 15-year lapse period for the TRHIF NoR, which is three times longer than the default lapse period in the RMA.

Section 4.3 of the AEE sets out the rationale for the extended lapse period and the following reasons have been offered:

"We [SGA] consider that an extended lapse period of 15 years is a method that is reasonably necessary to achieve this key objective as it provides statutory protection of the future transport corridors in a manner that enables a flexible and efficient infrastructure response to land use" (AEE, pg. 34).

While I recognise that the above reasoning for seeking a longer lapse period is valid, I note that this is a very general reasoning that has been provided across all the NoRs within the wider HIF package. There has been no further justification provided regarding why an extended lapse period is necessary, particularly in relation to the TRHIF Project.

I further consider that a longer lapse period has a range of effects on those persons subject to (or potential adjacent) including the following:

- Creating a long period of uncertainty for the affected landowner;
- Limitation on the changes or improvement to the land affected, particularly commercial business owners;
- Loss of property value.

Section 176 sets out the effect of designations on land and with regard owners and occupiers of land subject to a designation and section 176(1)(b) states:

(b) no person may, without the prior written consent of that requiring authority, do anything in relation to the land that is subject to the designation that would prevent or hinder a public work or project or work to which the designation relates, including—

(i) undertaking any use of the land; and

(ii) subdividing the land; and

(iii) changing the character, intensity, or scale of the use of the land.

The term “planning blight” has been used to encapsulate these concerns and is defined in the Oxford Dictionary as:

“the reduction of economic activity or property values in a particular area resulting from expected or possible future development or restriction of development”.

Several submitters expressed concern that an extended lapse period would cause uncertainty and could unreasonably constrain business investment decisions, fund raising, the value of commercial land and assets.

I note that under section 184 of the RMA, within 3 months before the expiry of the designations lapse period, a requiring authority can submit an application to the territorial authority to fix a longer lapse period. The lapse period can be extended if the territorial authority determines ‘that substantial progress or effort has been made towards giving effect to the designation and is continuing to be made’; which is a similar test to that for extending resource consent’s lapse period under Section 125 of the RMA. In that regard, it acknowledged that it is feasible that should a 5 year lapse period be imposed, multiple extensions of 5 years could also follow.

In my opinion, a delicate balance needs to be struck between the practical needs of SGA to protect and secure the route and co-ordinate its implementation with planned urban growth, and the effect of that lapse period on property owners and occupiers. It is my view that the concerns of the submitters are also valid and that a uniform 15 year lapse period for all the NoRs has the potential to create an unreasonable level of uncertainty and/or planning blight on the properties affected. In my view, the uniform 15 year lapse period for all new NoRs should be reviewed.

Having considered the reasons provided by SGA for the proposed lapse period and balancing them against the potential prejudicial effects to directly affected property owners, I support a shorter lapse date of 10 years for the TRHIF NoR. I consider that a longer (15 year) lapse period introduces greater uncertainty for affected landowners and occupiers and is not necessary in order to implement the NoR in concert with the anticipated urban development under the current FULSS sequencing. We note that should AT require additional time to implement the NoRs, s184(2) of the RMA provides RA's with the opportunity to apply for an extension to the lapse period. This would be granted by council if it was satisfied that substantial progress or effort had been made towards giving effect to the designation and was continuing to be made.

Although funding is not an RMA matter, it is noted that the TRHIF NoR is included within the Housing Infrastructure Funded package of NoRs. In relation to this, Section 1.2 of the AEE states that "*as the HIF funding provides for construction, the necessary resource consents to enable construction are sought in conjunction with the NoR*" (pg. 16). If the NoR and any related resource consent(s) are granted for the Project, I consider that 10 years is a reasonable timeframe required to give effect to the designation, particularly considering that the Council's application for funds from the HIF was made in order to accelerate the development of houses in greenfield areas (AEE, pg. 16).

My conclusion on the appropriateness of the lapse date for the TRHIF NoR is subject to the requiring authority providing further information at the hearing to support the reasons why an additional 5 years is required.

7.12. Part 2 of the Resource Management Act 1991

Section 13.4 of the AEE considers the TRHIF NoR against the purpose and principles of Part 2 of the RMA.

7.12.1. Section 5 of the RMA

The purpose of the RMA is set out in section 5(1) which is: to promote the sustainable management of natural and physical resources. Sustainable management is defined in section 5(2) as:

...managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while –

- (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment⁹.*

⁹ Section 5 of Part 2 of the RMA

My assessment below only considers district plan matters, with Mr Hall addressing regional consent matters in his assessment of the companion application for resource consent.

Regarding Section 5 of the RMA, SGA states that:

“The effects of the Project are addressed in Section 9 of this AEE. The Project represents the sustainable use of natural and physical resources, by avoiding and minimising adverse effects on local ecology and water quality through both its design and the proposed mitigation. AT has sought to avoid new adverse effects on, and minimise disturbance of other, natural features during construction by upgrading the existing Trig Road corridor, and therefore utilising the efficient use of existing infrastructure, rather than providing a new transport corridor.

The finished Project corridor will feature stormwater infrastructure, which meets the Council’s standards and avoids more than minor adverse effects on the receiving environment, while the design also addresses the natural hazards present in the Project area. AT has also proposed a number of management plans and offsetting for wetland loss to address the Project’s effects, including those arising from construction traffic, works within watercourses, earthworks and noise and vibration generation (see Section 10 for specific management plans). This is a standard approach to projects of this scale and type, and similar measures have previously been used on other transport projects in the Auckland region. Following a management plan approach provides adequate flexibility to allow for minor design changes while ensuring that any adverse effects are addressed in a practical manner.

The Project will improve the existing transport network in Whenuapai and provide a vital transport connection for the Whenuapai area. This will ensure that the local transport network operates in an efficient manner as the area urbanises, thereby supporting the economic and social wellbeing of the community. The Project has also been designed to provide for multiple transport modes in a manner which protects the health and safety of all road users. The Project is needed to support the growth and development of the Whenuapai area and is an integral part of a wider programme to provide a comprehensive transport network in the North West area.

AT has also worked with Manawhenua to incorporate cultural protocols and mitigation where practicable and will continue working with iwi in this regard. Given these factors, the Project is considered to be consistent with section 5 of the RMA.”¹⁰

I generally agree with the assessment provided, subject to the recommended new/amended conditions for the TRHIF NoR and further assessment of those matters where clarification is sought in this report.

7.12.2. Sections 6, 7 and 8 of the RMA

As stated above, SGA has provided an assessment against Sections 6, 7 and 8 of the RMA. These are found in sub-sections 13.4.1, 13.4.2 and 13.4.3 of the AEE.

Regarding section 6 of the RMA, SGA considers parts of section 6 of ‘importance’ are 6(a), (e) and (h), of which SGA state:

¹⁰ Section 13.4.4 of the Trig Road AEE

“It is considered that the Project recognises and appropriately responds to these matters of national importance. With regard to natural character and indigenous ecology, the Project has sought to avoid the most significant vegetation and habitats.

The Project will result in unavoidable adverse effects on two wetlands. However, these effects will be offset through appropriate wetland restoration, as discussed at Section 9.7 of this AEE, and the proposed designation provides sufficient room for this offset to be finalised at the detailed design stage.

Manawhenua have been actively involved throughout development of the corridor, including through alternatives assessment and identification of the preferred options. The opportunity to provide CIA’s was provided and the CIAs prepared by Te Kawerau ā Maki and Ngāti Whātua o Kaipara have been considered by the Project team.

The ongoing partnership with Manawhenua has provided an understanding and the incorporation of Manawhenua values and expression of kaitiakitanga throughout the development of the Project.

There are no sites of significance to Manawhenua, wāhi tapu, other taonga or Māori land identified under the AUP:OP within the transport corridor. The relationship of the respective iwi with the transport corridor, their ancestral lands, wāhi tapu and taonga will be recognised and provided for through the involvement of Manawhenua in developing and implementing various mitigation measures and management plans at the time of detailed design and construction.

The proposed stormwater management for the Project will provide sufficient attenuation to avoid the potential adverse effects of flood hazards, both upstream and downstream of the Project area.

Given these factors, the Project is considered to be consistent with section 6 of the RMA.”¹¹

Below, I have addressed the outstanding Section 6 matters that were not addressed specifically by SGA:

- Regarding 6(b), I note that there are no areas within the TRCU Project corridor that are subject to the Outstanding Natural Features or Outstanding Natural Landscape overlays, as identified within the AUP. As such, I do not consider that the TRCU Project is inconsistent with 6(b).
- Regarding 6(c), I note that there are no areas within the TRCU Project corridor that are identified as areas of significant indigenous vegetation or significant habitat, in accordance with the AUP. There are sections of land south-west of the Project area, however these are not directly affected.
- Regarding 6(d), I note that the TRCU Project does not restrict access to any coastal marine areas, lakes, and/or rivers. The assessment of the resource consent application that has been lodged for this Project will address these matters in accordance Chapter E of the AUP.

¹¹ Section 13.4.1 of the AEE

- Regarding 6(f), section 6.4.4. of this report addresses heritage matters. I do not consider the TRHIF NoR is inconsistent with section 6(f).
- Regarding 6(g), the TRCU Project does not conflict with any customary rights.

SGA considers that the parts of Section 7 that are ‘particularly relevant’ are 7(a), (aa), (b), (c), (d), (f) and (i) of which SGA state:

“The values of kaitiakitanga and the ethic of stewardship have been adopted to direct the option assessment and design development process for the Project. As previously discussed, the Project team has worked with, and is continuing to work with Manawhenua to ensure that appropriate measures are employed to protect the mauri of the local environment. This includes the use of an ESCP during construction and GD01 compliant stormwater infrastructure within the completed transport corridor. The proposed design also avoids new stream crossings and minimises the required removal of vegetation and habitat, with any adverse effects adequately mitigated through wetland restoration and enhancement.

The Project also represents the efficient use and development of the Project corridor’s natural and physical resources by utilising the existing transport corridor as much as possible, rather than constructing a new corridor.

The adjacent land to the existing Trig Road corridor is currently rural in character but is identified in the AUP:OIP and FULSS as future urban land. The Project will provide an urban transport corridor to reflect this intended future urban character of the surrounding area. The corridor has been developed to provide for walking and cycling facilities and sufficient space is provided for street planting and street furniture, contributing to the enhancement of amenity values associated with a high-quality urban environment.

The Project avoids any Significant Ecological Areas, and while wetland reclamation is required wetland restoration and enhancement will be undertaken to offset the adverse effects of the Project. In this way the Project recognises the intrinsic values of the local ecosystem.

The proposed stormwater infrastructure has been designed to accommodate predicted climate conditions, including ensuring that the proposed culverts can safely transport water without affecting the stability of the transport corridor. In addition, the Project supports a compact urban form within the existing urban boundaries by supporting the development proposed by the AUP:OIP, limiting the need for further urban expansion. It is also noted that the Project does not preclude the provision of future public transport services, and provides for active transport modes, assisting in seeking to achieve mode shift.”¹²

Sections 7(h) is not considered relevant as there are no trout or salmon habitats within the Project area, and section 7(j) is not relevant as these projects do not relate to renewable energy.

¹² Section 13.4.2 of the AEE

Section 8 of the RMA requires that the TRCU Project takes into account the principles of the Treaty of Waitangi. In relation to Section 8, SGA have stated:

“AT has partnered with Manawhenua throughout the development of the Project. This has resulted in the selection of a corridor alignment which avoids and minimises adverse effects on cultural values where practicable. This has included treating stormwater to a high standard, minimising the disturbance of streams and ensuring that construction management plans will be in place to protect water quality and any unrecorded cultural heritage items encountered during construction.

Further engagement will be undertaken in the design and construction phases to ensure that the principles of the Treaty of Waitangi are taken into account. Given these factors, the Project is considered to be consistent with section 8 of the RMA.¹³

Overall, I generally agree with the requiring authority’s assessment of the Project against Sections 5, 6, 7 and 8 of the RMA, subject to the recommended conditions for each of the NoRs (included as Attachment 5), and further assessment of the matters I have sought clarification to in this report.

8. Conclusions

The requiring authority, being Auckland Transport, has lodged a NoR under section 168 of the RMA for the TRHIF NoR, which forms part of the TRCU Project.

It is recommended to the requiring authority that the notice of requirement should be confirmed subject to conditions, for the following reasons.

- The notice of requirement and associated works are reasonably necessary for achieving the objectives of the requiring authority.
- Adequate consideration has been given to alternative sites, routes or methods of undertaking the work identified in the notice(s) of requirement.
- The notice of requirement is generally consistent with the relevant AUP provisions.
- The notice of requirement is generally in accordance with Part 2 of the RMA and; and relevant national environmental standards and national policy statements.
- Restrictions, by way of conditions, imposed on the designation can avoid, remedy, or mitigate any potential adverse environmental effects.

9. Recommendation and conditions

9.1. Recommendation and conditions

Subject to new or contrary evidence being presented at the hearing, it is recommended that the notice of requirement be confirmed by the requiring authority, subject to the amended and additional condition, as set out in Attachment 5 of this report.

¹³ Section 13.4.3 of the AEE

That pursuant to section 171(3) of the RMA the reasons for the recommendation are as follows:

- The notice of requirement is consistent with Part 2 of the RMA in that it enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety.
- The notice of requirement is consistent with and gives effect to the relevant national environmental standards, national policy statements and the AUP.
- in terms of section 171(1)(b) of the RMA, adequate consideration has been given to alternative sites, routes, or methods for undertaking the work.
- in terms of 171(1) of the RMA, the notices of requirement are reasonably necessary to achieve the requiring authority's objectives.
- restrictions, by way of conditions attached to the notices of requirement, have been recommended to avoid, remedy, or mitigate adverse environmental effects associated with the works.

9.2. Recommended conditions

Several changes are recommended to the conditions that were proposed by the Requiring Authority. The recommended condition amendments are included in Attachment 5.

Attachment 1: Section 92 Requests and Responses

Attachment 2: Submissions and Local Board Comments

Attachment 3: Auckland Council Specialist Reviews

Attachment 4: Summary of Submissions

Attachment 5: Proposed Notice of Requirement Conditions

ATTACHMENT 1
SECTION 92 REQUESTS AND RESPONSES

Attachment 1

Section 92 Requests and Responses

The following is a link to the Auckland Council website for the Redhills and Trig Road HIF Notices of Requirement.

The link to the requests for further information under Section 92 of the of the Resource Management Act 1991 are here:

[North West HIF Redhills Network](#)

[North West HIF Trig Road Network](#)

ATTACHMENT 2

SUBMISSIONS AND LOCAL BOARD VIEWS

Submissions have not been re-produced in this agenda but
can be found at:

<https://www.aucklandcouncil.govt.nz/have-your-say/hearings/find-hearing/Pages/Hearing-documents.aspx?HearingId=690>

Attachment 2

Submissions and Local Board Comments

The following is a link to the Auckland Council website for the Redhills and Trig Road HIF Notices of Requirement.

The link to the submissions is here:

[Submissions – Volume 1 – HIF Redhills and HIF Trig Road](#)

A list of submitters by name is here:

[Submitters by Name](#)

A guide for Submitters is here:

[Submitters Guide](#)

For Action

MEMO TO: Todd Elder - Planner

COPY TO:

FROM: Laura Hopkins - Democracy Advisor

DATE: 03 July 2023

MEETING: Henderson-Massey Local Board Meeting of 20/06/2023

Please note for your action / information the following decision arising from the meeting named above:

HM/2023/80 **Local Board views on the 19 North West Notice of Requirements lodged by Supporting Growth Alliance**

FILE REF CP2023/06988

AGENDA ITEM NO. 17

17 **Local Board views on the 19 North West Notice of Requirements lodged by Supporting Growth Alliance**

Resolution number HM/2023/80

MOVED by Deputy Chairperson B Loader, seconded by Member O Kightley:

That the Henderson-Massey Local Board:

- a) **whakarite / provide the following feedback on the 19 Notices of Requirement lodged by the Supporting Growth Alliance for new transportation projects in the Northwest:**
 - i) **tautoko / support the Supporting Growth Alliance (SGA) 19 transportation related Notices of Requirement (NOR) in the Northwest**
 - ii) **recognise the plans for growth in the Auckland Unitary Plan require long-term transport planning and the designations will provide route protection**
 - iii) **kohuki / consider that water quality and healthy ecosystems and wider ecological values are important in the context of Notices of Requirement (NOR) in the Northwest**
 - iv) **kohuki / consider that the aquifers in the NOR area must not be affected by planned stormwater run-off or flood attenuation, as they flow to the Upper Waitemata Harbour catchment, which is already struggling with sedimentation and pollution issues.**
- b) **kopou / appoint Brenda Brady to speak to the local board views at a hearing (if one is held) on the 19 Notices of Requirement lodged by the Supporting Growth Alliance for new transportation projects in the North West, if that is considered necessary by the local board.**

-
- c) **delegate authority to the chairperson of Henderson-Massey Local Board to make a replacement appointment in the event the local board member appointed in resolution b) is unable to attend the hearing (if one is held).**

CARRIED

SPECIFIC ACTIONS REQUIRED:

Kia ora Todd,

Please note for your action / information the following decision arising from the Henderson-Massey Local Board business meeting on 20 June 2023.

For Action

MEMO TO: Todd Elder - Planner

COPY TO:

FROM: Ignacio Quinteros - Democracy Advisor

DATE: 23 June 2023

MEETING: Rodney Local Board Meeting of 6/21/2023

Please note for your action / information the following decision arising from the meeting named above:

RD/2023/79 **Local Board views on the 19 North West Notices of Requirements lodged by Supporting Growth Alliance**

FILE REF CP2023/06990

AGENDA ITEM NO. 13

13 **Local Board views on the 19 North West Notices of Requirements lodged by Supporting Growth Alliance**

Member G Wishart declared an interest in this item and took no part in the discussion or voting in the matter.

Member G Wishart left the meeting at 11.23am.

Todd Elder – Senior Policy Planner was in attendance for this item.

Resolution number RD/2023/79

MOVED by Member M Dennis, seconded by Deputy Chairperson L Johnston:

That the Rodney Local Board:

- a) **whakarite / provide the following views on the Notice of Requirements for the transportation projects**
 - i) **support S1 the alternative state highway: a new dual carriageway motorway and the upgrade of Brigham creek interchange in Whenuapai**
 - ii) **express concern that the adverse effects of flooding are more than minor for the notice of requirement S2: State Highway 16 (SH16) Main (Huapai): upgrade of the existing SH16 designation 6766 to provide for the road corridor upgrade, including the shared footpaths and cycle lanes (active mode facilities) and realignment of the Station Road intersection with SH16**
 - iii) **express concern that the adverse effects of flooding are more than minor for the notice of requirement S3 Rapid transit corridor (Kumeu): new rapid transit corridor with shared footpath and cycle lane (active mode corridor)**

- iv) express concern the adverse effects of flooding are more than minor for that notice of requirements KS of Kumeu Rapid Transit station New rapid transit station including transport interchange facilities accessway
 - v) express concern the adverse effects of flooding are more than minor for that notice of requirements HS: Huapai Rapid Transit Station: New rapid transit station, including transport interchange facilities, park and ride and accessway
 - vi) express concern the adverse effects of flooding are more than minor for that notice of requirements of S4: Access Road (Kumeu): Upgrade of Access Road with separate footpath and cycle lane
 - vii) express concern that the delivery of these projects is overdue given the decades of growth in the North West leading to Rodney being the fastest growing area of Auckland accommodating massive urban sprawl yet there having been little investment in capacity on State Highway 16 or in provision of any rapid transit solutions that would encourage mode shift and mitigate climate impacts
 - vii) express concern that the congestion on State Highway 16 is compromising regional productivity as commuter traffic and rural production compete with students and visitors, for the opportunity to use the route with weekends being no better than during the week as recreational travelers from all over Auckland come out to our visitor attractions, regional parks, beaches and to participate in activities not available in other parts of the city
 - viii) seek clarification of the sequence of delivery of the notices of requirements in the North West Strategic Package
 - ix) support a moratorium on all future development in the North West until all the projects that follow the notices of requirements have been delivered.
- b) kopou / appoint Deputy Chairperson Louise Johnson to speak to the local board views at a hearing (if one is held) on the Notice of Requirement if that is considered necessary by the local board
 - c) tautapa / delegate authority to the chairperson to make a replacement appointment in the event the local board member appointed in resolution b) is unable to attend the hearing (if one is held).

CARRIED

Member G Wishart returned to the meeting at 12.20pm.

SPECIFIC ACTIONS REQUIRED:

For Action

MEMO TO: Todd Elder - Planner

COPY TO:

FROM: Max Wilde - Democracy Advisor (Upper Harbour Local Board)

DATE: 23 June 2023

MEETING: Upper Harbour Local Board Meeting of 22/06/2023

Please note for your action / information the following decision arising from the meeting named above:

UH/2023/66 **Local Board views on the 19 Notice of Requirements lodged by Supporting Growth Alliance in the North West**

FILE REF CP2023/06989

AGENDA ITEM NO. 11

11 **Local Board views on the 19 Notice of Requirements lodged by Supporting Growth Alliance in the North West**

The Senior Policy Planer, Todd Elder, was in attendance to support the item.

Resolution number UH/2023/66

MOVED by Chairperson A Atkinson, seconded by Member K Parker:

That the Upper Harbour Local Board:

- a) **whakarite / provide the following local board feedback on the 19 Notices of Requirement lodged by the Supporting Growth Alliance for new transportation projects in the North West, noting that the Upper Harbour Local Board is only commenting on projects in the Upper Harbour Local Board area:**
 - i) **the local board supports the aims of the Supporting Growth Alliance to enable better public and active modes of transportation, better roads and safer intersections. We do wish that in some areas this was completed prior to the already completed intensification and development**
 - ii) **the current Local Board Plan 2020 Outcome 2 is for “An efficient and accessible travel network” One objective is to ‘Improve roads and connections in Upper Harbour’. We note that these transportation projections will lead to some achievement of this outcome**
 - iii) **note that Whenuapai is currently zoned Future Urban and there is currently a Future Development Strategy consultation running which aims to provide long term guidance on how the council plans for development**

- iv) request that the Supporting Growth projects around the Whenuapai and Hobsonville area are prioritized as that is where growth is currently occurring. The local board consider that development of roading infrastructure including public and active transport should be done prior to further housing and business intensification
 - v) note that many intersections in the Whenuapai and Hobsonville area are unsafe and upgrades need to happen as soon as possible. We hear from many residents in Hobsonville, Scott Point and Whenuapai about the dangerous intersections and congestion along these key roads
 - vi) request safe crossing points at key pedestrian locations as many of the new roads are extremely wide.
 - vii) the local board acknowledges concerns raised by submitters. We therefore ask that as the project moves into detailed design that the following issues are considered:
 - A) the effect this will have on induced traffic and the need to reduce emissions
 - B) effects on individual properties
 - C) the potential that a motorway interchange in Whenuapai will not add to the liveability of the area unless driving a car.
 - viii) many areas around Whenuapai have a deficit of trees and biodiversity. While acknowledging that the New Zealand Defence Force is of strategic importance nationally and their concerns around bird strike, we request that where possible berms are planted rather than grassed. This would be in a similar manner to the recent upgrades around State Highway One near Albany as part of the Northern Corridor Alignment Project
 - ix) request that planning to upgrading the public and active transport components, and road safety components especially around intersections can be prioritized.
- b) kopou / appoint Chairperson A Atkinson to speak to the local board views at a hearing (if one is held) on the 19 Notices of Requirement if that is considered necessary by the local board.
 - c) tautapa / delegate authority to the chairperson of Upper Harbour Local Board to make a replacement appointment in the event the local board member appointed in clause b) is unable to attend the hearing (if one is held).

CARRIED

SPECIFIC ACTIONS REQUIRED:

ATTACHMENT 3

AUCKLAND COUNCIL SPECIALIST REVIEWS

Attachment 3

Auckland Council Specialist Reviews

- 3A Transport
- 3B Noise and Vibration
- 3C Archaeology and Heritage
- 3D Landscape and Visual
- 3E Ecology
- 3F Stormwater and Flooding
- 3G Economics
- 3H Urban Design

3A Transport

Memo (technical specialist report to contribute towards Council's section 42A hearing report)

22 June 2023

To: Jo Hart, Senior Policy Planner, Plans & Places – Regional, North, West & Islands

From: Andrew Temperley, Senior Transport Planner, Traffic Planning Consultants

Subject: Supporting Growth Alliance – (NoR Package 1 – Local Arterials) – Transportation Assessment

1.0 Introduction

1.1 I have undertaken a review of the Local Arterials Notices of Requirements lodged by the Supporting Growth Alliance (SGA), on behalf of Auckland Council in relation to transportation effects.

My name is Andrew Temperley and I am a Senior Transportation Engineer and Planner at Traffic Planning Consultants Ltd (TPC) and have over 21 years of experience in transportation planning and engineering. I hold the qualifications of a Bachelor of Mechanical Engineering with German from the University of Nottingham, UK (1998) and I am a Chartered Transportation Engineer and member of the Chartered Institution of Highways and Transportation (CIHT) in the UK.

1.2 My work experience has included assessing and reporting on transportation effects of commercial and residential developments and strategic growth proposals in both New Zealand and the UK. Over recent years, I have been contracted to undertake such work on behalf of Auckland Council.

1.3 In writing this memo, I have reviewed the following documents:

- NW Local Arterials - Assessment of Transport Effects – Whenuapai
- NW Local Arterials - Assessment of Transport Effects – Redhills Riverhead
- NW Local Arterials - Assessment of Transport Effects – Trig Road
- NW Local Arterials - Assessment of Transport Effects – Redhills Arterial Transport Network
- NW Local Arterials - Assessment of Alternatives
- NW Local Arterials - Assessment of Effects on the Environment
- NW Local Arterials - Assessment of Effects on the Environment – Redhills Arterial Transport Network
- NW Local Arterials - Assessment of Effects on the Environment – Trig Road Corridor Upgrade
- NW Local Arterials - General Arrangement Plans – Brigham Creek Rd
- NW Local Arterials - General Arrangement Plans – Mamari Rd
- NW Local Arterials - General Arrangement Plans – Trig Rd
- NW Local Arterials - General Arrangement Plans - Spedding Road

- NW Local Arterials - General Arrangement Plans – Hobsonville Road
- NW Local Arterials - General Arrangement Plans – Fred Taylor Drive
- NW Local Arterials - General Arrangement Plans – Don Buck Road
- NW Local Arterials - General Arrangement Plans – Coatesville-Riverhead HWY
- NW Local Arterials - General Arrangement Plans – Whenuapai
- NW Local Arterials - General Arrangement Plans – Redhills
- NW Local Arterials – Indicative Design & Designation Drawings – Trig Road
- NW Local Arterials – Indicative Design & Designation Drawings – Redhills

1.4 By way of summary of the detail contained within this memo, based on information provided by SGA to date, I consider that the evidence provided by SGA confirms that the future arterial road corridors are necessary to support traffic growth arising from future urban development in the area. However, I do not consider that sufficient information has been provided to guarantee that the proposed NORs will deliver a fit for purpose road network ensuring safe and efficient operation for all road users.

1.5 The lodgement of NORs individually fails to guarantee delivery of key transport outcomes which are reliant on an eventual full network being delivered. The scope of SGA's assessment of the future transportation performance of the arterial routes focusses primarily on a scenario under which a full network of arterial routes is delivered and does not assess scenarios under which some routes could be subject to heavier future traffic flows if built in the absence of other parts of the future network.

1.6 Future arterial roads within the Whenuapai area in particular include combinations of routes with an east-west or north-south traffic carrying function, which have a high interdependence on one another in order to achieve forecast future traffic flows which are premised on the full network being developed.

1.7 In order to address my concerns, I have identified a number of conditions that I have summarised at the end of my review.

2.0 Key Transportation Issues

2.1 Key transportation issues which I considered across the proposed new network of urban arterial routes included the following:

- Provision of sufficient capacity to cater for future growth, particularly at key intersections.
- Consideration of key elements of route form and physical characteristics to ensure safe performance of future road network and alleviation of any safety issues on the existing network.
- Interdependence between combinations of the future road corridors to achieve desired transport outcomes, which I have elaborated upon below.
- The ability to effectively manage construction traffic effects on the existing road network, including compliance with provisions of the AUP Transport Chapter

in relation to appropriate manoeuvring arrangements on the existing arterial road network.

- 2.2 As noted above, a key issue affecting the transportation performance and operation of individual NOR projects is the interdependence between particular combinations of NORs, with notable differences in potential future traffic levels on some routes depending on the timing of delivery of separate elements of the network. This is particularly noted to be the case for the proposed network of routes in the Whenuapai area, where all of the NOR corridors broadly follow either an east-west axis or a north-south axis in close proximity to each other.
- 2.3 As an example, the future performance of Brigham Creek Road has been assessed with daily flows of between 12,500 and 26,600 vehicles in 2048, with the full future NOR network in place. However, these forecast flows are premised in particular on the parallel running route of Spedding Road being upgraded to a two-lane urban arterial road. Without either upgrade in place, the corresponding forecast flows for Brigham Creek Road are between 21,200 and 35,200 vehicles, equating to around 9,000 extra vehicles per day without the Spedding Road upgrade.
- 2.4 The level of traffic demand on the future arterial road corridors has particular implications with regards to the designs of key intersections and the need to ensure that sufficient capacity can be provided within the Designation boundaries. As some of the future arterial road corridors do not appear to have been assessed with future traffic volumes which would represent a realistic 'worst case scenario', I have been unable to conclude that the NORs in their current form will result in acceptable transport outcomes being achieved.
- 2.5 The issues identified in paragraph 2.1 formed the basis for further information requests from SGA, as discussed further in Section 4 of this memo.

3.0 Supporting Growth Alliance Assessment

- 3.1 SGA's assessments for each of the NORs for the urban arterials package are broadly consistent with one another, considering future use by all transport users, changes to the 'place' function of key routes (e.g., transition from rural to urban), design features to ensure safety and traffic operation and capacity analyses.
- 3.2 SGA's assessment refers to the Roads and Streets Framework (RASf) for assessment of appropriate elements of route form to cater for all modes of travel whilst fulfilling appropriate 'place' and 'movement' functions identified for each of the corridors. This approach is deemed to be appropriate and acceptable.
- 3.3 While safety assessments provided in the original Assessments of Transport Effects are qualitative in nature, subsequent information requested from SGA additionally confirms pre-existing safety problems along individual corridors.
- 3.4 As confirmed in the Assessments of Transport Effects for the NORs, SGA's traffic modelling and capacity analyses have utilised the Auckland multi-modal strategic model, in conjunction with a local traffic SATURN model, as well as the strategic active model for walking and cycling (SAMM). Outputs from the SATURN model

have in turn been used as inputs to SIDRA models for individual intersections. This approach is deemed to be acceptable, utilising appropriate modelling tools for the respective strategic and local level analyses.

- 3.5 The transport conditions proposed in the NORs refer to the preparation of a Construction Traffic Management Plan (CTMP) for each of the NORs, to avoid, remedy, or mitigate the adverse construction traffic effects as far as practicable. This approach is deemed to be appropriate.

4.0 Assessment of Transportation effects and management methods

- 4.1 In reviewing SGA’s assessment of the transportation effects of the NOR corridors, a number of gaps were cited which were common to most or all of the routes. Further to reviewing additional information provided in response by SGA, I have provided my own assessment, which I have summarised below in relation to each of the information gaps.

Information Gap		TPC Assessment of SGA Response
Inconsistencies in intersection form along most of the future arterial road corridors	Most NOR corridors include variations between signal and roundabout control at consecutive intersection points and a lack of clarification as to the approach and philosophy to identifying appropriate intersection forms. Variations between signal and roundabout control along individual corridors can potentially reduce the ability to effectively manage congestion and traffic operations, including bus priority, at a corridor-wide level over the long-term.	I am satisfied with the responses provided by SGA clarifying the process for selection of intersection forms and confirming scope for changing intersection forms at a later stage.
Poor LOSs at key intersections, with no interventions or mitigation proposed	Separate correspondence with AT in relation to acceptability of low intersection Level of Service (LOS) advised that a LOS of D or below at key intersections could be deemed to be acceptable, provided that due consideration has been given towards the ability of the future corridor to cater for safe and efficient movements of public transport and freight, in instances in which	I am satisfied with the responses provided by SGA providing clarification in relation to provisions for strategic bus and freight movements where appropriate. However, intersection performance as assessed has

	these were respectively identified as key functions for individual corridors.	interdependence on the item below.
Interdependency of NOR corridors	Future performance at key intersections was limited to a single future scenario in which all NOR road projects were fully completed, without a 'Do Nothing's or 'Do Minimum' scenario to use as a reference point against which to confirm the basic need for the NORs and to fully quantify their effects. In addition, there were no scenarios which considered transportation effects associated with individual NORs getting approved in the absence of others, resulting in a worst case scenario in relation to forecast traffic levels.	Further Information provided by SGA confirms potentially higher traffic levels on some corridors in a 'Do minimum' scenario. However, the further information still does not fully assess transport effects of individual arterial corridors, including performances of key intersections, under an appropriate 'worst case scenario', thus I have been unable to conclude that acceptable transport outcomes can be achieved in the event that not all of the NORs are approved.
Assessments of safety	SGA's original assessments of safety were mostly qualitative in nature, however further information requested from SGA included a comparative analysis with current safety issues on the existing network, in order to understand the effect of the NORs upon safety.	I am satisfied that the NORs will result in positive safety outcomes.
Construction Traffic Effects	Include access and manoeuvring of heavy vehicles on arterial roads, which are not assessed in the Assessments of Transport Effects according to Auckland Unitary Plan principles and are proposed by SGA to be addressed through a Construction Traffic Management Plan (CTMP).	I am happy with the approach for construction traffic effects to be addressed through the CTMP process, subject to compliance with provisions of the AUP Transport Chapter in relation to appropriate manoeuvring arrangements on the existing arterial road network.

4.2 Information supplied in response by SGA is deemed to be acceptable in relation to most of the above items. However, in the absence of 'Do minimum' scenarios, which consider the progression of individual NORs which have a high interdependence on parallel running corridors within the Arterials Package, I consider that insufficient information has been provided by SGA to confirm a 'worst case' traffic scenario.

5.0 Submissions

5.1 Following notification of the NORs on 23 March 2023, the period for submissions closed on 21 April 2023. A total of 285 submissions were received across the twelve NORs, summarised as follows:

NoR	No. of submissions	Submissions including Transportation comments
NoR W1: Trig Road North	21	10 (48%)
NoR W2: Mamari Road	16	7 (44%)
NoR W3: Brigham Creek Road	21	11 (52%)
NoR W4: Spedding Road	17	11 (65%)
NoR W5: Hobsonville Road	61	38 (62%)
NoR R1: Coatesville-Riverhead Highway	29	17 (59%)
NOR RE1: Don Buck Road	25	10 (40%)
NOR RE2: Fred Taylor Drive	20	6 (30%)
HIFTR: Trig Road (South)	16	9 (56%)
NOR 1: Redhills North-South Arterial	20	7 (35%)
NOR 2a: Redhills East-West Arterial – Dunlop Road	12	3 (25%)
NOR 2b: Redhills East-West Arterial – Baker Lane	15	5 (33%)
NOR 2c: Redhills East-West Arterial – Nixon	12	4 (33%)
Total	285	138 (48%)

5.2 The following sub-sections summarise the most common transportation related comments raised for each individual NOR in turn, along with my comments.

NoR W1: Trig Road North

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property during construction phase	5
Maintain vehicle access to property upon completion	4

Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network	4
Preference for crossroads intersection form between Trig Road / Hobsonville Road / Luckens Road	1
Concern over construction traffic effects impacting upon the future school	1
Opposition to making Trig Road a Limited Access Road, to ensure local access is retained	1
Proposed NOR route not appropriate	1

5.3 **Transport Issue: Maintain vehicle access to property during construction phase**

Maintaining vehicle access to property will be a requirement for a prospective Construction Traffic Management Plan (CTMP), as noted in Supporting Growth's Assessment of Transport Effects (ATE) for North West Whenuapai:

During the time of construction, there will be temporary traffic management controls such as temporary concrete or steel barriers. Existing driveways that remain during construction will be required to have temporary access provision. It is anticipated that the contractor should undertake a property specific assessment of any affected driveways and provide temporary access arrangements if required. The temporary access should ensure the ability for residents to safely access and exit the property. These requirements should be captured in the CTMP or SSTMP, if required. It is noted that significant land use change is expected along these key arterials [...]. As such, confirmation of traffic management controls will be required immediately prior to works to reflect the land use considerations at that time.

5.4 **Transport Issue: Maintain vehicle access to property upon completion**

As noted in the ATE for North West Whenuapai, the adopted design philosophy is to maintain driveway access where practicable and minimise impacting land for access purposes other than where necessary to re-instate driveways. No change to access for any existing properties on Trig Road, Mamari Road or Brigham Creek Road have been identified and no operational effects on egress and access to retained driveways have been identified.

5.5 **Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network**

Others of the NORs for future strategic arterial routes within the Whenuapai area include upgrades to Brigham Creek Road, Spedding Road and Hobsonville Road, of which the latter two in particular provide enhanced strategic connectivity to the metropolitan centre of Westgate.

Submitters additionally raised questions in relation to progress on other future transport projects in the area, including the proposed extension to Northside Drive and connections between State Highways 16 and 18. The proposal for new connections between SH16 and SH18 is a future Waka Kotahi project that is currently unfunded, which is expected to include the completion of the Northside Drive connection crossing SH16, with the provision of south-facing ramps onto

SH16. At the time of writing, no timeframe is available for the delivery of these new roading connections, however, their future delivery is not impacted by the proposed new strategic arterial road network serving the Whenuapai area.

5.6 *Transport Issue: Preference for crossroads intersection form between Trig Road [realigned to east] / Hobsonville Road / Luckens Road*

Previous work undertaken has given consideration to an alternative proposal to provide a crossroads arrangement between Trig Road / Hobsonville Road / Luckens Road, which would be achieved through an easterly off-line realignment of the southernmost end of Trig Road. However, this option was discarded in favour of on-line widening, due to substantial earthworks required, the need for stream crossings and its large footprint on Greenfield land.

5.7 *Transport Issue: Concern over construction traffic effects impacting upon the future school*

The site of the future school at 13 – 15 Trig Road was identified in the ATE for the Whenuapai arterials as requiring further consideration during the development of a prospective CTMP.

The Ministry of Education has submitted that the construction-related effects on these schools need to be appropriately addressed and managed by means of a CTMP and highlights particular concerns in relation to the impact of heavy vehicles. The Ministry of Education submission requests a more specific requirement for the CTMP to include:

- How heavy vehicles will avoid travelling along Trig Road, between SH16 and Hobsonville Road, during school pick-up and drop-off times (between 8.15am - 9.10am and 3.00pm - 3.30pm), during term time. Engagement should be undertaken with each school prior to construction to confirm the restricted times still reflect the school's peak pick up and drop off times. It is noted that new schools could establish around the project area before construction commences. Any new school on an identified construction route must be engaged. Heavy vehicles movements must also avoid these new schools at their peak pick up and drop off time.
- Details of consultation (including outcomes agreed) with the applicant and Trig Road School with regard to maintaining the safety of school students during construction. Details of all safety measures and interventions will be documented in the Construction Traffic Management Plan.
- Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving past both schools, and to look out for school children and reversing vehicles at all times.
- Any CTMP 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.

I support these proposed additions to the CTMP conditions.

5.8 Transport Issue: Opposition to making Trig Road a Limited Access Road, to ensure local access is retained

As confirmed in the ATE for North West Whenuapai, all of the new future arterial road corridors are expected to be subject to Limited Access Road status. As identified under para. 5.4, local access to existing property on Trig Road is to be maintained as part of the upgrade.

5.9 Transport Issue: Proposed NOR route not appropriate [with regard to site access opposite intersection of Trig Road / Spedding Road]

The submission in question raises concern in relation to access to #49 Trig Road, which would become more constrained as a result of the two NoRs for Trig Road and Spedding Road respectively.

While modifications to site access and parking arrangements will be examined on a case by case basis during the Outline Plan of Works (OPW) phase, it is understood that alternative access options are available for access to #49 Trig Road via alternative existing Rights of Way (subject to confirmation of legal entitlements), without requiring significant changes to the proposed NoR alignments for Trig Road and Spedding Road.,

NoR W2: Mamari Road

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property during construction phase	1
Maintain vehicle access to property upon completion	3
Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network	2
Need to enable local connections to site located at intersection of Mamari Road / Brigham Creek Road from both arterial roads	1
Direct consultation with effected parties regarding provision of alternative access	1

5.10 Transport Issue: Maintain vehicle access to property during construction phase

See comments under para 5.3.

5.11 Transport Issue: Maintain vehicle access to property upon completion

See comments under para 5.4.

As noted in the ATE for North West Whenuapai, Timitanga Community School has been identified as a particular location to which access may potentially become constrained both during and after the construction phase. Access to the school can be maintained and has been provided for with the designation. It is noted that particular consideration to access during construction will need to be provided prior to construction as part of the recommended CTMP.

5.12 **Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network**

See comments under para 5.5.

5.13 **Transport Issue: Need to enable local connections to site located at intersection of Mamari Road / Brigham Creek Road from both arterial roads**

While the new arterial road will be subject to Limited Access Road status, thus limiting the number of access points to individual sites, site access provision to individual sites will be considered on a case by case basis during the Outline Plan of Works phase.

5.14 **Transport Issue: Direct consultation with effected parties regarding provision of alternative access**

In instances where designation land-take is expected to affect property access, direct consultation with affected landowners will be undertaken during the Outline Plan of Works (OPW) phase accordingly. Any required changes to access arrangements should be designed to comply with appropriate requirements of the Auckland Unitary Plan Transport Chapter.

NoR W3: Brigham Creek Road

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property during construction phase	4
Maintain vehicle access to property upon completion	3
Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network	2
Heavily trafficked roads result in no provision of active mode facilities	1
Alternative proposal of widening of Brigham Creek Road on the opposite side of the carriageway	1
Providing connection to the site from Brigham Creek Road and Mamari Road.	1
Direct consultation with effected parties regarding provision of alternative access to property, where this is necessary	1

5.15 **Transport Issue: Maintain vehicle access to property during construction phase**

See comments under para 5.3.

The ATE for North West Whenuapai notes the particular need to consider access and safety in relation to construction traffic effects and heavy vehicle movements, in the vicinity of Whenuapai School and Whenuapai Kindergarten, which will be considered as part of a prospective CTMP.

- 5.16 **Transport Issue: Maintain vehicle access to property upon completion**
See comments under para 5.4.

- 5.17 **Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network**
See comments under para 5.5.

- 5.18 **Transport Issue: Heavily trafficked roads result in no provision of active mode facilities**

The proposed Brigham Creek Road upgrade will include facilities for active mode users commensurate with demand and with an increasingly urbanised environment.

- 5.19 **Transport Issue: Alternative proposal of widening of Brigham Creek Road on the opposite side of the carriageway**

The submission in question refers to encroachment of the proposed widening to the south of the road boundary towards the easternmost end of Brigham Creek Road.

Previous work undertaken in relation to options and alternatives for the widening of Brigham Creek Road considered options for widening Brigham Creek Road on both sides, to the north only and to the south only. The preferred approach varied according to specific segments of Brigham Creek Road and particular constraints identified on each one.

While widening on both sides was highlighted as the preferred option along the western sections of Brigham Creek Road, on account of requiring the least overall demand for property acquisition, the preferred option towards the eastern end was a hybrid of widening to the north and south.

The preferred alignment in the vicinity of the submitter's site is influenced by the location of the proposed new signalised intersection with Hobsonville Road, which has been located to ease turning movements between Brigham Creek Road and Hobsonville Road and to avoid conflict with turning movements into and out of Williams Road. The existing location of the interchange with SH18 immediately to the northwest poses a further constraint to options for significantly moving the existing road layout.

Given the combination of the above constraints, the route of the Brigham Creek Road upgrade in the vicinity of the submitter's site as proposed is considered to be appropriate. A relocation of this road layout to the north to avoid the submitter's site would be likely to compromise the ability to achieve a safe and efficient road layout in this location.

- 5.20 **Transport Issue: Providing connection to the site [on the corner of Brigham Creek Road / Mamari Road] from Brigham Creek Road and Mamari Road**
See comments under para 5.13.

- 5.21 **Transport Issue: Direct consultation with effected parties regarding provision of alternate access to property, where this is necessary**
See comments under para 5.15.

NoR W4: Spedding Road

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property during construction phase	7
Maintain vehicle access to property upon completion	3
Concern over construction traffic effects, and particularly heavy vehicle movements, in the vicinity of [Hobsonville] school	1
Proposed NOR route not appropriate	1
Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network	1
Direct consultation with effected parties regarding provision of alternative access to property, where this is necessary	1

- 5.22 **Transport Issue: Maintain vehicle access to property during construction phase**
See comments under para 5.3.

- 5.23 **Transport Issue: Maintain vehicle access to property upon completion**
As noted in the ATE for North West Whenuapai, the adopted design philosophy is to maintain driveway access where practicable and minimise impacting land for access purposes other than where necessary to re-instate driveways.

The ATE makes particular note that the intersection of Spedding Road and Fred Taylor Drive impacts on the access to several properties within proximity to the intersection, however it confirms that relocated site accesses can be accommodated within the proposed designation boundary.

In the case of designated properties fronting Spedding Road, where changes to access arrangements may be required, arrangements should be designed to comply with appropriate requirements of the Auckland Unitary Plan Transport Chapter.

- 5.24 **Transport Issue: Concern over construction traffic effects, and particularly heavy vehicle movements, in the vicinity of [Hobsonville] school**
See comments under para 5.35.

- 5.25 **Transport Issue: Proposed NOR route not appropriate [with regard to site access opposite intersection of Trig Road / Spedding Road]**

See comments under para 5.9.

5.26 Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network

See comments under para 5.5.

5.27 Transport Issue: Direct consultation with effected parties regarding provision of alternate access to property, where this is necessary

See comments under para 5.14.

NoR W5: Hobsonville Road

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property during construction phase	6
Maintain vehicle access to property upon completion	7
Adverse effects on on-site parking as a result of NOR / Designation land-take	7
Concern over encroachment of public infrastructure over property boundary	5
Requested provisions for a prospective CTMP	4
Consider alternative routes for trucks, e.g., through industrial areas or provision of new motorway ramps	4
Support for Cycle lanes / Bus lanes	3
Concern over construction traffic effects, and particularly heavy vehicle movements, in the vicinity of Hobsonville School	2
Prioritising the upgrade of Hobsonville Road/ Brigham Creek Road intersection, due to poor safety record	2
Proposal to put a roundabout rather than a traffic lights and pedestrian crossing near Fruit World	2
Decline the NoR outright / No funding for project and no clear timeline	2
Concern over scope of traffic assessment	1
Make the road for residents only and exclude heavy vehicles	1
Implement Cycle lanes on parallel local roads, not on Hobsonville Road	1
Opposition to Bus stop outside 299-301 Hobsonville Road due to taking up on-street parking space / Widen Hobsonville Road on the opposite side of the carriageway	1
Alternative option to avoid affecting residential properties on Hobsonville Road: Extend Westpoint Drive as an alternative East-West link	1
The intersection of Hobsonville Road / Brigham Creek Road would be best served by a large roundabout	1

Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network	1
Direct consultation with effected parties regarding provision of alternative access to property, where this is necessary	1

5.28 *Transport Issue: Maintain vehicle access to property during construction phase*

See comments under para 5.3.

5.29 *Transport Issue: Maintain vehicle access to property upon completion*

As noted in the ATE for North West Whenuapai, the adopted design philosophy is to maintain driveway access where practicable and minimise impacting land for access purposes other than where necessary to re-instate driveways. Given the current level of urban development along the Hobsonville Road corridor and existing access, berm space has been rationalised at some points to maintain access and limit property impacts.

Several existing properties have been identified for which it is not possible to implement a replacement driveway, primarily due to changes to road levels and incursion of the corridor into the front of properties, namely nos. 44, 46a, 48, 50, 94 and 179a Hobsonville Road. These properties have therefore been included within the designation boundary.

In the case of designated properties fronting Hobsonville Road, where changes to access arrangements may be required, arrangements should be designed to comply with appropriate requirements of the Auckland Unitary Plan Transport Chapter.

5.30 *Transport Issue: Adverse effects on on-site parking as a result of NOR / Designation land-take*

7 Submitters raised concerns in relation to the extents of the designation land take resulting in the potential loss of on-site parking to varying degrees, mostly from commercial and retail premises.

While the ATE for North West Whenuapai affirms the general philosophy to retain access to individual sites where possible, it does not discuss an approach to loss or relocation of on-site parking, where this may be affected by designation land take.

The Supporting Growth Alliance has provided more information on the management of parking effects in the document “North West Strategic Section 92 Response – Parking Matters” (27 March 2023). The response acknowledges that removal of parking that has been required as a condition of a previous resource consent may require a variation to the existing resource consent, but that “this process sits separately to the Notices of Requirement and will be undertaken at an appropriate future point.”

While I support assessment of changes to on-site parking provisions lying outside the NoR process and acknowledge that minimum parking requirements

for land-use activities have been removed from the Auckland Unitary Plan Transport Chapter, as a result of the National Policy Statement for Urban Development, a number of Unitary Plan policy objective still apply. These are outlined below and I recommend that these should form the basis for assessment of variations to pre-consented parking provisions.

E27.2

(3) Parking and loading supports urban growth and the quality compact urban form

(4) The provision of safe and efficient parking, loading and access is commensurate with the character, scale and intensity of the zone.

E27.3

Parking

(3) Manage the number, location and type of parking and loading spaces, including bicycle parking and associated end-of-trip facilities to support all of the following:

(a) the safe, efficient and effective operation of the transport network;

(b) the use of more sustainable transport options including public transport, cycling and walking;

(c) the functional and operational requirements of activities;

(d) the efficient use of land;

(e) the recognition of different activities having different trip characteristics; and

(f) the efficient use of on-street parking.

5.31 ***Transport Issue: Concern over encroachment of public infrastructure over property boundary***

Five submitters raised concerns in relation to encroachment of the improvement proposals along Hobsonville Road into property boundaries, with three expressing particular concern of instances where entire properties are to be acquired. As noted under paragraph 5.29, this outcome has only been deemed to be appropriate in instances where alternative suitable access and on-site parking arrangements cannot be provided on a given site.

As noted under paragraph 5.40, alternative options considered for improving or relieving Hobsonville Road offline of its existing alignment were found to be ineffective in performing a comparable strategic function, commensurate with the arterial road status of Hobsonville Road.

Based on increasing traffic volumes using Hobsonville Road, desired transport and safety outcomes for the Hobsonville Road corridor cannot be achieved within the existing road reserve or by means of an off-line alignment.

The on-line improvements proposed under the NoR are thus considered to be most appropriate option for delivering the desired transport outcomes.

5.32 ***Transport Issue: Requested provisions for a prospective CTMP***

Four submitters, all representing commercial and retail activities along Hobsonville Road, confirmed their support towards a Construction Traffic Management Plan (CTMP) and requested the following specific provisions for a prospective CTMP:

- i. *Condition 15 – Construction Traffic Management Plan. In Condition 15(b)(iii) add the words “and care centres” so that the sub-part reads:
 iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools and care centres or to manage traffic congestion
 b) In condition 15(b)(vi) delete the words “where practicable”.*
- ii. *Request from landholder of holdings bounded by State Highway 16, State Highway 18, Trig Road and Hobsonville Road, for a site specific Construction Management Plan, which is:*
 - o *Prepared by the requiring authority in consultation with the Submitter;*
 - o *Provided to Council, along with details of the Submitter’s observations and comments on the plan, if any; and*
 - o *Approved by the Council.*
- iii. *Engagement/consultation with submitter for Construction Traffic Management Plan and in regard to cycleway traffic and pedestrian flow.*
- iv. *Additionally, the submitter seeks that not less than 6 months or more consultation is undertaken with the owner for the Construction Traffic Management Plan (CTMP) and that works are practically complete before the annual peak seasonal shopping period. Further engagement is sought concerning cycleway traffic and pedestrian flow connecting with 124 Hobsonville Road.*
- v. *Support based on the following relief: c) apply conditions which impose i) no long term effects on the existing vehicle access; ii) minimise adverse effects of construction on the access to the site; iii) ensure there is sufficient road capacity on the weekends; iv) produce a CTMP applying to the road network around the site [refer to submission for full wording of relief sought].*

I support the condition amendments proposed under item i of the above. However, with regard to the proposed alterations under items ii to v, I consider that the existing provisions within the Designation Conditions in relation to CTMPs are already adequate to address the submitter concerns in question. This includes:

Item (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents/public/stakeholders/emergency services).

I consider the above provision to be sufficient and appropriate in scope to cater for engagement with affected landowners bordering the NoR. I would consider the requested 6-month notice period prior to the start of works under item iv to be unreasonable, and that one month would constitute a realistic and reasonable timeframe.

5.33 **Transport Issue: Consider alternative routes for trucks, e.g. through industrial areas or provision of new motorway ramps**

As an existing arterial road, Hobsonville Road has a strategic function to cater for through traffic movements, which includes freight traffic movements between key locations.

As noted under paragraph 5.40, alternative parallel running corridors to Hobsonville Road that were previously considered were found to not fulfil a comparable strategic arterial road function within the local network, with traffic modelling concluding that these alternative routes would in practice fulfil a collector road function.

Hobsonville Road is thus expected to retain its existing function as an arterial road, including its existing freight-carrying function, however new adjoining local and collector routes such as Westpoint Drive are expected improve connectivity for freight movements, providing more localised access to specific commercial sites. In addition, existing motorway interchanges are considered to already offer good levels of connectivity to the motorway network, via Hobsonville Road, Trig Road and Brigham Creek Road.

Additional motorway ramps are not deemed to be warranted, as the proximity of the aforementioned existing motorway interchanges to one another is already less than the recommended minimum separation distance of 2km within an urban area (Austroads Guide to Road Design Part 4C).

5.34 **Transport Issue: Support for Cycle & Bus Lanes**

Three Submitters supported the proposed cycle lanes and bus lanes, to mitigate against hazards associated with buses and heavy vehicles.

5.35 **Transport Issue: Concern over construction traffic effects, and particularly heavy vehicle movements, in the vicinity of Hobsonville school**

See comments under para 5.3.

The ATE for North West Whenuapai notes the particular need to consider access and safety in relation to construction traffic effects and heavy vehicle movements, in the vicinity of Hobsonville School, which will be considered as part of a prospective CTMP.

The Ministry of Education has submitted that the construction-related effects on Hobsonville School and Hobsonville Point Secondary School need to be appropriately addressed and managed by means of a CTMP and highlights particular concerns in relation to the impact of heavy vehicles.

The Applicant's proposed CTMP conditions include a requirement that the CTMP include "*the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion.*" The Ministry of Education submission requests a more specific requirement for the CTMP to include:

- a. How heavy vehicles will avoid travelling past the schools during before-school and after-school travel times, during term time. Engagement should be

undertaken with the schools prior to construction to confirm the restricted times still reflect the school's peak before-school and after-school travel times. It is noted that new schools could establish around the project area before construction commences. Any new school on an identified construction route must be ~~engaged~~ consulted. Heavy vehicle movements must also avoid these schools at their peak before-school and after-school travel times [refer to submission for table with schools and restricted times].

- b. Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving past both schools, and to look out for school children and reversing vehicles at all times.
- c. Details of consultation (including outcomes agreed) with the applicant and Hobsonville School and Hobsonville Point Secondary School with regard to maintaining the safety of school students during construction. Details of all safety measures and interventions will be documented in the Construction Traffic Management Plan.
- d. Any CTMP 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.
- e. A designation condition is included that the construction area outside Hobsonville School must have visually impermeable hoarding where classrooms are facing into the construction site to reduce any distractions to classroom learning environments.

I support these proposed additions to the CTMP conditions, subject to the highlighted change to item a (replacement of 'engaged' with 'consulted').

The Ministry of Education additionally requests the following additions to the conditions for the Stakeholder and Communication and Engagement Management Plan (SCEMP), to achieve the objective of identifying how the public and stakeholders will be engaged and communicated with throughout the construction works:

(iv) methods for engaging with Hobsonville School. The School must be contacted ten working days prior to the start of any construction within 100m of the school boundary.

[(v) a list of stakeholders, organisations (such as community facilities) and businesses and persons who will be engaged] and communicated with;

I consider that the above requests are consistent with the intent of the SCEMP, and agree with them being added as a requirement of the SCEMP, with the following suggested amendment to item (iv):

The School must be contacted at least ten working days prior to the start of any construction within 100m of the school boundary

5.36 *Transport Issue: Prioritising the upgrade of Hobsonville Road/ Brigham Creek Road intersection, due to poor safety record*

The proposed improvements enabled by the NoRs have been assessed primarily on the basis of their ability to enable growth, as opposed to addressing pre-existing safety issues. The delivery of improvements at individual intersections and specific locations in isolation to wider corridor improvements would require a separate assessment and investigation by Auckland Transport as the Road Controlling Authority, in the event that they confirm a safety concern at this location.

5.37 *Transport Issue: Proposal to put a roundabout rather than a traffic lights and pedestrian crossing near Fruit World*

Signals are currently proposed at all key intersections across the future arterial road network in the immediate vicinity, which includes the replacement of some roundabouts with signals.

It is not considered appropriate nor in accordance with good practice to vary intersection forms between signals and roundabouts in close proximity to one another, due to adverse operational issues which may ensue from tailbacks from signals affecting roundabout circulation.

Signals are considered to be the most appropriate form of control for all major intersections, to best provide opportunity to manage and coordinate heavy traffic flows at a network-wide level, as well as providing opportunity for controlled crossing facilities for active mode users and priority measures for public transport.

5.38 *Transport Issue: Decline the NoR outright / No funding for project and no clear timeline*

Designating the NoRs at this stage, in advance of commitments towards funding and staging, is still deemed to be appropriate, as it protects the corridors from future planning and development proposals, which may otherwise encroach into the corridors. This in turn may prevent desired transport outcomes from being achieved in the future and limit the scope of future development that can be accommodated within the wider sub-region.

5.39 *Transport Issue: Concern over scope of Traffic Assessment*

The submitter concern in question related to the network around Don Buck Road / Fred Taylor Drive not having been assessed at a weekend, which they considered to be the busiest period.

Based on a comparison of recent traffic count data available from AT, while weekend traffic flows on Don Buck Road and Fred Taylor Drive are noted to be similar in magnitude to weekday flows, weekday flows are noted to be higher overall and thus considered more appropriate as a basis for traffic modelling assessments.

5.40 *Transport Issue: Make the road for residents only and exclude heavy vehicles*

As an existing arterial road between Westgate, SH16 and Hobsonville, Hobsonville Road provides strategic connectivity with key retail, commercial and residential areas, which require access by heavy vehicles and strategic public transport connectivity. While previous work considered alternative options for new alignments off-line to the existing alignment of Hobsonville Road, these were found to not be capable of fulfilling a comparable strategic function to the existing corridor of Hobsonville Road.

While parallel running roads such as Westpoint Drive cater for heavy vehicle access to newly developed commercial areas adjoining Hobsonville Road, their function is that of a collector / local access road as distinct from the strategic function for through traffic movements that Hobsonville Road will continue to provide.

5.41 *Transport Issue: Implement Cycle lanes on parallel local roads, not on Hobsonville Road*

While some parallel running roads to Hobsonville Road may provide quieter alternatives for cyclists and more localised access to and from particular locations, the inclusion of cycle lanes on Hobsonville Road itself is still considered to be appropriate. As noted under the above paragraph, the existing route of Hobsonville Road is expected to continue to function as a strategic arterial route. Its future form as an arterial road needs to be fit for purpose for all road users.

5.42 *Transport Issue: Opposition to Bus stop outside 299-301 Hobsonville Road due to taking up on-street parking space / Widen Hobsonville Road on the opposite side of the carriageway*

Provision for public transport is an important element of the NoR project and a bus stop in this location would be strategically located adjacent to a key intersection, which provides access to catchment area surrounding the bus stop. The submitter's request appears to in fact be consistent with the proposed approach to widen Hobsonville Road over the 'Segment 3' section, which is to widen to the north and hold the southern edge.

5.43 *Transport Issue: Alternative option to avoid affecting residential properties on Hobsonville Road: Extend Westpoint Drive as an alternative East-West link*

While Westpoint Drive is being extended in phases, in line with the progression of commercial development to the north of Hobsonville Road, it is classified as a local road and its function is to provide local access to new commercial development in this area. As a local road, the form of Westgate Drive is not designed for use by heavy through traffic movements, with a generally narrower alignment and more frequent local access points than the arterial road environment of Hobsonville Road.

The use of Westpoint Drive for through traffic movements, in the event of it being extended as far West as Trig Road, could result in adverse traffic effects, such

as reduced efficiency and safety resulting from conflicts between through traffic movements and local turning manoeuvres.

While the provision of footways along Westpoint Drive would provide an alternative east-west route for active mode users, the planned improvements to Hobsonville Road are considered appropriate to reaffirm its existing function as a strategic arterial intra-regional link between Westgate, SH16 and Hobsonville.

5.44 Transport Issue: The intersection of Hobsonville Road / Brigham Creek Road would be best served by a large roundabout

Discussion took place with SGA during review of the NoRs in relation to the approach and philosophy towards intersection forms along the upgraded corridors. While the NoR generally allows for flexibility to be able to accommodate roundabouts or signals at most key intersection locations, one factor influencing the choice of intersection form is achieving consistency in intersection form along individual corridors. Roundabouts and signalised intersections located in close proximity to one another can sometimes result in operational issues, resulting from tailbacks from signals adversely affecting the performance of a roundabout.

While the intersection of Hobsonville Road / Brigham Creek Road lies in close proximity to adjacent roundabout and signalised intersections, the proposed signalised intersection layout was found to perform without adversely impacting the operation of adjacent roundabouts.

5.45 Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network

See comments under para 5.5.

5.46 Transport Issue: Direct consultation with effected parties regarding provision of alternate access to property, where this is necessary

See comments under para 5.15.

NoR R1: Coatesville-Riverhead Highway

Transportation Issue Raised	No. Respondents
Opposition or proposed changes to Coatesville-Riverhead Highway / Old Railway Road roundabout	7
Reject the NOR in favour of prioritising upgrades to the adjoining section of SH16	6
Maintain vehicle access to property upon completion	3
Requested condition for direct consultation with affected parties in instances when changes to site access are required	1
Maintain vehicle access to property during construction phase	1
Improve Public Transport in the area	2

Provide Walking & Cycling lanes along Coatesville-Riverhead Highway in lieu of roadway widening	2
Opposition to walking and cycling provisions, due to currently unpleasant environment for active mode users	2
Opposition to NoR, as more roads will not solve Auckland's traffic issues	1
Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network	1

5.47 Transport Issue: Opposition or proposed changes to Coatesville-Riverhead Highway / Old Railway Road roundabout

Submitter responses raised the following comments in opposition to the proposed roundabout at this location:

- Outright opposition to roundabout
- Preference for a signalised intersection or left-turn only access, over a roundabout
- Concern that a roundabout affords too much priority to traffic travelling from Kumeu
- Preference to increase the number of lanes in the southbound direction
- Concern over conflict with entry to Huapai Golf Club
- Design not consistent with compact urban design principles, and does not cater safely for pedestrians and cyclists

The proposed roundabout at this location is considered an appropriate form of intersection control, based on the expected future levels of traffic on Old Railway Road relative to those on Coatesville-Riverhead Highway. A priority intersection at this location would be likely to experience significant levels of queueing resulting from demand for turning movements, while a signalised intersection form would not be consistent with key intersection forms to the north and south on Coatesville-Riverhead Highway, which are similarly planned to be roundabouts.

5.48 Transport Issue: Reject the NOR in favour of prioritising upgrades to the adjoining section of SH16

The adjoining Section of State Highway 16 is due to benefit from other proposed roading provisions to be delivered through a concurrent NOR for an Alternative State Highway Alignment (ASH) for State Highway 16 between Brigham Creek Road and Waimauku. The new motorway standard alignment to be provided to the south of the existing route of State Highway 16 will provide significant traffic relief to the existing route adjoining Coatesville-Riverhead Highway.

In addition, a new roundabout is currently planned at the intersection of SH16 / Coatesville-Riverhead Highway, as part of a package of safety improvements planned by Waka Kotahi.

These improvements are expected to achieve the transport outcomes sought by the submitters in question and do not conflict with concurrent improvements planned along the Coatesville-Riverhead Highway.

5.49 Transport Issue: Maintain vehicle access to property upon completion

As noted in the ATE for North West Redhills and Riverhead, the adopted design philosophy is to maintain existing driveway access where practicable and minimise impacting land for access purposes other than where necessary.

Any required modifications to site access provisions will be reviewed on a case by case basis during the OPW phase and will be required to comply with relevant requirements of the Auckland Unitary Plan Transport Chapter.

5.50 Transport Issue: Maintain vehicle access to property during construction phase

Maintaining vehicle access to property will be a requirement for a prospective Construction Traffic Management Plan (CTMP), as noted in Supporting Growth's Assessment of Transport Effects (ATE) for North West Whenuapai:

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

ATE identifies the site of 1229 Coatesville Riverhead Highway as a particular site for consideration during the construction phase, with regards to potential for access constraints during the construction phase. None of the sites currently occupied by the submitters in question have been identified as falling into this category.

5.51 Transport Issue: Improve Public Transport in the area

The improvements delivered under the NoR allow for more efficient bus services along this corridor, while increased urbanisation in the area is expected to contribute towards more reliable patronage to sustain public transport services.

5.52 Transport Issue: Provide Walking & Cycling lanes along Coatesville-Riverhead Highway in lieu of roadway widening

The proposed NoR Road layout includes a widened vehicle roadway commensurate with AT Transport Design Manual Standards for a two-lane urban arterial route. It also includes facilities for a walking and cycling route along one side between SH16 and South Road and along both sides between South Road and Riverhead Road, although the designation allows for some flexibility to potentially provide walking and cycling routes on both sides, if deemed appropriate.

Overall, it is considered that the NoR designation allows for all transport modes to be appropriately catered for, in line with expected levels of demand expected within the future urban environment.

5.53 Transport Issue: Opposition to walking and cycling provisions, due to currently unpleasant environment for active mode users

Provisions for travel by active mode users is considered to be an important element of the future network serving an increasingly urbanised environment in this area. Travel by active modes within this area is expected to become more attractive as increased urbanisation takes place and traffic speed limits are reduced, commensurate with the change in environment.

As noted above, the walking and cycling provisions allowed for in the NoR designation are consistent with AT's Transport Design Manual standards and are considered to be appropriate.

5.54 Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network

See comments under para 5.5.

5.55 Transport Issue: Requested condition for direct consultation with affected parties in instances when changes to site access are required

See comments under para 5.14.

NoR RE1: Don Buck Road

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property and manage traffic effects during construction phase	4
Future proposals need to focus on connectivity to Westgate town centre area	2
Maintain vehicle access to property and / or on-site parking upon completion	2
Provision of more efficient Public Transport	1
Ensure that adverse construction related effects are appropriately avoided, remedied or mitigated	1
Not supportive of cycle lanes	1

5.56 Transport Issue: Transport Issue: Maintain vehicle access to property and manage traffic effects during construction phase

As noted in the ATE for Redhills and Riverhead, the adopted design philosophy is to maintain driveway access where practicable and minimise impacting land other than where necessary. Berm space along Don Buck Road is to be rationalised at key locations to maintain access and limit property impacts.

ATE identifies the sites of St Paul's Primary School and Massey Leisure Centre as a particular site for consideration during the construction phase, with regards to potential for access constraints during the construction phase.

5.57 Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area

See comments under para 5.5.

5.58 Transport Issue: Maintain vehicle access to property and / or on-site parking upon completion

See comments under para 5.49.

There are several existing properties where it has been identified that a replacement driveway will not be possible to implement with the project in place, primarily due to changes to road levels and incursion of the corridor into the front of properties. These properties, namely 453, 455 and 457 Don Buck Road, have hence been included within the proposed designation boundary.

5.59 Transport Issue: Provision of more efficient Public Transport

See comments under para 5.55.

5.60 Transport Issue: Ensure that adverse construction related effects are appropriately avoided, remedied or mitigated

As noted in Supporting Growth's Assessment of Transport Effects (ATE) for North West, CTMPs will be implemented to appropriately manage adverse transport effects resulting from construction, including identification of appropriate mitigation measures.

5.61 Transport Issue: Not supportive of cycle lanes

While the submitter in question does not elaborate on their opposition to cycle lanes on Don Buck Road, the upgraded arterial road corridors need to be fit for purpose for all road users. In the current absence of alternative parallel running routes in immediate proximity to Don Buck Road which provide comparable connectivity to Don Buck Road, it is expected to remain a strategically important arterial transport route for active mode users as well as vehicular traffic.

NoR RE2: Fred Taylor Drive

Transportation Issue Raised	No. Respondents
Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network	1
Supportive for the need for the corridor upgrades	1
Ensure that adverse construction related effects are appropriately avoided, remedied or mitigated	1
Allow for provision of key intersections identified in the Redhills Precinct Plan	1
Direct consultation with effected parties regarding provision of alternative access, in the event that existing property access is affected by the NoR proposal	1

5.62 *Transport Issue: Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area / Other Improvements to the Strategic Road Network*

See comments under para 5.5.

5.63 *Transport Issue: Ensure that adverse construction related effects are appropriately avoided, remedied or mitigated*

As confirmed in the ATE for the Redhills Arterial Transport Network, construction related traffic effects are to be appropriately managed by means of a Construction Traffic Management Plan (CTMP).

5.64 *Transport Issue: Allow for provision of key intersections identified in the Redhills Precinct Plan*

The NORs already allow for the provision of the key intersections on Fred Taylor Drive which were identified in the Redhills Precinct Plan. The ATE confirms that they are expected to operate at an acceptable Level of Service based on indicative design layouts.

5.65 *Transport Issue: Direct consultation with effected parties regarding provision of alternative access, in the event that existing property access is affected by the NoR proposal*

See comments under para 5.14.

NoR HIFTR: Trig Road (South) Arterial

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property upon completion	2
Preference for crossroads intersection form between Trig Road / Hobsonville Road / Luckens Road	3
Consider alternatives to widening & acquiring property on the west side of Trig Road	2
Concern that widening Hobsonville Road will generate additional traffic	2
Requested provisions for a prospective CTMP to address concerns near school	1
Future proposals need to focus on connectivity to Westgate town centre area	1
Provide more motorway access in the vicinity of Hobsonville Industrial area	1

5.66 *Transport Issue: Transport Issue: Maintain vehicle access to property upon completion*

As confirmed in the ATE for Trig Road, the adopted design philosophy is to maintain existing driveway access where practicable and minimise impacting land for access purposes other than where necessary.

The ATE confirms that several existing properties have been identified for which a replacement driveway will not be possible to implement with the Project in place, primarily due to changes to road levels and incursion of the corridor into the front of properties. These properties have been included within the proposed designation boundary.

Future access to the land adjacent to the Trig Road corridor will be provided by future collector roads adjoining Trig Road, through the subdivision process.

- 5.67 Transport Issue: Preference for crossroads intersection form between Trig Road [realigned to east] / Hobsonville Road / Luckens Road**
See comments under para 5.6.

- 5.68 Transport Issue: Consider alternatives to widening & acquiring property on the west side of Trig Road**

As discussed under para 5.6, previous investigation into alternatives for the Trig Road corridor discarded the option of an off-line realignment of Trig Road to the east, due to constraints relating to a new construction footprint over land to the east. Whilst a potential off-line realignment to the west was also considered, this was found to have some similar constraints, as well as necessitating more property acquisition on Hobsonville Road.

The proposal to widen Trig Road on-line of its existing alignment is thus considered to be the preferred option.

- 5.69 Transport Issue: Concern that widening Hobsonville Road will generate additional traffic**

The Hobsonville Road widening is considered to be necessary to accommodate future urban growth in the area, which will generate additional traffic with or without the proposed improvements in place. As discussed under para 5.40, the proposed on-line widening for the Hobsonville Road corridor has been assessed as being more effective improvement option in fulfilling desired transport outcomes.

- 5.70 Transport Issue: Requested provisions for a prospective CTMP to address concerns near school**

The site of the future school at 13 – 15 Trig Road was identified in the ATE for the Whenuapai arterials as requiring further consideration during the development of a prospective CTMP.

See Para 5.7 for comments in relation to conditions proposed by Ministry of Education.

- 5.71 Transport Issue: Future proposals need to focus on connectivity to Westgate town centre area**

See comments under para 5.5.

5.72 Transport Issue: Provide more motorway access in the vicinity of Hobsonville Industrial area

See comments under para 5.33.

NoR 1: Redhills North-South Arterial

Transportation Issue Raised	No. Respondents
Maintain vehicle access to property upon completion	2
The Redhills NORs differ to the routes identified in the Redhills Precinct Plan	2
Reduce Speed Limit on Fred Taylor Drive to 60km/hr	1
Complete Footpaths on either side of Fred Taylor Drive	1

5.73 Transport Issue: Maintain vehicle access to property upon completion

As confirmed in the ATE for the Redhills Arterial Transport Network, the adopted design philosophy is to maintain existing driveway access where practicable and minimise impacting land for access purposes other than where necessary.

The ATE confirms that for the majority of existing properties, there will be little to no change in the level of vehicle access provided, however for 10 properties on Royal Road it has been identified that reinstatement of a driveway will not be possible. These properties have been included within the designation.

For properties that currently gain access via a low-level access on Don Buck Road, these accesses will be reformed. The ability to turn right to and from the low level access at the point closest to the Royal Road intersection will be limited to left in left out, however full movements will still be provided at the opposing point of the low level access. Limited access is proposed to be maintained on Fred Taylor Drive and there is no additional effect when compared to the current environment. Limited access is also proposed to be provided on the new corridors – consistent with the provisions in AUP:OP for arterial roads and provisions within the Redhills Precinct Plan.

5.74 Transport Issue: The Redhills NORs differ to the routes identified in the Redhills Precinct Plan

Two submitters (both landowners for future residential development) proposed adjustments to the alignments of the Redhills Arterial Transport Network (to the west of Fred Taylor Drive and Don Buck Road), with the aim of better integrating the future arterial road network with development master planning and structure planning.

The first of the two submissions in question requests the following changes to the NoR conditions to remove parts of the NoR designations that are no longer required following project completion. I support these proposed changes and do not consider that this will adversely impact upon the transportation performance of the completed projects.

The second of the two submissions in question notes differences between the NoR network alignments and those shown in the Redhills Precinct Plan and recommends amendments to the NoR routes to align with the Precinct Plan.

The new road alignments illustrated in the Redhills Plan are indicative only and while the NoR routes differ in their horizontal alignment, the differences in horizontal alignment are not considered to adversely affect key transportation outcomes resulting from the network.

However, in terms of road cross-section, the general road width of the new arterial roads proposed under the NoRs is 24 metres, which compares with 30 metres proposed in the Redhills Precinct Plan. The latter provision of the Precinct Plan allows for passive provision for future widening from two traffic lanes to four traffic lanes, which is not allowed for in the NoRs, albeit additional lanes at key intersections within the NoRs allows for extra capacity and opportunities for bus priority.

The ATE for the Redhills Arterial Transport Network includes forecast future traffic volumes for 2048 for the new arterial roads (to the west of Fred Taylor Drive and Don Buck Road), which are commensurate with the capacity of two-lane single carriageway roads.

On this basis, I deem the NoR alignments to be acceptable with regards to the key transport outcomes that they enable.

5.75 *Transport Issue: Reduce Speed Limit on Fred Taylor Drive to 60km/hr*

The proposed future speed limit on the upgraded Fred Taylor Drive is to be 80km/hr north of the roundabout with Hobsonville Road, commensurate with the new arterial road environment and as confirmed in the ATE for Redhills Arterial Transport Network. A lower speed limit on Fred Taylor Drive would reduce the attractiveness of this corridor for longer-distance through traffic movements and thus reduce its ability to fulfil an intra-regional strategic function in the context of the wider adjoining road network. In the event of longer-distance traffic and commercial vehicle traffic assigning to alternative parallel running roads, this could create undesirable conflict with local traffic movements and reduced efficiency of the wider network as a whole.

5.76 *Transport Issue: Complete Footpaths on either side of Fred Taylor Drive*

The submitter comment in question in fact refers to sections of NoRs 2a, 2c and RE2, which cover Fred Taylor Drive and will include the implementation of continuous pedestrian footways on both sides.

NoR 2a: Redhills East-West Arterial – Dunlop Road

Transportation Issue Raised	No. Respondents
Request for provisions for a prospective CTMP to address concerns near school	1

Transport Issue: Impose a less than 4-year lapse period on the NoR to reflect the urgent need to Address operational and safety deficiencies of Fred Taylor Drive	1
Give Priority to other projects providing for connectivity to Westgate Centre	1
Promote Low speed environment and provide enhanced facilities for pedestrians within the Redills Local Centre	1

5.77 Transport Issue: Request for provisions for a prospective CTMP to address concern near school

A new school and other education facilities are planned within the Redhills area, located near the designations for NoRs 2a, 2b and 2c. The Ministry of Education has submitted that the construction-related effects on these schools need to be appropriately addressed and managed by means of a CTMP and highlights particular concerns in relation to the impact of heavy vehicles.

The Applicant’s proposed CTMP conditions include a requirement that the CTMP include “*the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion.*” The Ministry of Education submission requests a more specific requirement for the CTMP to include:

- a. *How heavy vehicles will avoid travelling past the schools [...] during before-school and after-school travel times, during term time. Engagement should be undertaken with each school prior to construction to confirm the restricted times still reflect the school’s peak before-school and after-school travel times. It is noted that new schools could establish around the project area before construction commences. Any new school on an identified construction route must be engaged and added to the table below [see table in submission]. Heavy vehicles movements must also avoid these new schools at their peak pick up and drop off time.*
- b. *Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving past both schools, and to look out for school children and reversing vehicles at all times.*

I support these proposed additions to the CTMP conditions.

An issue not raised in the Ministry submission is the maintenance of safe routes for pedestrians and cyclists to and from the schools. I recommend an additional requirement that the CTMP as follows:

- c. *Ensuring that safe routes to schools for pedestrians and cyclists are maintained, or equivalent alternative routes are provided.*

5.78 Transport Issue: Impose a less than 4-year lapse period on the NoR to reflect the urgent need to Address operational and safety deficiencies of Fred Taylor Drive

At present no funding is available and committed towards the construction of the NoR projects and imposing a shorter lapse period would not in and of itself serve

as leverage for funding to become available. Moreover, it could increase the risk of improvements not being delivered, in the event that funding is not forthcoming within the shortened lapse period.

5.79 *Transport Issue: Give Priority to other projects providing for connectivity to Westgate Centre*

See comments under para 5.5.

5.80 *Transport Issue: Promote Low speed environment and provide enhanced facilities for pedestrians within the Redhills Local Centre*

The ATE for the Redhills Arterial Transport Network confirms that the east-west arterial route will have a posted speed limit of 50km/hr, with the following categorisations based on Auckland Transport’s Roads and Streets Framework Assessment:

- ‘Place 1’ categorisation, recognising a primarily local place function
- ‘Movement 2’ categorisation, recognising a medium strategic significance.

These characteristics are considered to allow for the safe implementation of appropriate pedestrian facilities to facilitate access to the new local centre. Any potential reductions in speed limit in the vicinity of the local centre, to below 50km/hr, could serve to compromise the ‘medium strategic’ movement function of the new arterial road network and would have to be considered in this context.

NoR 2b: Redhills East-West Arterial – Baker Lane

Transportation Issue Raised	No. Respondents
Request for provisions for a prospective CTMP	2
Unrestricted access to the Bunnings service lane at the rear of the site from Fred Taylor Drive via a right hand turn is provided for.	1
Give Priority to other projects providing for connectivity to Westgate Centre	1
That NoR RE2 recognise Fred Taylor Drive’s continuing status as the principal arterial transport corridor and specify it as a HIF project so that, together with NoR 2A and NoR 2B, the road controlling authority can provide the urgently needed and “joined up” upgrade of Fred Taylor Drive between Don Buck Road and Northside Drive.	1
That a < 4-year lapse period be imposed for NoR 2A, NoR 2B and NoR RE2 to reflect the urgent need to address the operational and safety deficiencies of Fred Taylor Drive.	1

5.81 *Transport Issue: Request for provisions for a prospective CTMP*

Two submitters requested particular provisions for a prospective CTMP, one of which was on behalf of the Ministry of Education in relation to planned new education facilities for the Redhills area. *See comments under para 5.77.*

Another submitter, representing a commercial entity, confirmed their support towards a Construction Traffic Management Plan (CTMP) and requested the following specific provisions for a prospective CTMP:

Prior to the commencement of construction in the vicinity of the Site, a construction traffic management plan applying to the road network in the immediate vicinity of the Site is:

- (i) Prepared by the Requiring Authority in consultation with the Submitter;*
- (ii) Provided to Council, along with details of the Submitter's observations and comments on the plan, if any; and*
- (iii) Approved by the Council.*

I consider that the existing provisions within the Designation Conditions in relation to CTMPs are already adequate to address the above submitter concerns.

5.82 *Transport Issue: Ensure that unrestricted access to the Bunnings service lane is provided for at the rear of the site from Fred Taylor Drive via a right-hand turn*

The road layout plans for the NORs do not confirm that right-turn movements into and out of the service lane will be formally catered for, with either a flush or solid median provided on Fred Taylor Drive opposite the access, while the roundabout of Fred Taylor Drive / Don Buck Road will be replaced with a signalised intersection.

While future access arrangements to individual sites will be considered on a case by case basis, it is considered that, in the event of site access being limited to left-in / left-out only, the wider network provides reasonable opportunity for vehicles to assign to alternative routes and undertake appropriate manoeuvres to compensate for such a limitation.

5.83 *Transport Issue: Give Priority to other projects providing for connectivity to Westgate Centre*

See comments under para 5.5.

5.84 *Transport Issue: That NoR RE2 recognise Fred Taylor Drive's continuing status as the principal arterial transport corridor and specify it as a HIF project so that, together with NoR 2A and NoR 2B, the road controlling authority can provide the urgently needed and "joined up" upgrade of Fred Taylor Drive between Don Buck Road and Northside Drive.*

The submitter's concern relates to ensuring the delivery of improvements along the full length of Fred Taylor Drive as one 'package', as opposed to in a piecemeal manner, noting that the upgrades in question are split between 3 different NoRs. However, it is inappropriate to suggest that this would necessarily be achieved by combining the separate upgrades to be delivered as a 'HIF' project, as the HIF status refers to the funding mechanism, which does not in and of itself guarantee delivery of improvements on Fred Taylor Drive under one package.

Transport Assessment work undertaken by Supporting Growth does not assess NoR projects on the basis of being implemented in isolation to one another or on a piecemeal basis, as opposed to in one complete package. The isolated implementation of improvements on Fred Taylor Drive near individual arterial road intersections, in the absence of upgrading the entire corridor as one package, is one such scenario which has not been considered, to confirm whether or not this may result in adverse transport effects on non-upgraded sections of Fred Taylor Drive.

Accordingly, my recommendations confirmed at the end of this review are that further assessment of such scenarios would be appropriate, in the event that the full package of NoRs does not get approved in its entirety.

5.85 *Transport Issue: That a < 4-year lapse period be imposed for NoR 2A, NoR 2B and NoR RE2 to reflect the urgent need to address the operational and safety deficiencies of Fred Taylor Drive*
See comments under para 5.78.

NoR 2c: Redhills East-West Arterial – Nixon

Transportation Issue Raised	No. Respondents
Proposed changes to NoR alignment	1
Seeks alternative option, to widen Don Buck Road from Westgate to Henderson and State Highway 16 from Kumeu to Westgate to ease congestion	1
Request for provisions for a prospective CTMP to address concerns near school	1
Give Priority to other projects providing for connectivity to Westgate Centre	1

5.86 *Transport Issue: Proposed changes to NoR Road alignment*

One submitter proposed alterations to the alignment for the route of NoR 2c, in order to maximise the development potential of the adjoining land, which included the following:

- Westward relocation of the proposed roundabout with Nixon Road / Nelson Road by 15 metres and vertically lowering by 2 to 3 metres
- Siting of new road alignments as close to the watercourses as possible, to eliminate areas of ‘no man’s land’ with little or no development potential.

While the level of information provided by the submitter does not include full engineering plans and traffic assessment analyses, I would consider the scope and nature of the proposed geometric changes to the alignments to be unlikely to adversely affect key transportation outcomes, in terms of network operation and safety. My support towards such proposed changes would thus be subject to provision of engineering layout plans and traffic assessments for any dimensional changes to key intersections.

5.87 Transport Issue: Seeks alternative option, to widen Don Buck Road from Westgate to Henderson and State Highway 16 from Kumeu to Westgate to ease congestion

While other concurrent NoRs that are currently being lodged will provide for future improvements along both of these corridors, these fulfil separate transport functions to the corridor safeguarded under NoR 2c. The primary function of NoR 2c will be to provide strategic north-south access into the future Redhills Local Centre, while Don Buck Road and State Highway 16 do not provide an equivalent level of penetration of this future urban area.

5.88 Transport Issue: Request for provisions for a prospective CTMP to address concerns near school

See comments under para 5.77.

5.89 Transport Issue: Give Priority to other projects providing for connectivity to Westgate Centre

See comments under para 5.5.

6.0 Conclusions and recommendations

6.1 Further to reviewing supporting information for the Northwest NOR Package 1 – Local Arterials, with regards to their acceptability in transportation engineering terms, I consider that the NORs meet the Resource Management Act requirement to be ‘reasonably necessary’ to accommodate future growth within the areas served by the new transport corridors.

6.2 However, the lodgement of each of the NORs separately, under its own separate Form 18, fails to guarantee the fulfilment of key transport outcomes which are reliant on an eventual full network being delivered. I consider that insufficient information has been provided by SGA to demonstrate the ability of individual road corridors to function adequately under an appropriate ‘worst case scenario’, which considers the absence of other key elements of the proposed future road network.

6.3 To ensure that the NORs deliver a future fit for purpose road network, I recommend the following additional conditions:

- It is recommended that the NORs either be approved in their entirety, or that further information be required on transport performance, the possible need to increase transport capacity, and the ability of that additional capacity to be provided within the proposed NOR designations, should any individual NOR not be approved.
- Site access routes and access points provided during the construction phase to comply with appropriate provisions of the Auckland Unitary Plan Transport Chapter.

6.4 To manage impacts during construction, as outlined earlier in this report, I recommend that Construction Traffic Management Plan (CTMP) Condition (b) of North West Local Proposed Conditions, Trig Road Corridor Upgrade Proposed Designation Conditions condition 15(b) and North West Redhills Arterial Transport Network Designation Conditions condition 15(b), specifying the elements that a Construction Traffic Management Plan must include to achieve its objective, also include the following:

- a. *How heavy vehicles will avoid travelling past the schools listed in the table below during before-school and after-school travel times, during term time. Engagement should be undertaken with each school prior to construction to confirm the restricted times still reflect the school's peak before-school and after-school travel times. It is noted that new schools could establish around the project area before construction commences. Any new school on an identified construction route must be consulted and added to the table below [see table in submission]. Heavy vehicles movements must also avoid these new schools at their peak pick up and drop off time.*
- b. *Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving past both schools, and to look out for school children and reversing vehicles at all times.*
- c. *Details of consultation (including outcomes agreed) with the applicant and [affected schools] with regard to maintaining the safety of school students during construction. Details of all safety measures and interventions will be documented in the Construction Traffic Management Plan.*
- d. *Any CTMP 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.*
- e. *Ensuring that safe routes to schools for pedestrians and cyclists are maintained, or equivalent alternative routes are provided.*

3B Noise and Vibration



REVIEW OF CONSTRUCTION NOISE AND
VIBRATION EFFECTS
NORTHWEST STRATEGIC AND LOCAL ARTERIAL
NOTICE OF REQUIREMENTS

TECHNICAL REVIEW PREPARED FOR
Auckland Council

DATE
13 July 2023



Technical review prepared by Styles Group for Auckland Council.

REVISION HISTORY

Rev:	Date:	Comment:	Version:	Prepared by:
1	13/07/23		Final	Jon Styles, MASNZ Director and Principal Styles Group

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1.0 Introduction

Auckland Council has engaged Styles Group to review the construction noise and vibration effects from the North West Strategic Package, Kumeu and Huapai Local Arterials and NW Local Arterials Package (the **Projects**).

This review is focussed on the construction noise and vibration effects from the Projects. I have prepared a review of operational noise and vibration effects under separate cover.

I have reviewed the following Assessments:

- The North West Strategic Assessment of Construction Noise and Vibration Effects (the **Strategic Assessment**)
- The Trig Road Corridor Upgrade Assessment of Construction Noise and Vibration (the **Trig Assessment**)
- The Redhills Arterial Transport Network Assessment of Construction Noise and Vibration (the **Redhills Arterial Assessment**)
- The North West Redhills Riverhead Assessment of Construction Noise and Vibration Effects (the **Redhills Riverhead Arterial Assessment**)
- The NorthWest Whenuapai Assessment of Construction Noise and Vibration Effects (the **Whenuapai Assessment**)

I refer to these collectively as the Assessments throughout this advice unless identified specifically.

I have prepared this review following pre-lodgement and post-lodgement engagement with the Project team. The engagement has included a site visit, meetings and feedback on draft reports and the review of the finalised Assessments lodged with the applications.

The objective of this review is to provide general commentary on the Assessments and to provide any additional commentary and analysis to ensure that the effects and mitigation measures are clear and understandable.

2.0 Experience and qualifications

My full name is Jon Robert Styles. I am an acoustic consultant, director and the principal of Styles Group Acoustics and Vibration Consultants. I have approximately 22 years of experience in the industry, the first four years as the Auckland City Council's Environmental Health Specialist – Noise, and the latter 18 years as the Director and Principal of Styles Group.

I hold a Bachelor of Applied Science majoring in Environmental Health and I have completed the Ministry for the Environment's Making Good Decisions programme. I recently concluded my second term as the President of the Acoustical Society of New Zealand. I am currently a Council member and professional member of the ASNZ.

I am on the executive of the Association of Australasian Acoustical Consultants (**AAAC**). My role on the executive is to develop guidelines for the assessment of noise and vibration in New Zealand and Australia.

Throughout my career, I have been involved in the development and administration of numerous District Plan rules, plan changes and general policy development. I have assisted a large number of councils to process a significant number of resource consents and Notices of Requirement subject to noise and vibration standards. I have extensive experience advising on the management of noise and vibration effects, including the construction, maintenance and operational noise effects of major and strategic transport infrastructure (including port, road, air and rail) and the protection of strategic industry and transport infrastructure through the effective management of reverse sensitivity effects.

Specific assignments relevant to this evidence include:

- Review of operational and construction noise effects on behalf of Auckland Council for many Auckland Transport project's, including AMETI, Eastern Busway and Airport to Botany.
- The Auckland Council's witness through the development of the High Land Transport Noise Overlay and the E25 Noise Chapter in the Proposed AUP.
- Advice on several recent District Plan reviews, including Whangarei Urban and Services Plan Change and plan reviews in Wellington, Christchurch, Waikato, Queenstown, Central Hawkes Bay, New Plymouth, Taupō, Napier, Gore and Kaipara.
- Providing advice to a range of clients on a significant number of resource consents, NoRs and plan changes involving construction effects, including a significant number of Waka Kotahi projects.
- Noise and vibration measurements for a significant number of resource consent applications involving construction activities ranging from small residential development to significant infrastructure, such as City Rail Link, Northern Corridor Improvements, Waterview Connection, Central Interceptor and many more.
- I have given evidence before several Boards of Inquiry on road construction effects including being the Boards' expert.
- I have assisted a wide range of tier-1 and tier-2 constructors to manage their construction noise and vibration effects during the construction of a range of significant infrastructure projects. This includes advising constructors on the management of construction noise and vibration effects that are managed by conditions and CNVMPs that are similar in nature to those proposed by the Requiring Authority in this case. This includes Southern Corridor Improvements, Lincoln Road Corridor Improvements, Mackays to Pekapeka, Waikato Expressway, Central Motorway Junction, AMETI, Victoria Park Tunnel, Waterview Connection, St Lukes Interchange, SH16 Causeway, Puhoi to Warkworth, the Northern Corridor Improvements and many others.

I have read the Environment Court Code of Conduct for Expert Witnesses. My advice complies with the Code in all respects and the opinions herein are within my area of expertise.

3.0 The Projects

The scope of each NoR, their receiving environment and the nature and extent of construction works are described in the application material and are not repeated in this advice.

The NoRs are generally summarised below. All project descriptions have been sourced from the application documents.

3.1 Strategic and Kumeu Huapai Local Arterials

NoR	Project	Description	Requiring Authority	Lapse period sought
Highway Connections				
NoR S1	Alternative State Highway (ASH) and Brigham Creek Interchange (BCI).	A new four-laned dual carriageway motorway and the upgrade of Brigham Creek Interchange	Waka Kotahi	20 years
NoR S2	SH16 Main Road Upgrade	Widening of the existing 20m wide two-lane urban arterial to a 24m wide corridor with walking and cycling facilities on both sides of the corridor. Realignment of Station Road intersection with SH16.	Waka Kotahi	Designation has been given effect to.
Rapid Transit				
NoR S3	Rapid Transit Corridor (RTC)	Rapid transit system connecting Kumeū-Huapai with Westgate, Auckland City Centre and the North Shore	Waka Kotahi	20 years
KS	Kumeū Station	New rapid transit station, including transport interchange facilities and accessway.	Waka Kotahi	20 years
HS	Huapai Station		Waka Kotahi	20 years
Local Roading				
NoR S4	Upgrade of Access Road	Upgrade of Access Road to a four-lane corridor with separated cycle lanes and footpaths on both sides of the corridor	Auckland Transport	20 years

3.2 Whenuapai Package

NoR	Project	Description ¹	Requiring Authority	Lapse period sought
NoR W1	Trig Road (North)	Upgrade of Trig Road (North) corridor to a 24m wide two-lane urban arterial cross-section with separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR W2	SH16 Main Road Upgrade	Extension and upgrade of Māmari Road corridor to a 30m wide four-lane urban arterial cross-section providing bus priority lanes and separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR W3	Brigham Creek Road	Upgrade of Brigham Creek Road corridor to a 30m wide four-lane arterial cross-section with separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR W4	Spedding Road	Upgrade of Brigham Creek Road corridor to a 30m wide four-lane arterial cross-section with separated active mode facilities on both sides of the corridor	Auckland Transport	15 years
NoR W5	Hobsonville Road (alteration to existing designation 1437)	Alteration of the existing Hobsonville Road designation 1437 to provide for the widening of the Hobsonville Road corridor between Oriel Avenue and Memorial Park Lane. Upgrade of sections of Hobsonville Road corridor to a 30m wide four-lane cross section with separated active mode facilities on both sides of the corridor. Upgrade of sections of Hobsonville Road corridor to a 24m wide two-lane cross section with separated active mode facilities on both sides of the corridor	Auckland Transport	n/a

3.3 Trig Road Corridor Upgrade

NoR	Project	Description	Requiring Authority	Lapse period sought
	Trig Road Corridor Upgrade	Widening and upgrade of the existing Trig Road transport corridor from a 20m wide, two-lane rural road to a 24m wide, two-lane arterial standard transport corridor between the SH18 off-ramps and Hobsonville Road	Auckland Transport	15 years

¹ Reproduced from <https://www.aucklandcouncil.govt.nz/UnitaryPlanDocuments/03-r1-assessment-of-effects-on-the-environment.pdf>

3.4 Redhills Arterial Network

NoR	Project	Description	Requiring Authority	Lapse period sought
NoR 1	Redhills North-South Arterial Corridor	New urban arterial transport corridor and upgrade of Don Buck and Royal Road intersection.	Auckland Transport	15 years
NoR2a	Redhills East-West Arterial Corridor – Dunlop Road	New urban arterial transport corridor that intersects with Fred Taylor Drive and connects to the remaining East-West corridor (NoR2c) at the intersection with the Redhills North-South arterial corridor.	Auckland Transport	15 years
NoR2b	Redhills East-West Arterial Transport Corridor – Baker Lane	New urban arterial transport corridor that intersects with Fred Taylor Drive and connects to the intersection of the remaining East-West connection and Dunlop Road (NoR2a).	Auckland Transport	15 years
NoR2c	Redhills East-West Arterial Transport Corridor – Nixon Road Connection	New urban arterial transport corridor that intersects with the Redhills East West Arterial Corridor – Dunlop Road. This includes the upgrade of the existing Red Hills Road / Nelson Road / Nixon Road intersection, and the existing Nixon Road / Henwood Road intersection	Auckland Transport	15 years

3.5 Redhills and Riverhead

NoR	Project	Description ²	Requiring Authority	Lapse period sought
Redhills				
NoR RE1	Don Buck Road	Upgrade of Don Buck Road corridor to a 30m wide four-lane cross-section providing bus priority lanes and separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR RE2	SH16 Main Road Upgrade	Upgrade of Fred Taylor Drive corridor to a 30m wide four-lane cross-section providing bus priority lanes and separated active mode facilities on both sides of the corridor	Auckland Transport	n/a

² Reproduced from <https://www.aucklandcouncil.govt.nz/UnitaryPlanDocuments/03-r1-assessment-of-effects-on-the-environment.pdf>

NoR	Project	Description ²	Requiring Authority	Lapse period sought
Riverhead				
NoR R1	Coatesville – Riverhead Highway	Upgrading the southern section of the corridor to a 33m two-lane low speed rural arterial cross-section with active mode facilities on the western side and upgrading the northern section of the corridor to a 24m two-lane urban arterial cross-section with active mode facilities on both sides of the corridor.	Auckland Transport	20 years

4.0 Context and overview

Managing the noise and vibration effects from constructing large infrastructure projects can be challenging. The often-heavy nature of the works and close proximity to receivers commonly results in construction noise and vibration effects high enough to cause significant disruption to normal business or residential activity.

In my experience, it is not possible to require a project of this nature to comply with noise and vibration limits that would avoid disruption. To do so would often require such extensive mitigation that the project becomes cost-prohibitive, and it could prolong the construction duration by significant amounts.

Accordingly, the construction noise and vibration effects of large infrastructure projects are often managed by allowing them to exceed the typical ‘permitted standards’ for construction noise and vibration on the basis that there are strict requirements (in conditions) to ensure that the Best Practicable Option (**BPO**) is adopted to manage the effects.

The BPO can comprise a large variety of physical mitigation measures such as limits on machine size and type, noise barriers and similar, through to management measures such as timing of the works, offering mitigation to the receivers directly and offering effective consultation and engagement with the receivers to help avoid the worst of the effects. This is essentially the Requiring Authority’s proposal in this case. I support such a proposal, provided that the conditions set out a clear and certain pathway to ensure that the BPO is carefully identified and adopted in all cases.

It is important to note that this approach is still likely to result in some significant disruption to businesses and residential activity. But it will minimise it to the greatest degree practicable.

4.1 Uncertainty

A key feature of the Assessments is the lack of detail on construction methods, plant, the time it will take to conduct high-noise or vibration work near to any particular receiver, and therefore the overall degree of construction noise and vibration effects.

I acknowledge that it would be difficult for the Requiring Authority to provide a more accurate assessment of the construction noise and vibration effects at this time, given the relatively long lapse periods and the difficulty in confirming specific construction methods for special features along the routes, such as bridges, retaining walls and other structures.

I have been involved in other projects where the Requiring Authority or applicant has been required to minimise these uncertainties by engaging with construction experts to refine the construction methods and timeframes to a more-detailed level. This has allowed a more accurate and reliable assessment of construction noise and vibration effects to be undertaken. The major focus in those cases has been to determine whether there is likely to be significant disruption to any particular receivers. The focus is therefore applied to the construction of the projects in areas where there are receivers very close by, and / or where there are structures to be built that might take longer and / or involve heavy plant and high noise / vibration activities close to receivers. This could include works in constrained environments such as through Kumeu and Huapai (for example).

By contrast, (and for example) the construction of much of the ASH could be left at a general level as the remoteness of the route from most receivers means that the construction noise and vibration effects will be unlikely to cause significant disruption.

Overall, I consider that the Assessments are subject to a reasonable degree of uncertainty that makes it difficult to determine the level of effect and disruption that might be experienced by receivers close to major elements of the works. The specific elements of uncertainty are:

- 1) **Equipment and activity noise and vibration levels** – I consider that the Assessments have done a reasonably good job of estimating and predicting the noise and vibration levels arising from the use of different plant and activities.
- 2) **Duration of construction** – there appears to be a high degree of uncertainty on the duration that any particular receiver would be exposed to construction noise and vibration levels that could cause disruption. I expect that this is due to the construction methodology being in a relatively unrefined state.
- 3) **Dynamic state of the receiving environment** – the Assessments quite rightly acknowledge that the receiving environment is dynamic, and that there are a number of situations where there may be new receivers established much closer to the works areas than the current receivers. This makes it very difficult in many cases to determine what construction noise and vibration effects will be likely on these future receivers. Helpfully, (and in contrast to the operational noise assessments) the Assessments propose that the construction noise and vibration effects on future receivers are treated the same as the existing receivers.
- 4) **Overall level of effect and disruption** – the uncertainties noted in (1) to (3) above, (and (2) and (3) in particular) contribute to what I consider to be a reasonably high degree of uncertainty in the overall assessment of construction noise and vibration effects. This uncertainty is attributable mostly to the shortage of information available at such an early stage of the design – rather than being the fault of the Assessments.

I consider that the reasonably high degree of uncertainty in the assessment of construction noise and vibration effects needs to be emphasised in this case.

5.0 The Requiring Authority's Assessments

The Assessments are generally comprehensive. I consider that the technical inputs (such as equipment sound power levels), noise and vibration prediction methods, application of NZS6803:1999 and the general technical aspects are appropriate and robust.

The Assessments provide setback distances for construction noise and vibration emissions based on an indicative construction methodology. The Assessments recognise that:

- a) The conclusions relating to the predicted noise and vibration levels and effects can only be confirmed after the detailed design has identified the proposed construction methodology, staging and selection of proposed plant; and
- b) The prediction levels will need to be reconfirmed based on the physically existing receivers at the time of construction. The Appendices attached to the Assessments identify the physically existing affected receivers that are predicted to receive noise and/ or vibration levels above the permitted standards (based on mitigated and unmitigated compliance distances).

Taking into account (a) and (b), I consider that there is likely to be some considerable variation in the actual noise levels that will be received in-reality. The noise level predictions provided by the Requiring Authority are useful to give an indication of the approximate magnitude of the effects that will be experienced by the *existing* receivers, but they should be considered indicative only.

The Requiring Authority proposes to manage the effects of construction work through CNVMP's that will be prepared prior to construction.

5.1 Effects on receivers

A key component of the assessment of construction noise and vibration effects are the tables in each of the Assessments that describe the potential noise and vibration effects. These tables describe the nature of the effects that would typically be experienced by receivers at various noise and vibration levels. These descriptions have been adapted from the Northern Corridor Improvements project.

These tables demonstrate that the construction work will include considerable disruption for some receivers, even at the permitted standards in the AUP (70dB L_{Aeq} during the day). For example, at a noise level of 70-75dB L_{Aeq} , "*Businesses that involve substantial outdoor use...*" "*would experience considerable disruption*".

The tables also demonstrate that at vibration levels up to (but not exceeding) the Category B standards, the effects "*Unlikely to be tolerated in a workplace or residential environment without prior warning and explanation. If exposure was prolonged, some people would want*

to leave the building affected. Computer screens would shake, and light items could fall off shelves.”

The effects increase beyond these noise and vibration levels to a point where they would be difficult to tolerate at all, and where significant disruption and potential damage is probable. The Assessments predict noise and vibration levels high enough to cause significant disruption in many cases.

In my opinion, these effects are high. They may only be received in some cases for short periods, in which case it may be tolerable. However, I expect that in some cases the exposure to disruptive construction noise and vibration effects could be prolonged (even if there are intermittent periods of respite) and the effects could be significant overall.

The Assessments provide a very general indication of the duration of time that a receiver will experience disruption. However, based on my experience, I expect that there will be some receivers that will experience significant disruption potentially for several weeks, and potentially longer. These effects can be significant, even when managed by adopting the BPO in terms of physical mitigation and management measures. This is commonplace for large infrastructure projects.

Overall, I expect that the construction noise and vibration effects generated by the works will be typical of a large roading project with receivers in close proximity. Most receivers will experience a moderate level of construction noise and vibration for most of the project. The closest receivers will be likely to experience construction noise and vibration levels that exceed the project standards for short periods as the works progress past them, and some for longer periods where there are structures that require longer construction periods. The construction noise and vibration effects and disruption on these receivers could be significant.

In my view, such effects are a typical feature of large infrastructure projects. But this does not necessarily make them reasonable.

5.2 Noncompliance with permitted standards

The construction noise and vibration conditions proposed by the Requiring Authority require compliance with the permitted noise and vibration standards “*as far as practicable*”. The proposed wording of the CNVMP condition also requires the plan to achieve the construction noise and vibration standards “*to the extent practicable*”³. The construction noise and vibration standards are similar to the permitted standards in the AUP.

The condition sets allow the CNVMP to set out the management measures for any situation where construction noise and vibration levels exceed the construction noise and vibration standards. The conditions then propose that Schedules are developed for any exceedance of the construction noise and vibration standards that is not dealt with in the CNVMP.

³ North West Local proposed condition set.

I consider that this arrangement is inappropriate, as it allows the CNVMP to be drafted in a way that allows infringements of the construction noise and vibration standards in wide-ranging circumstances with a relatively 'open' framework for permitting the infringements.

In my view, the activities that infringe the construction noise and vibration standards are the activities that will generate the highest level of effect and disruption. I consider that these activities and effects are the ones that require the closest attention, the most thorough assessment of the BPO and the most careful management.

I consider that the possibility of the CNVMP dealing with infringements to the standards in a potentially open and permissive manner is inappropriate. I consider that all infringements should be dealt with by Schedules to the CNVMP. This will achieve better outcomes in two ways:

- 1) The proposed conditions requiring Schedules set out a specific process for identifying the specific receivers, activities of concern, timeframes and the BPO in a much more detailed and appropriate way than the CNVMP would be capable of, and
- 2) The need to prepare a Schedule can often act as an incentive to apply more physical mitigation or better management to avoid any infringement of the construction noise and vibration standards.

Accordingly, I consider that the proposed NoR conditions should be amended to require any infringement of the construction noise and vibration standards to be dealt with by a Schedule only.

5.3 Night works

The Assessments confirm that night works will be limited to "critical activities" that cannot be carried out at any other time.

I understand that works at night are typically required to complete tasks when traffic flows are low and traffic disruption can be minimised, on the basis that completing such works during the day would cause significant disruption. The downside of avoiding bad traffic disruption during the day is often the sleep disruption for nearby receivers at night. It is my experience that allowing for some work at night is reasonable and consistent with the approach taken for most large infrastructure projects.

The key is to ensure that the noise and vibration levels from night works are minimised as far as practicable, and that where the residual noise and vibration levels exceed the project noise and vibration standards, a Schedule is developed to manage those effects. This is the typical approach that has been successfully adopted for several recent infrastructure projects.

The Assessments state that night works will be limited to critical activities that cannot be undertaken out at any other time. The proposed conditions require the CNVMP to simply describe "*any requirements to limit night works ...as far as practicable*".

I consider that the conditions should limit the scope of night works to critical activities that cannot be carried out any other time. The key issue is ensuring that construction work is not

carried out at night to make up for lost time or other project delays, where that work can be completed during the day.

I recommend that the NoR conditions be amended to make it clear that works at night that would exceed the construction noise and vibration standards can only be authorised by a Schedule where those works cannot reasonably be undertaken during the day. Such work cannot be undertaken at night to advance the construction program if that work can be done in the day.

6.0 Submissions on construction noise and vibration effects

I have reviewed the submissions that relate to construction noise and vibration effects on the Projects. The submissions are generally summarised below.

Table 1 Submissions on strategic NoRs

Submitter(s)	NoR	Concern
P Joicey (8)	KS	Noise effects from construction work
J Alexander (3)	KS	Noise effects from construction work
S Cooper (9)	S1	Noise effects from construction work
Heritage New Zealand	S2	Effects on the Huapai Tavern and the Kumeu Railway Goods Shed, located in the extent of NoR S2 or within the 200m buffer of NoR S2.
S Newnham	S2	Noise effects from construction work
T A S Ltd (51)	S2	Noise effects from construction work
A Joicey (83)	S3	Noise effects from construction work
Morleyvest Limited (81)	S2, S3	Submitter raises concerns relating to effects on tenancies of 1A Tapu Road, Huapai. The site is zoned RMHSZ and includes various commercial tenancies including a childcare centre ("ACPL"). The outdoor play area appears to be traversed by the new designation. Submitter raises concerns relating to construction noise effects on the childcare centre: <i>"construction noise during 7.30am-6.00pm weekdays in the Residential – Mixed Housing Suburban Zone is a maximum noise level of 75dBA Leq and 90dBA Lmax.5 The anticipated construction noise levels for this work is between 80 or 85dB LAeq which exceeds that permitted under the Plan. Noise and vibration (which can be as high as 80 or 85dB LAeq) will impact the children's sleeping arrangements during the day, and poses the risk of hearing damage to the children (especially when using outdoor spaces). This in turn, may result in families relocating their children currently enrolled at ACPL to alternate early childhood learning centres"</i> . The submitter seeks that ASN be considered in the Construction Noise and Vibration Management Plan, noise levels standards be reduced in areas that contain ASN and consultation relating to noise mitigation measures;
Kumeu Shopping Village Combined	S2, S3, KS	The Submitter requests noise control to allow all tenants of the Kumeu Shopping Village to continue to trade during construction activity.

Submitter(s)	NoR	Concern
Owners Committee and Kumeu Medical Centre, Kumeu Dental Surgery		
Ministry of Education- Submission 20	S2, S3	The Submitter notes that Matua Ngaru School has been identified as a property potentially affected by noise. The Ministry supports the implementation of a CNVMP to ensure communication and consultation with the affected receivers and a site-specific schedule if required. The Ministry requests that both Matua Ngaru and Huapai schools are engaged with to determine if they will be affected by noise and what noise mitigation can be implemented, if necessary

Table 2 Submissions on Local Arterials

Submitter(s)	NoR	Concern
Kainga Ora	All	Kāinga Ora requests that they are directly consulted as part of the preparation of the CNVMP and CNVMS.
D Wilson & A Tabuteau	R1	Vibration effects from construction activity on 1914 villa on 5 Moontide Road: “ <i>A few years back road works caused damage to our lounge. Heavy machinery shook the house like a low-grade earthquake and cracked the wall lining and kauri door frames in our living room which is nearest the road. The house foundations were inspected and found stable. The earthworks required to achieve what you propose would damage our home considerably more.</i> ”
C & L M Laurie, W Van der Steen, C Cruz, J Kahukiwa & L Roberts	All	Construction noise and vibration effects
Nicola Craig	HIF	Construction noise and vibration effects on 2 Trig Road. The Submitter considers that the construction noise standard is not practicable and that the construction timeframes should be shortened.
Ministry of Education	NoR1	MoE request consideration of noise barriers and visually impermeable hoarding around the school during construction to reduce disruption (to be confirmed with the school closer to the time of construction). The Ministry also seek that operational noise effects are fully mitigated on the school to ensure students can continue to learn in a non-disrupted learning environment.
Acanthus	NoR 1	Submitter raises concerns relating to construction noise and vibration effects on Cardinal West. Submitter seeks that there is land available for acoustic measures, including noise walls and other barriers to reduce the overall effect of noise on the Cardinal West residents.
Universal Homes	NoR 2a and 2b	Submitters requests that construction noise and associated conditions takes account of the future residents within the new dwellings that may be constructed on 60-68 Fred Taylor Drive, 550 Don Buck Road and Lot 7703 DP 568880.

Submitter(s)	NoR	Concern
BW Holdings Limited	W5	<p>The Submitter opposes several proposed conditions relating to construction noise.</p> <p>The Submitters does not support the inclusion of “as far as practicable” in sub-part (a) of proposed Condition 16. The Submitter states that the “Noise and Vibration Assessment Report predicts that these standards will be complied with at all noise sensitive receivers and there is thus no need for the “as far as practical” escape clause”</p> <p>The Submitter supports the requirement that a CNVMP must be prepared with the following reservations:</p> <p><i>“a) In sub-part (c) objective, the use of “to the extent practicable” in addition to “the Best Practicable Option is unnecessary, will weaken the meaning of “Best Practicable Option” to an unsatisfactory degree and fails to provide potentially affected persons with an acceptable degree of certainty that responsible environmental outcomes will be achieved.</i></p> <p><i>b) In sub-part (c) (x), if the requisite standards will not be achieved then there should be a requirement to identify and implement mitigation actions that could include actions on the receiving properties. Simply to identify “specific management controls” does not discharge the overarching responsibility to mitigate adverse effects to an acceptable level.</i></p> <p><i>20. The Company notes that 193 Hobsonville Road is identified as a property for which the received construction noise is likely to exceed the standards in Table 16.1 of the conditions. (in Appendix A – Affected Receivers – Noise (Unmitigated) to the Assessment of Construction Noise and Vibration Effects Report) Unfortunately, no details about the likely extent or frequency of the non-compliance are given in the report. For NoR W5, some 410 properties are assessed as likely to be so affected. The Company considers this to be unacceptable resource management practice and that provision must be made for mitigation”</i></p> <p>The Submitter seeks the following relief:</p> <p>8. Condition 16 – Construction Noise Standards. In condition 16 (a) delete the words “as far as practicable”</p> <p>9. Condition 18 – Construction Noise and Vibration Plan.</p> <p>a) In condition 18(c) after the words “set out in Conditions 16 and 17” delete the words “to the extent practicable”.</p> <p>b) In condition 18(c) (x) after the words “specific management controls”, add the words “and/or mitigation techniques”</p>
Ministry of Education	W5	<p>Hobsonville School is located close to proposed works and has not been identified as a potentially affected property. MoE support the approach for a CNVMP, and requests appropriate noise mitigation is implemented and engagement is undertaken with the school if they are identified as an affected property.</p>
C & A Day	W5	<p>The Submitter questions whether they are an affected receiver for construction noise.</p>
General Distributors Limited (Countdown)	W5	<p>Concerns relating to construction noise effects on Countdown Hobsonville.</p>

6.1 Concerns raised by owners and occupiers of dwellings, businesses and vacant land

I recommend that the Requiring Authority addresses the specific concerns raised in submissions from the owners/ occupiers of land affected by the NoRs. This should provide a more site-specific assessment of the potential adverse construction noise and vibration effects for the specific properties.

I agree with the concerns raised by BW Holdings relating to the conditions proposed by the Requiring Authority. I have recommended amendments to the proposed conditions that are designed to provide greater certainty for receivers. These amendments require that any infringement of the construction noise and vibration standards is managed by a Schedule, and not in a permissive manner by a CNVMP.

The submissions from Kumeu Shopping Village and the businesses that are part of it raise similar issues. My assessment is that many of the submitters will experience construction noise and vibration effects that are intermittent or short-term. The submitters that operate businesses on the close to the main works areas do have the potential to experience construction noise and vibration effects that could be more disruptive. These works will need to be carefully managed to ensure that the BPO is carefully identified and adopted. I recommend that the Requiring Authority provide further detail on these submissions to provide a more specific and certain assessment of the potential adverse construction noise and vibration effects on these businesses.

6.2 Kainga Ora submission

The submission from Kainga Ora supports the imposition of conditions that require a Construction Noise Management Plan and Schedules to manage the construction noise and vibration effects of the project. I support this outcome. I have recommended changes to the proposed conditions to provide greater certainty and management of effects through CNVMP's and Schedules.

6.3 Ministry of Education (MoE)

I support the relief sought by MoE. I consider that the construction noise and vibration effects on schools and ECECs can be significant if not managed properly, and that these facilities often experience disruption at lower construction noise and vibration levels than other businesses and residential activity.

I recommend that the Requiring Authority respond to these submission points directly with the knowledge they have of the construction activities that will be likely in locations near to the MoE properties.

6.4 Heritage New Zealand's submission

The submission of Heritage New Zealand raises concerns relating to construction vibration effects on the two listed heritage buildings, Huapai Tavern and Kumeū Railway Goods Shed. These buildings are within the footprint of several designations.

The Strategic Assessment states that these buildings are proposed to be repositioned along the corridor following works commencing on the RTC (NoR S3) to enable the construction of the Project. The Strategic Assessment states that:

“The buildings are transported to their new site, which will involve high levels of vibration through the loading, transport and unloading. Therefore, we consider that with appropriate siting and careful construction management, construction vibration is unlikely to cause damage to these buildings”⁴

The successful relocation of heritage buildings is largely beyond the expertise of an acoustics / vibration expert. However, I have been involved in the relocation of a number of heritage buildings, and in particular the relocation of the Birdcage Tavern as part of the Victoria Tunnel project. I can provide brief comment from my experience on that project.

I consider it likely that significant strengthening work would be required before the buildings can be moved. The effects of moving the buildings will be much greater than the potential vibration effects.

The Strategic Assessment does not provide any analysis of how the buildings can be successfully relocated whilst withstanding the stresses arising from relocation efforts. I consider that this matter is best-assessed by suitably qualified and experienced structural engineer.

However, I understand that it is likely that the heritage buildings will be exposed to vibration from construction work at some point, wherever they are located. In such cases, I recommend that vibration monitoring is undertaken on at least one point on each main part of the structures during the works that have the potential to reach 50% of the guideline vibration limits for avoiding damage to heritage buildings as set out in DIN4150-3.

In some cases, the criteria to avoid building damage in heritage buildings is lower than the Category B vibration limits in the proposed construction noise and vibration standards.

I consider that the guideline limits for avoiding damage to “Line 3” (including heritage buildings) is required to be complied at all times, whether the buildings are occupied or not and irrespective of the time of the day that the work is undertaken.

I consider that this could be achieved either by the development of a draft Schedule or by modifications to the NoR conditions. I suggest that the latter option may provide greater certainty.

⁴ P44 of the Strategic Assessment

7.0 Recommended conditions

I have worked with the Council team to markup amendments to the proposed NoR conditions. These amendments are generally designed to deliver a greater level of certainty in the way that the construction noise and vibration standards apply and how infringements to those standards are handled.

I have not made any amendments to the conditions to better-manage the vibration effects on heritage buildings or education facilities at this stage. I consider that some amendments will likely be necessary, but that the Requiring Authority should provide further assessment in response to the specific submissions before those amendments should be drafted.

8.0 Conclusion

Managing the noise and vibration effects from the construction of large infrastructure projects can be challenging. The often-heavy nature of the works and close proximity to receivers often results in the generation of noise and vibration effects high enough to cause significant disruption to normal business or residential activity.

The Assessments are generally comprehensive. I consider that the technical inputs (such as equipment sound power levels), noise and vibration prediction methods, application of NZS6803:1999 and the general technical aspects are appropriate and robust.

A key feature of the Assessments is the lack of detail on construction methods, plant, the time it will take to conduct high-noise or vibration work near to any particular receiver, and therefore the overall degree of construction noise and vibration effects.

I acknowledge that it would be difficult for the Requiring Authority to provide a more accurate assessment of the construction noise and vibration effects at this time, given the relatively long lapse periods and the difficulty in confirming specific construction methods for special features along the routes, such as bridges, retaining walls and other structures.

The noise level predictions provided by the Requiring Authority are useful to give an indication of the approximate magnitude of the effects that will be experienced by the *existing* receivers, but they should be considered indicative only.

The Assessments also quite rightly acknowledge that the receiving environment is dynamic, and that there are a number of situations where there may be new receivers established much closer to the works areas than the current receivers. This makes it very difficult in many cases to determine what construction noise and vibration effects will be likely on these future receivers. Helpfully, (and in contrast to the operational noise assessments) the Assessments propose that the construction noise and vibration effects on future receivers are treated the same as the existing receivers.

The Requiring Authority proposes to manage the effects of construction work through CNVMP's that will be prepared prior to construction.

The condition sets proposed by the Requiring Authority allow the CNVMP to set out the management measures for any situation where construction noise and vibration levels exceed the construction noise and vibration standards. The conditions then propose that Schedules are developed for any exceedance of the construction noise and vibration standards that is not dealt with in the CNVMP.

I consider that this arrangement is inappropriate, as it allows the CNVMP to be drafted in a way that allows infringements of the construction noise and vibration standards in wide-ranging circumstances with a relatively 'open' framework for permitting the infringements.

In my view, the activities that infringe the construction noise and vibration standards are the activities that will generate the highest level of effect and disruption. I consider that these activities and effects are the ones that require the closest attention, the most thorough assessment of the BPO and the most careful management.

I have worked with the Council team to prepare a set of marked-up amendments to the NoR conditions proposed by the Requiring Authority. These amendments are generally designed to deliver a greater level of certainty in the way that the construction noise and vibration standards apply and how infringements to those standards are handled.

Overall, I expect that the construction noise and vibration effects generated by the works will be typical of a large roading project with receivers in close proximity.

Most receivers will experience a moderate level of construction noise and vibration for most of the project. The closest receivers will be likely to experience construction noise and vibration levels that exceed the project standards for short periods as the works progress past them, and some for longer periods where there are structures that require longer construction periods. The construction noise and vibration effects and disruption on these receivers could be significant.



REVIEW OF OPERATIONAL NOISE EFFECTS
NORTHWEST LOCAL ARTERIAL NETWORK
PACKAGE NOTICE OF REQUIREMENTS

TECHNICAL REVIEW PREPARED FOR
Auckland Council

DATE
12 July 2023

Technical review prepared by Styles Group for Auckland Council.

REVISION HISTORY

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1.0 Introduction

Auckland Council has engaged Styles Group to review the operational noise and vibration effects from the NW Local Arterials Package (the **Projects**).

The Project comprises several Notices of Requirement (**NoR**) for future extended and/ or upgraded transport corridors in Whenuapai, Redhills, Trig Road and Riverhead.

This advice comprises a review of the Project's operational noise and vibration effects when constructed. I have prepared a review of construction noise and vibration effects under separate cover.

I have prepared this review following pre-lodgement and post-lodgement engagement with the NW Project team. The engagement has included a site visit, meetings and feedback on draft reports and the review of the finalised Assessment of Operational Noise and Vibration Effects (the **Assessments**) report lodged with each NoR. This Assessments include:

- The Trig Road Corridor Upgrade Assessment of Traffic Noise and Vibration Effects (the **Trig Assessment**)
- The Redhills Arterial Transport Network Assessment of Traffic Noise and Vibration Effects (the **Redhills Arterial Assessment**)
- The North West Redhills Riverhead Assessment of Road Traffic Noise and Vibration Effects (the **Redhills Riverhead Arterial Assessment**)
- The NorthWest Whenuapai Assessment of Traffic Noise and Vibration Effects (the **Whenuapai Assessments**)

I refer to these collectively as the Assessments throughout this advice unless identified specifically.

The objective of this review is to provide general commentary on the Assessments and to provide any additional commentary and analysis to ensure that the effects and mitigation measures are clear and understandable.

1.1 The Projects

The scope of each NoR, their receiving environment and the nature and extent of construction works are described in the application material and are not repeated in this advice.

The NoRs subject to this review are generally summarised below. I have adopted the project descriptions from the Requiring Authorities' application material.

1.2 Whenuapai Package

NoR	Project	Description ¹	Requiring Authority	Lapse period sought
NoR W1	Trig Road (North)	Upgrade of Trig Road (North) corridor to a 24m wide two-lane urban arterial cross-section with separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR W2	SH16 Main Road Upgrade	Extension and upgrade of Māmari Road corridor to a 30m wide four-lane urban arterial cross-section providing bus priority lanes and separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR W3	Brigham Creek Road	Upgrade of Brigham Creek Road corridor to a 30m wide four-lane arterial cross-section with separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR W4	Spedding Road	Upgrade of Brigham Creek Road corridor to a 30m wide four-lane arterial cross-section with separated active mode facilities on both sides of the corridor	Auckland Transport	15 years
NoR W5	Hobsonville Road (alteration to existing designation 1437)	Alteration of the existing Hobsonville Road designation 1437 to provide for the widening of the Hobsonville Road corridor between Oriel Avenue and Memorial Park Lane. Upgrade of sections of Hobsonville Road corridor to a 30m wide four-lane cross section with separated active mode facilities on both sides of the corridor. Upgrade of sections of Hobsonville Road corridor to a 24m wide two-lane cross section with separated active mode facilities on both sides of the corrido	Auckland Transport	n/a

¹ Reproduced from <https://www.aucklandcouncil.govt.nz/UnitaryPlanDocuments/03-r1-assessment-of-effects-on-the-environment.pdf>



Figure 1 Whenuapai Project Overview

1.3 Trig Road Upgrade

NoR	Project	Description	Requiring Authority	Lapse period sought
	Trig Road Corridor Upgrade	Widening and upgrade of the existing Trig Road transport corridor from a 20m wide, two-lane rural road to a 24m wide, two-lane arterial standard transport corridor between the SH18 off-ramps and Hobsonville Road	Auckland Transport	15 years



Figure 2 Whenuapai Trig Road Overview

1.4 Redhills Arterial Network

NoR	Project	Description	Requiring Authority	Lapse period sought
NoR 1	Redhills North-South Arterial Corridor	New urban arterial transport corridor and upgrade of Don Buck and Royal Road intersection.	Auckland Transport	15 years
NoR2a	Redhills East-West Arterial Corridor – Dunlop Road	New urban arterial transport corridor that intersects with Fred Taylor Drive and connects to the remaining East-West corridor (NoR2c) at the intersection with the Redhills North-South arterial corridor.	Auckland Transport	15 years

NoR	Project	Description	Requiring Authority	Lapse period sought
NoR2b	Redhills East-West Arterial Transport Corridor – Baker Lane	New urban arterial transport corridor that intersects with Fred Taylor Drive and connects to the intersection of the remaining East-West connection and Dunlop Road (NoR2a).	Auckland Transport	15 years
NoR2c	Redhills East-West Arterial Transport Corridor – Nixon Road Connection	New urban arterial transport corridor that intersects with the Redhills East West Arterial Corridor – Dunlop Road. This includes the upgrade of the existing Red Hills Road / Nelson Road / Nixon Road intersection, and the existing Nixon Road / Henwood Road intersection	Auckland Transport	15 years

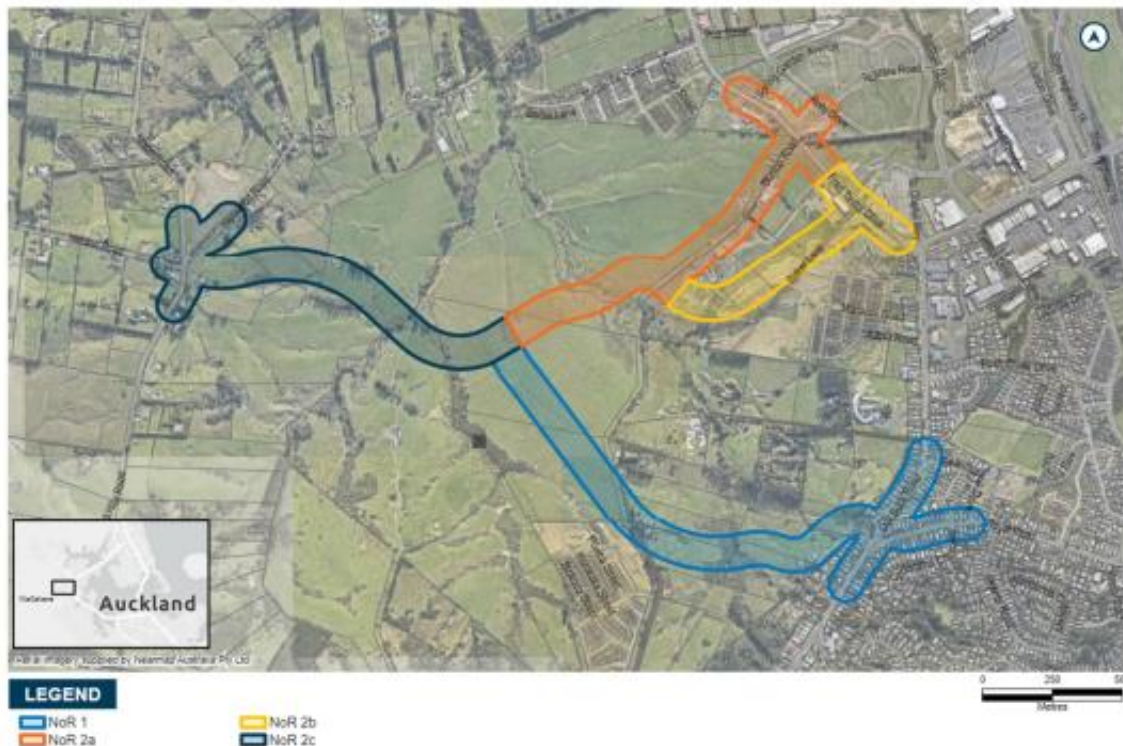


Figure 3 NoR 1, 2a, 2b and 2c

1.5 Redhills and Riverhead

NoR	Project	Description	Requiring Authority	Lapse period sought
Redhills				
NoR RE1	Don Buck Road	Upgrade of Don Buck Road corridor to a 30m wide four-lane cross section providing bus priority lanes and separated active mode facilities on both sides of the corridor.	Auckland Transport	15 years
NoR RE2	SH16 Main Road Upgrade	Upgrade of Fred Taylor Drive corridor to a 30m wide four-lane cross section providing bus priority lanes and separated active mode facilities on both sides of the corridor	Auckland Transport	n/a
Riverhead				
NoR R1	Coatesville – Riverhead Highway	Upgrading the southern section of the corridor to a 33m two-lane low speed rural arterial cross-section with active mode facilities on the western side and upgrading the northern section of the corridor to a 24m two-lane urban arterial cross-section with active mode facilities on both sides of the corridor.	Auckland Transport	20 years

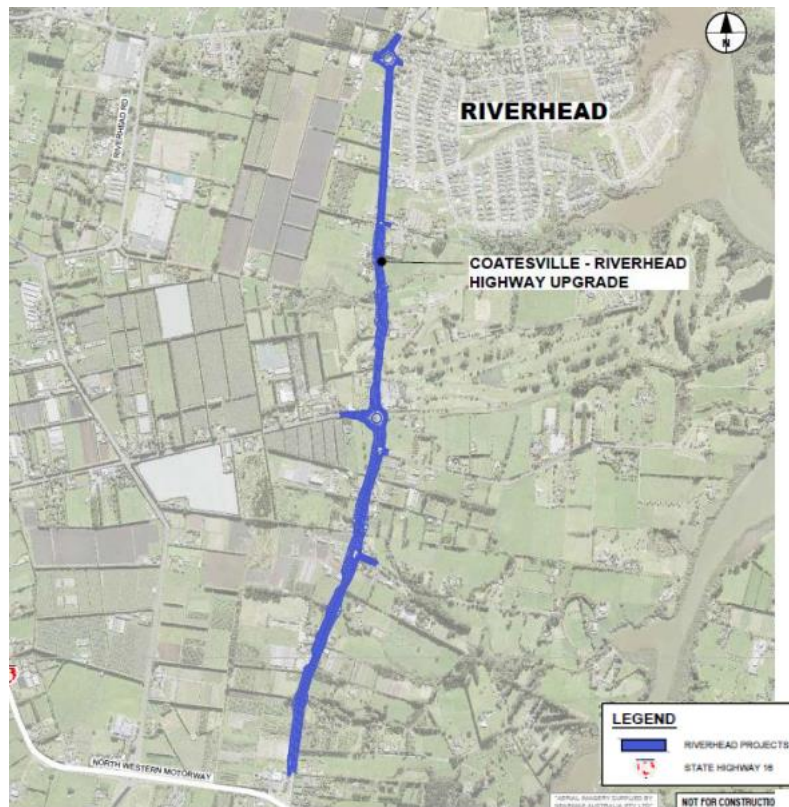
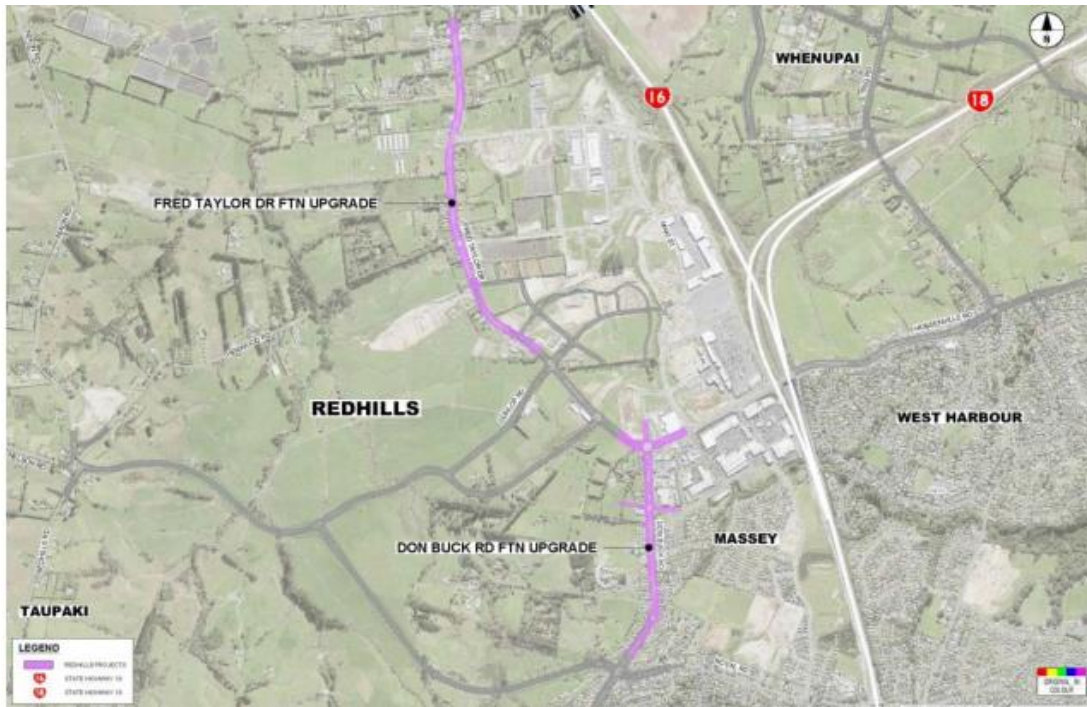


Figure 4 Redhills and Riverhead

2.0 Experience and qualifications

My full name is Jon Robert Styles. I am an acoustic consultant, director and the principal of Styles Group Acoustics and Vibration Consultants. I have approximately 22 years of experience in the industry, the first four years as the Auckland City Council's Environmental Health Specialist – Noise, and the latter 18 years as the Director and Principal of Styles Group.

I hold a Bachelor of Applied Science majoring in Environmental Health and I have completed the Ministry for the Environment's Making Good Decisions programme. I recently concluded my second term as the President of the Acoustical Society of New Zealand. I am currently a Council member and professional Member of the ASNZ.

I am on the executive team of the Association of Australasian Acoustical Consultants. My role on the executive team is to develop guidelines for the assessment of noise and vibration in New Zealand and Australia.

Throughout my career, I have been involved in the development and administration of numerous District Plan rules, plan changes and general policy development. I have assisted a large number of councils to process a significant number of resource consents and Notices of Requirement subject to noise and vibration standards. I have extensive experience advising on the management of noise and vibration effects, including the construction, maintenance and operational noise effects of major and strategic transport infrastructure (including port, road, air and rail) and the protection of strategic industry and transport infrastructure through the effective management of reverse sensitivity effects.

Specific assignments relevant to this evidence include:

- Review of operational and construction noise effects on behalf of Auckland Council for many Auckland Transport project's, including AMETI, Eastern Busway and Airport to Botany.
- The Auckland Council's witness through the development of the High Land Transport Noise Overlay in the Proposed AUP.
- Advice on several recent District Plan reviews, including Whangarei Urban and Services Plan Change and plan reviews for Wellington, Christchurch, Queenstown, Central Hawkes Bay, New Plymouth, Taupō, Napier, Gore and Kaipara.
- Providing advice on numerous public and private plan changes involving land exposed to road and rail noise, including recommendations for appropriate acoustic mitigation response.
- Noise and vibration measurements for a significant number of resource consent applications involving the establishment of activities sensitive to noise adjacent to various forms of transport infrastructure.
- A large number of projects around New Zealand involving road traffic noise and the application of New Zealand Standard NZS6806:2010 *Acoustics – Road Traffic Noise –*

New and Altered Roads (NZS6806). A number of these projects have been Roads of National Significance (RoNS) and include the Southern Corridor Improvements, Te Atatu Road widening, Lincoln Road Corridor Improvements, Ellerslie and Takanini Noise Walls, Mill / Redoubt Road, SH1 Whangarei Improvements, SH12 Matakoho Bridges, CSM2 & MSFRL (Christchurch Southern Motorway Stage 2 & Main South Road Four Laning), Mackays to Pekapeka, Waikato Expressway (numerous sections), Southern Links Hamilton, Central Motorway Junction, AMETI, Victoria Park Tunnel, Waterview Connection, St Lukes Interchange, SH16 Causeway, Puhoi to Warkworth, the East West Link, Penlink and the Northern Corridor Improvements, Warkworth to Wellsford, Otaki to North of Levin and many others.

- I have given evidence before several Boards of Inquiry on road traffic noise effects including being the Boards' expert.

I have read the Environment Court Code of Conduct for Expert Witnesses. My advice complies with the Code in all respects and the opinions herein are within my area of expertise.

3.0 The adoption of NZS6806:2010

The Assessments are heavily focussed on assessing the effects of the Project against the provisions of NZS6806:2010 Acoustics – Road-traffic noise- New and altered roads (**NZS6806:2010**). This standard is the only contemporary standard in New Zealand that sets out procedures to standardise the design and specification of road noise mitigation measures inside the designation boundaries and beyond in some cases.

It is well recognised in New Zealand that this standard has a number of limitations. These have been well-documented by various decision makers including several Boards of Inquiry².

I consider it critical that the limitations of NZS6806:2010 are clearly understood in this decision-making process, along with the additional assessment that is necessary to ensure that the limitations are addressed for these projects.

The Assessments go beyond the simple requirements of NZS6806:2010 and addresses the change in noise level arising in each NoR and the change in the level and prevalence of a high level of annoyance due to exposure to traffic noise. These provide helpful context for the overall assessment of noise exposure and the effects on people.

² For example, in the Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal. Many paragraphs, but mainly at paragraph 925. Available at <https://www.epa.govt.nz/assets/FileAPI/proposal/NSP000012/Boards-decision/ec6f94077d/Waterview-Final-decision-volume-1-Report-and-decision.pdf>

3.1 Limitations of NZS6806

In my view, the limitations of the standard that are relevant to the Projects are:

- 1) **Significant adverse effects can arise** - The noise level thresholds that trigger the need to consider mitigation are very high. NZS6806:2010 adopts a noise level of 57dB $L_{Aeq(24hr)}$ at PPFs near to a New Road and 64dB $L_{Aeq(24hr)}$ at PPFs near to an Altered Road as the thresholds for the investigation of mitigation. NZS6806:2010 does not require any mitigation effort where the noise level from an altered road is less than this level. This level is significantly above the World Health Organisations' (**WHO**) interim targets for managing road traffic noise.

I consider that and the approach in NZS6806:2010 to only require the investigation of mitigation when these higher thresholds are met contrasts significantly with the approach adopted by the WHO that seeks to reduce noise exposure to levels no greater than the targets they set.

I consider that this needs to be recognised in the assessment of effects and the consideration of designation conditions to minimise the potential adverse effects of exposure to road noise.

- 2) **No assessment of the effects of noise on people** - NZS6806:2010 does not require any assessment of the noise effects that may arise on the receiving environment. The standard sets out a process for determining what it states will be the BPO for mitigating road traffic noise. However, it is well recognised that the BPO can in fact involve the consideration of a number of factors that are not included in NZS6806:2010. The determination of the BPO by following NZS6806:2010 is further complicated because the lowest thresholds for mitigation effort are very high (see above) and the effects of the noise are not described or properly incorporated.

Accordingly, the full assessment of road traffic noise effects can use many of the processes set out in NZS6806:2010, but that must be supplemented with an assessment of the actual noise effects that will be likely to arise. This can help the decision-maker to evaluate whether the BPO has in fact been adopted.

- 3) **Noise barriers not fully supported** - NZS6806:2010 requires assessment of the noise levels at a point 1m away from the façade of buildings and at a height of 1.2m to 1.5m above the floor level of interest. Roadside barriers designed for reducing noise levels can have a significant effect on reducing the noise levels at ground level (or 1.2m – 1.5m above it) but would be unlikely to deliver any reduction in noise level at the first or second floors of a multi-storey building.

An assessment that follows NZS6806:2010 will conclude that a roadside barrier would not be a part of the BPO if it does not provide a noise level reduction at the most exposed part of the building. There are instances of this outcome evident in the Assessment. In my view, this is a clear limitation of the standard because roadside barriers can reduce the noise at ground level significantly and they can deliver

significant improvements to the quality of ground floor living spaces and yards. They should not be ruled out because they cannot screen the entire dwelling from road noise.

- 4) **Existing environment inconsistent with general practice** - NZS6806:2010 only looks as far into the future as the physically existing environment and any granted but unimplemented building consents. NZS6806:2010 does not have any capability of looking 'forwards' to ensure that the mitigation measures are integrated with the planned receiving environment that the AUP provides for. This contrasts with the general practice of assessing environmental effects where the planned environment is taken into account, as it may be informed by unimplemented resource consents and land zoned for development (but not yet developed).

This complicates the assessment for sites in the receiving environment that are currently vacant, or that have not been developed to the height or proximity to the roads that the District Plan provides for. This can be a major flaw in the standard in some cases, especially where a road is planned through an area that is currently vacant but zoned for intensive residential development.

I consider that this problem with NZS6806:2010 is the most significant for these Projects. I address this issue in detail in this review and I propose amendments to the proposed designation conditions to avoid the bad outcomes that will otherwise be delivered.

4.0 Review of the Operational Noise Assessments

This section sets out a review of the Assessments as it relates to the operational noise effects from the Project. This section raises some examples of where I consider the Assessments and s92 Response have adopted a problematic approach, particularly with respect to integrating the design of noise mitigation with future communities.

The Assessments are focussed primarily on the application of the procedures in NZS6806:2010 and provides a brief assessment of the effects in terms of the change in noise level and annoyance. I support this approach in a general way. I consider that the provisions of NZS6806:2010 set out a logical method of predicting the noise levels and determining the mitigation that it says should be applied. However, I consider that the serious problems with NZS6806:2010 that are relevant to these Projects need to be addressed in this case to avoid potentially bad outcomes.

4.1 Technical aspects of the noise modelling, measurement and predictions

My comments in this section of the review are relatively brief, on the basis that I consider the technical acoustics aspects of the Assessments are generally robust.

I have worked extensively with the Requiring Authority's acoustic experts on this and other projects and I am very familiar with the noise modelling techniques, software and processes employed to measure and predict noise levels arising from traffic on roads. The pre-lodgement engagement with the Requiring Authority's team allowed for several conversations about the technical noise modelling, measurement and assessment process that were very helpful.

I agree with the noise modelling methods and calculation procedures. I consider that the modelling process itself, including the calculation methods, input assumptions and the outputs are technically appropriate and sufficiently robust.

My agreement on these matters covers a significant portion of the Assessments.

4.2 Focus on the physically existing (2022) environment

The noise modelling inputs and outputs are focussed primarily on the physically existing receiving environment.

The Assessments discuss the general nature of the existing and planned future environments for each of the NoRs it assesses. The assessment of the planned environment is very brief and there is no meaningful assessment of noise effects for the future planned environment.

The Assessments include noise level contours for the Design Year for the various design options (Do Nothing, Do Minimum and Mitigation Option). These contours show what the future noise levels are likely to be across land that might currently be undeveloped. However, they appear to be subject to considerable uncertainty.

The s92 Response provides some additional context for the effects across undeveloped land. Table 1 of the s92 Response sets out a general description of how activities sensitive to noise should be treated when they fall within the predicted noise level contours.

I generally agree with Table 1 of the s92 Response. I consider that it provides a helpful analysis of the nature and degree of acoustic treatment that should be considered when the land is developed.

However, I consider that the Assessments and s92 Response both fail to address the way that the design of the Projects are intended to integrate with the future environment.

The fundamental principle of the Assessments and s92 Response is to design the road noise mitigation measures for the 2022 physically existing environment. The Requiring Authority's approach effectively ignores the future planned environment and proposes no mitigation for what could be a future residential community alongside the Projects, and no pathway through designation conditions that could deliver noise mitigation for future communities. The Requiring Authority's approach shifts the burden of effects and mitigation entirely on to the future receiving environment. The only caveat to this is the 'soft' commitment³ to apply an asphaltic pavement (moderately low noise). I consider that this alone will be insufficient to avoid potentially significant adverse effects in many circumstances, and it fails allow integration of road design and noise mitigation with the planned future environment.

I note that there are numerous areas where the Projects pass through or alongside land in the Future Urban Zone and land that is live-zoned as Terraced Housing and Apartment Zone (THAB) (particularly in the vicinity of Fred Taylor Drive). The Assessments effectively ignore these potential and foreseeable future communities and the proposed designation conditions also ignore them.

4.3 Selection of the Preferred Mitigation Option

The Assessments set out a short section for each NoR that outlines the possible noise mitigation options that could be adopted.

However, the Assessments do not make a firm commitment to any particular mitigation option. This demonstrates that the Requiring Authority has not followed the complete process set out in NZS6806:2010 to consider a range of possible mitigation options and to follow an evaluation process to determine the BPO.

Neither the Assessment or proposed conditions make any firm commitment to delivering any particular mitigation option or outcome.

I understand that such a process would be challenging to undertake at this time given that the long lapse periods sought, and that the design and the receiving environment could change

³ I consider that the commitment to apply a low noise pavement is not firm, as the requirements for the pavement are qualified in several ways by the proposed conditions – see North West Local Low Road Noise Surface condition for an example.

significantly in that time. I agree with the Requiring Authority that this situation lends itself well to a future assessment of the BPO to determine the BPO at that time.

However, as I describe further on in this review, the proposed conditions are designed so they look back in time to the year 2022 to define the receiving environment for the BPO assessment that will be undertaken prior to construction. I consider that this is nonsensical and fails to properly integrate the design with possible and probable future communities.

I consider that the future assessment of the BPO required by the conditions should require an assessment of the BPO that is integrated with the physically existing and planned environments that are present at that time.

4.4 Assessment of road traffic noise effects

The figures attached to the s92 Response demonstrate that a significant number of existing PPFs will be exposed to noise levels that are greater than the WHO interim targets, even if the identified options to minimise noise inside the road corridor are adopted. This is demonstrated simply by the number of PPFs exposed to noise levels greater than approximately 50dB $L_{Aeq(24hr)}$.

The Assessment contains a number of charts that set out the likely change in noise level arising from the implementation of the different NoRs. Figure 7-2 of the RE1 (Don Buck) Assessment provides an example. I have reproduced this below:

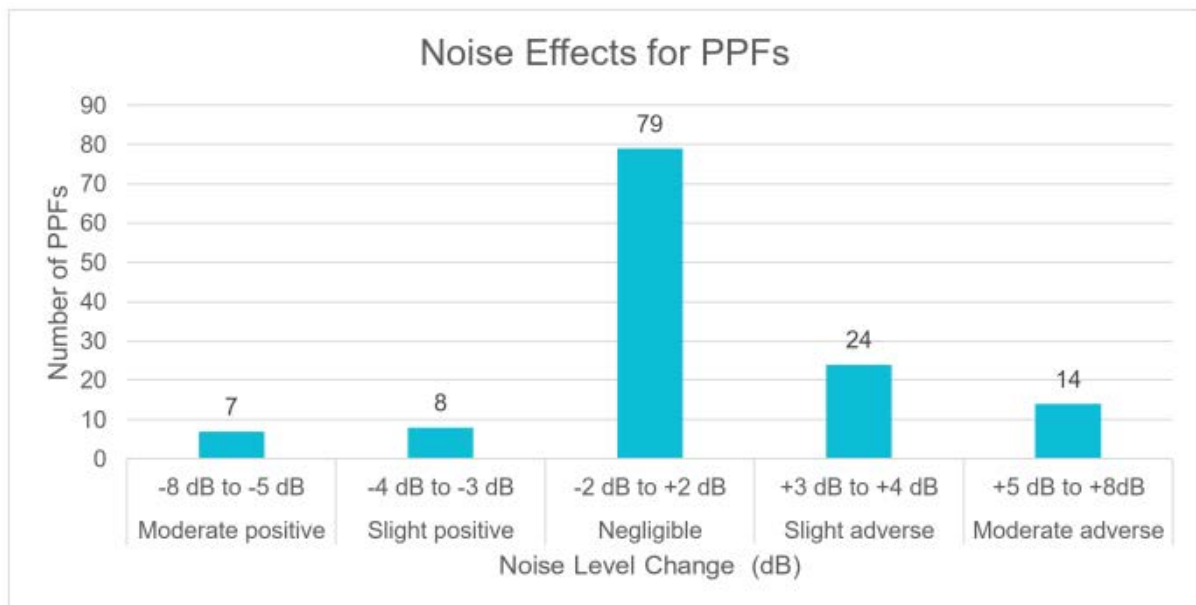
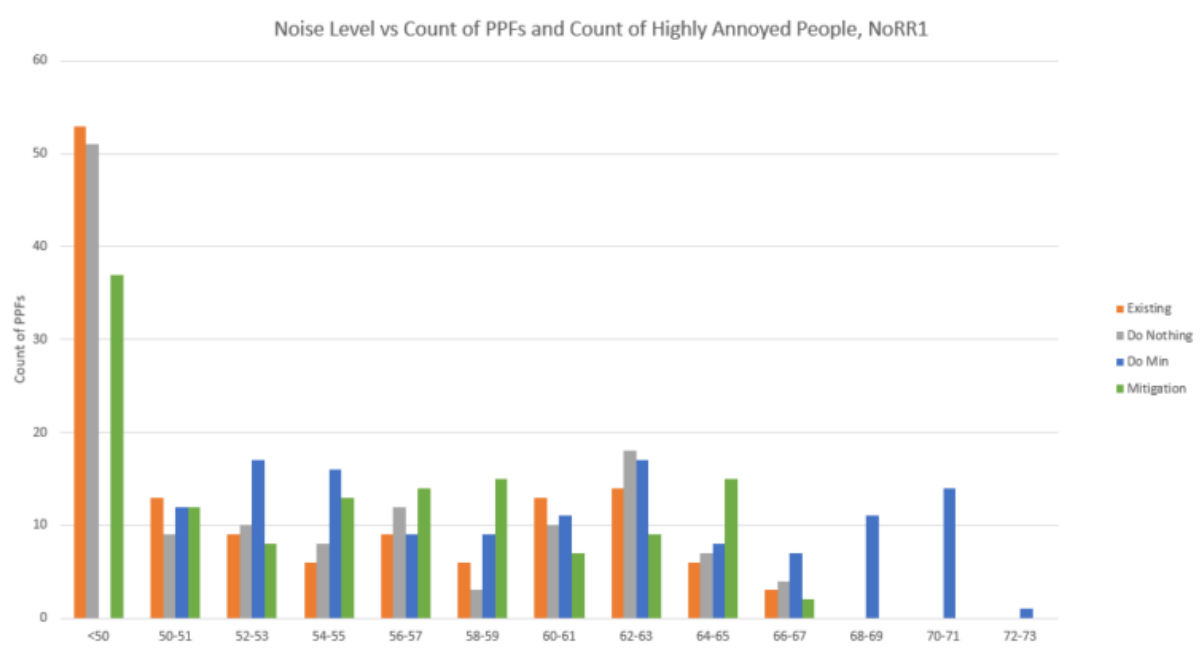


Figure 7-2 Change in Noise Level - Do Nothing Vs Mitigation Option 2 - NoR RE1

This figure demonstrates that a large number of PPFs will experience a considerable increase in road traffic noise levels if the project is implemented.

Figure 8 of the s92 Response (for the same stretch of Project) demonstrates that a significant number of PPFs will be exposed to noise levels greater than the WHO interim target of approximately 50dB $L_{Aeq(24hr)}$. I have reproduced this below:

Figure 8 NOR RE1 Don Buck Road



These figures comprise one example of the level of effect that will be experienced by the PPFs surrounding the Projects.

Whether there is a change in noise level or not, there will be a significant number of PPFs proximate to many NoRs that will be exposed to noise levels well above the WHO target levels. With no acoustic mitigation for those PPFs, I consider that there is a strong likelihood of significant adverse effects arising in the population.

I consider that this creates a strong incentive for ensuring that the BPO can and will be adopted for minimising the road traffic noise effects for the physically existing 2022 environment and any future communities that might be proximate to the Projects.

4.5 Missing PPFs

My review of the RE2 (along Fred Taylor Drive) appears to have missed a number of terraced houses or apartment buildings from the assessment.

The buildings physically exist. It appears that the buildings have been omitted from the traffic noise model as the noise level contours appear unaffected by any buildings in their location. The buildings in-question are also omitted from the list of existing PPFs. Figure 1 below shows the extent of the designation that avoids the site (presumably to leave the subject buildings in-place) but the schedule of PPF addresses omits them.



Figure 5 NoR R2- omitted PPF at 86 Fred Taylor Drive

I have not conducted an exhaustive search and reconciliation of all PPFs to determine whether this issue appears elsewhere. I suggest that the Requiring Authority complete such an exercise.

I recommend that the Requiring Authority re-run the computer noise model for this section with the buildings included.

4.6 Application of noise barriers

The Assessment confirms that the provision of noise barriers would be limited to a PPF that existed in 2022 and where the future BPO assessment requires a barrier, unless the PPF is double storey. The Assessment contains several examples of where no mitigation has been recommended for two storey dwellings on the basis that a noise barrier would not reduce the noise level at the upper floor, even though they might have a significant positive effect on the indoor and outdoor environment at ground level. An example can be found at section 8.3.1.1 of the Assessment for NoRs W1 – W5.

I consider that the future BPO assessment should require the implementation of roadside barriers where they are required by NZS6806:2010 and where the effects on the ground floor and any outdoor areas at ground level are the primary focus.

5.0 Adverse effects of exposure to road traffic noise

The most important effects arising from exposure to high levels of road traffic noise are those that are chronic and not always readily apparent. Many people that are affected by exposure to high levels of road traffic noise may not be aware of the extent of the effect it is having on them.

It is well accepted and globally recognised that exposure to noise from road, rail and air transport infrastructure, industry, ports commercial activities and a variety of other sources has the potential to generate high levels of annoyance and adverse health effects if it is not managed carefully. The adverse effects can be significant where the noise exposure is high.

Minimising these effects by adopting the best practicable option to minimise noise from inside the road corridor and in the receiving environment is critical to avoid the worst of the adverse health and amenity effects that could otherwise arise.

The WHO has published many policies and studies documenting extensive investigations into the effects of noise exposure on people⁴, estimating the burden of disease from environmental noise and quantification of healthy life years lost as a result of exposure to environmental noise⁵.

In 2011, WHO published the “Burden of Disease from Environmental Noise”⁶ that quantified the healthy years of life lost in western European countries as a result of exposure to environmental noise⁷. The study identified that at least 1 million healthy life years⁸ are lost every year from exposure to transport noise in the western European countries⁹. The study provided sufficient evidence from large-scale epidemiological studies to link the exposure to environmental noise with adverse health effects, including annoyance¹⁰, tinnitus, sleep disturbance, cognitive impairment in children and cardiovascular disease. The 2011 study identifies road-traffic noise as the most prevalent source of environmental noise, with the largest contribution to the burden of disease due to noise.

The 2011 study found that sleep disturbance and annoyance, mostly related to road traffic noise, constitute the bulk of the burden of disease. Available assessments place the burden of disease from environmental noise as the second highest after air pollution.

In 2018, WHO published the Environmental Noise Guidelines for the European Region (the **2018 Guidelines**)¹¹. The purpose of the 2018 Guidelines is to provide robust public health advice to drive policy action to protect communities from the adverse effects of noise.

⁴ WHO Regional Office for Europe (2012). Methodological guidance for estimating the burden of disease from environmental noise. Copenhagen,

⁵ WHO Regional Office for Europe (2011). Burden of disease from environmental noise: quantification of healthy life years lost in Europe. Copenhagen,

⁶ https://www.euro.who.int/__data/assets/pdf_file/0008/136466/e94888.pdf

⁷ WHO Regional Office for Europe (2011). Burden of disease from environmental noise: quantification of healthy life years lost in Europe. Copenhagen

⁸ This is measured in ‘DALYs’. DALYs are the sum of the potential years of life lost due to premature death and the equivalent years of “healthy” life lost by virtue of being in states of poor health or disability - WHO Burden of disease from environmental noise

⁹ Comprised of 61 000 years for ischaemic heart disease, 45 000 years for cognitive impairment of children, 903 000 years for sleep disturbance, 22 000 years for tinnitus and 654 000 years for annoyance.

¹⁰ High annoyance is not classified as a disease in the International Classification of Disease (ICD-9; ICD-10), it does affect the well-being of many people and therefore may be considered to be a health effect falling within the WHO definition of health as being a “state of complete physical, mental and social well-being”.

¹¹ https://www.euro.who.int/__data/assets/pdf_file/0008/383921/noise-guidelines-eng.pdf

The 2018 WHO Guidelines discuss the importance of interventions to reduce road traffic noise exposure. They conclude that:

“The GDG also considered the evidence for the effectiveness of interventions. The results showed that:

- *addressing the source by improving the choice of appropriate tyres, road surface, truck restrictions or by lowering traffic flow can reduce noise exposure;*
- *path interventions such as insulation and barrier construction reduce noise exposure, annoyance and sleep disturbance;*
- *changes in infrastructure such as construction of road tunnels lower noise exposure, annoyance and sleep disturbance;*
- *other physical interventions such as the availability of a quiet side of the residence reduce noise exposure, annoyance and sleep disturbance.”*

The overall recommendation for road traffic noise from the 2018 Guidelines is:

“For average noise exposure, the GDG strongly recommends reducing noise levels produced by road traffic below 53 dB L_{den} , as road traffic noise above this level is associated with adverse health effects.

For night noise exposure, the GDG strongly recommends reducing noise levels produced by road traffic during night time below 45 dB L_{night} , as road traffic noise above this level is associated with adverse effects on sleep.

To reduce health effects, the GDG strongly recommends that policy-makers implement suitable measures to reduce noise exposure from road traffic in the population exposed to levels above the guideline values for average and night noise exposure. For specific interventions, the GDG recommends reducing noise both at the source and on the route between the source and the affected population by changes in infrastructure.”

The Assessments confirm that the existing noise environment for those NoR's that are close to the existing major transport corridors is controlled by road-traffic noise. The noise level survey results confirm that the noise levels in parts of the Project are well above the WHO target noise levels. The noise level predictions for the Design Year for each NoR demonstrate that a significant number of the current PPFs will remain exposed to noise levels that are in some cases significantly above the WHO target noise levels.

I have prepared this section of my review to emphasise that there is a significant incentive to ensure that the Requiring Authority is adopting the BPO to minimise the noise generated by the operational phase of the project. This incentive applies to minimising the road traffic noise effects for the receiving environment that exists in 2022 and also for future communities that exist or are anticipated and that the roads may be affecting in the future.

6.0 A shared responsibility

It would often be impracticable for the Requiring Authority to contain fully contain noise levels above the WHO targets within the road corridor. To do so would likely require quite significant measures in many cases, such as high and continuous noise barriers, low speed limits, vehicle flow reductions or similar. I acknowledge that many of these would defeat the purpose of the projects or at-best would severely adversely affect the efficient design, the urban amenity and access to properties and businesses.

The management of exposure to road traffic noise is a responsibility that is traditionally shared between the noise-maker (in this case the Requiring Authority) and the occupants and developers of the receiving environment. The common arrangement is that the road controlling authority would adopt the BPO to minimise the noise exposure in the receiving environment as the priority. This often includes a low-noise pavement, barriers where they are practicable, lower speed limits and designs that shift the heaviest / noisiest traffic flows away from the PPFs as far as practicable.

The receiving environment is then left to contend with the noise effects that 'spill' outside of the road corridor. This can be achieved in many ways, such as requiring a no-build setback, the use of spatial planning to create larger separation distances between major roads and residential areas, or most commonly to require activities sensitive to noise to be acoustically treated so that the occupants can have a cool and quiet internal environment where good quality sleep and a moderate-to-high level of amenity is available.

Unfortunately, the AUP does not currently include any standards that would require an activity sensitive to noise / PPF near to a major road to be acoustically treated to reduce road traffic noise indoors. The AUP does not include any standards that would contribute towards the receiving environment managing the road traffic noise effects that cannot be contained inside the road corridor.

I consider that the lack of standards in the AUP to require acoustic treatment of existing, new or altered activities sensitive to noise near to major roads is a significant issue, and that introducing new standards in the AUP for this purpose is beyond the scope of these projects and this process.

However, the NoR and resource consent processes do not have the ability to change the planning provisions in the AUP to require such treatment. Although beyond the expertise of an acoustic expert, it would be novel to expect the Requiring Authority to acoustically treat all existing activities sensitive to noise / PPFs that will remain exposed to noise levels above the WHO targets, especially when the level of exposure has likely been present for some considerable time already. The Requiring Authority are not proposing to acoustically treat any existing PPFs unless the procedures in NZS6806:2010 would require them to. I consider that this is a typical approach in a case such as this one.

I consider that the 'shared responsibility' to manage the effects of road traffic noise is an important aspect of this review and for the Projects to adopt.

6.1 The methods adopted by the Project to achieve a 'shared responsibility'

The Assessments and s92 Response provide some helpful methods of promoting the concept of a shared responsibility for managing the effects of road traffic noise on people.

These are the methods that the Assessment and s92 Response propose:

- 1) The Assessments look at the physically existing 2022 receiving environment and gives an indication of the likely mitigation options that might comprise the BPO following the procedures in NZS6806:2010. The proposed conditions do not require the adoption of any of the mitigation options, other than a soft commitment to an asphalt pavement;
- 2) The Assessments and proposed NoR conditions state that the assessment of what might be the BPO will be repeated prior to construction of each part of the Project (the **future BPO assessment**). The future BPO assessment will look at essentially what is left of the 2022 receiving environment and will follow the procedures in NZS6806:2010 to determine the BPO for only those receivers;
- 3) The Assessments provide predicted noise level contours for the current road design and mitigation based on the 2022 receiving environment. The s92 Response states that these contours could be used by the Council as a non-statutory layer in its GIS system to alert future development to the presence of high noise levels from road traffic so the future environment can appropriately manage its exposure to noise, if it chooses to do so.

These are the problems with the Requiring Authority's approach to achieving a shared responsibility:

- 1) The future BPO assessment fails to properly recognise the possibility that the Projects may be alongside or through to houses and / or communities that are provided for and anticipated by the AUP. This is a particular issue where the Projects run through or beside the FUZ or THAB / Residential zones where development is anticipated but yet to occur.
- 2) The predicted noise level contours (designed to inform future development) have no meaningful regard to the possibility of future houses or communities near to the road and
- 3) The predicted noise levels contours (designed to inform future development) have been based solely on the adoption of noise mitigation measures for the existing 2022 receiving environment.
- 4) The proposed designation conditions provide no recognition of future houses or communities and no pathway for them to be considered in the future BPO assessment.
- 5) The future BPO assessment process prescribed by the proposed conditions would ignore any dwelling that has replaced a PPF that currently exists, even if it was similar

in location and not acoustically treated (keeping in mind the lack of standards in the AUP to require any acoustic treatment).

I consider that these issues are significant.

I consider that they can be largely resolved by requiring the future BPO assessment (as required by the proposed conditions) to recognise and provide for the BPO to be adopted for the receiving environment at the time of the future BPO assessment, where that receiving environment comprises:

- a) The PPFs that existed in 2022
- b) The PPFs that may have been established since 2022
- c) Any land that is zoned in a way that provides for development of new activities sensitive to noise.

I consider that this will ensure that the Projects are properly and appropriately integrated with the existing and future communities and will provide the best approach to minimising the potentially significant adverse effects of road traffic noise.

7.0 Appropriateness of the Requiring Authority's BPO assessment

The Assessments set out the results of the evaluation of the BPO for road noise mitigation based on the receiving environment that physically existed in 2022.

7.1 Current assessment is indicative only

Other than confirming that an asphalt pavement will be used on the roads, the Assessment only makes tentative suggestions for other mitigation measures, such as barriers or acoustically treating houses, and only where the future BPO assessment might require it.

This demonstrates that the Requiring Authority is not committing to any particular noise mitigation measures at this time, other than an asphalt pavement. This is reflected in the Requiring Authority's proposed conditions, which do not mandate the implementation of any operational noise mitigation measures other than the type of pavement.

7.2 The Requiring Authority's proposed conditions freeze the receiving environment to 2022

The Requiring Authority's proposed conditions require that the future BPO assessment is undertaken prior to construction, using the final design present at that time, but referring only to the PPFs that have been evaluated in 2022. The future BPO assessment is intended to confirm whether the PPFs that exist in 2022 'change category' under the final design.

The proposed conditions essentially 'freeze' the receiving environment in time to 2022. The Requiring Authority's proposed conditions fail to recognise the receiving environment that might exist in the year that the final design is undertaken, potentially 20 years from now.

I have summarised the Requiring Authority's proposed process below:

- 1) **2022** - Conduct an assessment of the BPO and road noise effects based on the indicative project design and the PPFs that exist in 2022. This is the Current Assessment.

The Current Assessment allocates a noise exposure 'category' (A, B or C) to each PPF in accordance with the guidance in NZS6806:2010. All PPFs that existed in 2022 are listed in a Schedule and assigned their noise exposure 'category'.

- 2) **2023** – Seek designation conditions that require a future BPO Assessment to determine whether the noise level predictions for the final design will result in a change to the 'category' at any PPF that existed in 2022.
- 3) **2024 – 2038** – Conduct the final project design. Prepare an updated noise model and BPO assessment for the final project design to predict the noise level at all PPFs that existed in 2022 (from the Current Assessment) and that still exist at the time of the final design.

Use the updated noise model to determine whether any 2022 PPFs that still exist change category. Investigate the BPO for reduction of noise at the 2022 PPFs that might still exist.

Ignore the receiving environment that exists at the time and ignore the implementation of the BPO in areas where the 2022 PPFs may no longer exist or have been replaced, even with similar dwellings. This approach also ignores any opportunities to mitigate noise effects that might exist in the future as the design changes and the receiving environment changes in terms of development and potentially zoning and zone provisions.

The proposed designation conditions specify the PPF's for the future BPO assessment by maps and building footprint (refer NoR condition 25i of S4 as an example). If these PPF's are demolished and replaced with PPF's in approximately the same location but potentially a more-dense arrangement, they will be ignored in the future assessment of the BPO required under the proposed conditions. This could include a situation where:

- 1) The Assessment recommends road side barriers or fences to mitigate noise effects for an existing (2022) PPF; and
- 2) No barriers would be required in the future assessment of the BPO if the 2022 PPF was replaced with a newer dwelling(s), even if in a similar location.

I understand that the Requiring Authority's approach is or may be premised on the new dwelling having been acoustically treated to reduce noise. However, this approach ignores a fundamental component of NZS6806:2010 and the WHO Guidelines to mitigate the noise at the source as the priority. The Requiring Authority's approach shifts the entire burden to the

receiving environment if it did not physically exist in 2022, save for the modestly-performing simple asphalt low-noise pavement.

I consider that the lack of any requirement in the AUP to acoustically treat noise sensitive activities near to major roads is a further reason to ensure that the maximum effort and priority should be to mitigate road noise effects inside the designation.

I consider that the simple fix for these issues is to ensure that the designation conditions recognises the physically existing and planned future environment at the time of the future BPO assessment.

7.3 Project objectives

Figure 3-1 of the AEE¹² sets out the Project objectives. The Integration objective from the Detailed Business Case is clear:

“Provide a transport system that is integrated with landuse, enabling a more sustainable, high quality, connected urban form that supports growth in the North West”

I consider that it is vital that the final design of the project includes noise mitigation measures that integrate with the existing and planned future environments as well as it can.

I consider that the Requiring Authority’s proposed conditions that freeze the receiving environment to what existed in 2022, and ignores the future receiving environment contravenes or is at least inconsistent this project objective.

7.4 Recommended approach

I consider that the Requiring Authority’s proposed conditions should be revised to require a BPO assessment prior to construction in the future that recognises the receiving environment as it exists at the time.

This approach will ensure that:

- 1) The future BPO assessment recognises all 2022 PPFs that are still present when the final design is confirmed;
- 2) The future BPO assessment properly recognises the future planned environment / receiving environment as it will exist at the time of the future assessment; and
- 3) The future BPO assessment will be capable of taking advantage of any opportunities that may arise between now and the final design process. These opportunities may arise from new land development or changes to the AUP. One example could be a

¹² <https://www.aucklandcouncil.govt.nz/UnitaryPlanDocuments/02-s4-assessment-of-effects-on-the-environment.pdf>

situation where numerous sites are developed in a way that avoids the need for vehicle access to the A2B alignment, making noise barriers practicable and worthwhile.

I consider that only minor modifications to the Requiring Authority’s proposed conditions are required. There are two ways the conditions could be structured:

- 1) The conditions could simply require a fresh assessment of the BPO for the final design for all PPFs according to the receiving environment that is present prior to construction; or
- 2) The conditions could maintain reference to the schedule of PPFs and their respective categories that existed in 2022, and then add in a requirement for the future BPO assessment to determine the BPO for the environment that is present prior to construction starting.

8.0 Submissions on operational noise

I have reviewed the submissions that relate to operational noise effects from the Projects. The concerns raised by the submissions are generally summarised below.

Table 1 Submissions on NoRs

Submitter(s)	NoR	Concern
D Wilson & A Tabuteau	R1	Increased noise effects on 5 Moontide Road.
I H Cho	R1	The Submitter seeks that the noise and vibration effects are permanently mitigated.
R & J Chong	R1	Increased noise effects on 1363 Coatesville-Riverhead Highway.
Kainga Ora	R1	Operational noise effects on the health of people. See section below.
R & A Scott	RE	Property is modelled within a high noise area however modelling does not take into account the footprint of the developed property. Submitter is concerned mitigation actions could be hindered as development is close to road. Submitter request the Requiring Authority confirms mitigation measures are able to address noise effects on the property.
A & S Levi, S Chul Lee, J Kahukiwa & L Roberts	RE2	Increased noise effects.
BW Holdings Ltd (193 Hobsonville)	W5	The Submitter owns the property at 193 Hobsonville Road (a consented childcare and early education centre). The Submitter supports low noise road surfacing along Hobsonville Road. The Submitter seeks the following updates to condition 22:

Submitter(s)	NoR	Concern
Hobsonville Villas	W5	<p><i>a) Sub part (c) (i) uses the present tense but the forecast traffic flows for the design year (2048) would be better and more appropriate to the arterial function of Hobsonville Road. In fact, the submitter understands that the recorded traffic volumes along Hobsonville Road already exceed the standard of 10,000 vpd.</i></p> <p><i>b) The trigger standards for use of low noise road surfacing should also refer to noise sensitive receivers such as schools, hospitals and care centres (and not be limited to areas of high pedestrian use).</i></p> <p><i>“The Company further notes that regulations for the operation of childcare and early education centre include requirements for outdoor programmes and also for doors and windows to be open the Centre. This emphasises the Company’s concern that the noise sensitivity of care centres be provided for in the conditions.. This contributes to the noise sensitivity of the Centre. This emphasises the Company’s concern that the noise sensitivity of care centres be provided for in the conditions”</i></p> <p>The Submitter generally supports Conditions 23-26 on the basis that (according to the Traffic Report)</p> <p><i>“a) Little change in traffic noise received at 193 Hobsonville Road is expected;</i></p> <p><i>b) Forecast traffic noise levels will be comfortably within the Category A standards.</i></p> <p><i>24. However, this support is contingent upon the use of low noise road surfacing as provided for in Condition 22”</i></p> <p>The Submitter seeks the following relief:</p> <p><i>10. Condition 22 Low Noise Road Surface.</i></p> <p><i>a) Amend condition 22 (c) (i) so that it reads:</i></p> <p><i>(i) The volume of traffic is forecast to exceed 10,000 vehicles per day by the design year (2048); or</i></p> <p><i>b) Amend condition 22 (c) by adding the following sub-part</i></p> <p><i>(v) The adjoining land use includes noise sensitive uses such as schools, hospitals and care centres</i></p> <p>Concerns relating to increased noise effects and lack of acoustic fencing to mitigate noise effects on elderly.</p>

8.1 Concerns from owners/ occupants of dwellings

There are a number of submissions from owners/ occupants raising concerns they will be exposed to increased traffic noise levels from the Projects.

The concerns are generally expressing an adverse reaction to any increase in noise level arising from the project. I consider that any increase in noise level is undesirable and that every effort should be made to minimise the noise levels experienced in the receiving environment.

The main challenge is for the future BPO assessment to be conducted in the most robust way possible to ensure that any noise effects that do 'spill' into the receiving environment are minimised as far as practicable.

I recommend that the Requiring Authority responds to the specific concerns raised by these submitters.

8.2 Kainga Ora

The submission of Kainga Ora raises concerns relating to the operational noise effects on the health and wellbeing of the community. The main points of the Kainga Ora submission are set out below, along with my responses under each point.

8.2.1 Health effects on people

29. *Kāinga Ora is concerned that the Project does not fully assess the health effects associated with traffic noise of the Project. While the Project assesses the traffic noise effects in the context of NZS6806, Kāinga Ora is concerned that the standard does not fully capture the potential health effects of a proposal.*
30. *Kāinga Ora notes that Auckland Transport identifies that activities subjected to an operational noise level of 55 dB LAeq require mitigation to address potential adverse health effects. Kainga Ora requests a condition requiring operational noise levels to not exceed 55 dB LAeq beyond the boundaries of the designation or, where exceeded at a sensitive receiver, mitigation is provided.*
31. *This operational noise level was the baseline utilised within Auckland Transport's Acoustic Expert Evidence by Claire Drewery for Private Plan Change 51 (PPC51)⁴, who considered that there are adverse health effects in relation to road traffic, referencing both the World Health Organisation (WHO) Environmental Noise Guidelines for the European Region (2018) and The Health Effects of Environmental Noise (2018)...*

Based on the above, Ms Drewery adopted 55 dB LAeq(24 hour) as the noise level above which potential health effects could occur and made subsequent recommendations for PPC51. Kāinga Ora considers that it is appropriate that a similar baseline is utilised for the Project.

I agree with many aspects of this part of the Kāinga Ora submission. I consider that the potential adverse effects on the health and amenity of the people has the potential to be significant in the existing and proposed Do Minimum environment.

I consider that it would be ideal if the Requiring Authority could internalise the noise effects such that the noise levels outside the road corridor were no greater than 55dB LAeq(24hr). However, this would be likely to require continuous noise barriers along the alignment to heights of at least 3-5m or more. Kāinga Ora suggest that if this could not be achieved practicably, the Requiring Authority should be providing acoustic treatment to PPFs where the same noise level is exceeded.

In principled terms, I agree that this would be ideal. This would create a similar situation that most large ports and airports in New Zealand also face. However, the number of affected buildings that might require acoustic treatment would be significant. I understand the fact most of these PPFs would have 'come to the noise' is a factor that would complicate the determination of what party should be responsible for the mitigation effort.

Ultimately, the determination of whether it is reasonable to require the Requiring Authority to mitigate the effects of noise at all PPFs where the road traffic noise level is greater than 55dB L_{Aeq} requires the expertise of a number of disciplines.

8.2.2 Management of effects at source

32. *Kāinga Ora considers that it is appropriate that the Requiring Authority is incentivised to ensure that such measures are undertaken to reduce noise and vibration at source, while at the same time utilising the AUP to manage those effects that cannot be controlled at source, if required.*
33. *Kāinga Ora submits that there would be a number of advantages with minimising noise and vibration at source that should provide benefits to future residents in surrounding urban areas, namely the ability for existing and future occupants to enjoy greater amenity outside their dwellings. While acoustic attenuation could be an appropriate response to address a health or amenity issue, any reduction of noise (or vibration) at source would enable future residents to enjoy their outdoor living areas, rather than being 'locked-up' in their homes.*

I agree. My review has determined that it is critical for the BPO to be accurately identified and implemented for the future environment at the time of the final design. I have also determined that the 'residual' noise effects in the receiving environment will still be greater than what is normally desirable and above the target noise levels suggested by the WHO. My assessment is that the residual noise effects could be managed by provisions in the AUP that would require acoustic treatment of activities sensitive to noise in close proximity to major roads. I understand that the Requiring Authority is not seeking any changes to the AUP in this process that could deliver such an outcome.

34. *At the same time, Kāinga Ora submits that there may be circumstances whereby existing dwellings that experience increased exposure to noise and vibration require further mitigation in the form of building modifications, including but not limited to wall insulation, double glazing, forced ventilation and temperature controls. Kāinga Ora would like to discuss this aspect with the Requiring Authority.*

I agree. The Current Assessment of the BPO makes it clear that there are a number of Category C properties that would require Structural Mitigation (acoustic treatment). The need for this will remain if the Future BPO Assessment (at the time of final design) results in noise levels exceeding the Category C criteria in the receiving environment. I expect that many of these PPFs will likely require considerable modification to achieve the target indoor noise level

of 40dB $L_{Aeq(24hr)}$. This could include improvements and upgrades to the glazing, internal wall linings, external doors and other parts of the building envelope.

8.2.3 Low road noise surface

37. *Kāinga Ora requests that the condition for Low Noise Road Surface is amended to require the use of low noise and vibration road surfaces, such as an Asphaltic mix surface, for all road surfaces within this designation, unless further information confirms that this is not warranted from a health and safety perspective*

I agree with this submission point generally. I understand that the Requiring Authority is proposing to use AC14 for the final surfacing, and in many cases, the Requiring Authority's proposed conditions will only require low noise road surface where an upgrade or extension to it is within or adjacent to an "urban zoning"¹³.

AC14 is classified as a 'low noise' surface but has only moderate noise reducing capabilities. Twin layer Open Graded Porous Asphalt (twin layer OGPA) is an example of a high performing pavement that will reduce the noise level by a further 2-3dB in the 50km/hr speed environment that I understand will be applied to parts of the Project. However, I understand that the higher-performing surfaces are expensive, wear faster, require more maintenance and have practical limitations and complications (such as for drainage and transitions) that often make their use impracticable in urban environments.

I support the Kāinga Ora submission point to require the Requiring Authority to confirm that the use of AC14 is the BPO surface for road noise minimisation in this case.

I also recommend that the conditions that require the asphalt pavements are strengthened to remove some of the qualifiers that could see a higher-noise pavement applied in the future, especially if there was an update to the *Auckland Transport Reseal Guidelines, Asset Management and Systems 2013* as provided for in all NoR condition sets (under the heading Low Noise Road Surface in each set).

¹³ Refer to North West Local Proposed Operational Conditions

9.0 Operational noise conditions

I consider that the designation conditions requiring the future BPO assessment need to be clear, certain and robust, and they need to ensure that the future environment is properly recognised and provided for.

I recommend that the proposed designation conditions are amended to deliver the following specific outcomes:

- 1) The conditions requiring the future BPO assessment should be amended to ensure they have proper regard to the receiving environment that exists or is provided for at the time the future BPO assessment is undertaken. This could be a simple modification that alters the definition of a PPF, or an addition to the conditions to properly and appropriately recognise the future planned environments.
- 2) The 'low noise pavement' conditions for the other NoRs should be amended to remove the unnecessary qualifiers and to increase the certainty to the type of pavement that will be implemented;
- 3) The conditions should include a requirement to ensure that the predicted noise level contours across FUZ or live-zoned Residential land do not increase. This gives some certainty for future development and assists in sharing the responsibility to mitigate road traffic noise effects;
- 4) The conditions should be amended to specifically recognise the sometimes-significant positive effect that roadside barriers can have on the ground floor of activities sensitive to noise and the outdoor spaces, even if they don't screen the upper floors. The conditions should require barriers where the process in NZS6806:2010 would require them for a single-storey dwelling, regardless of whether the dwelling is in fact multi-storey.

10.0 Conclusion

It is well accepted and globally recognised that exposure to noise from road, rail and air transport infrastructure, industry, ports commercial activities and a variety of other sources has the potential to generate high levels of annoyance and adverse health effects if it is not managed carefully. The adverse effects can be significant where the noise exposure is high.

It is well recognised in New Zealand that NZS6806:2010 has a number of limitations. These have been well-documented by various decision makers including several Boards of Inquiry. I consider it critical that the limitations of NZS6806:2010 are clearly understood, along with the additional assessment that is necessary to ensure that the limitations are addressed for these projects.

The Assessments confirm that the existing noise environment for those NoR's that are close to the major transport corridors is controlled by road-traffic noise. The noise level predictions

for the Design Year for each NoR demonstrate that a significant number of the current PPFs will remain exposed to noise levels that are in some cases significantly above the WHO target noise levels.

This emphasises that there is a significant incentive to ensure that the Requiring Authority is adopting the BPO to minimise the noise generated by the operational phase of the project. This incentive applies to minimising the road traffic noise effects for the receiving environment that exists in 2022 and also for future communities that exist or are anticipated and that the roads may be affecting in the future.

The Assessments set out a short section for each NoR that outlines the possible noise mitigation options that could be adopted. However, the Assessments do not make a firm commitment to any particular mitigation option. This demonstrates that the Requiring Authority has not followed the complete process set out in NZS6806:2010 to consider a range of possible mitigation options and to follow an evaluation process to determine the BPO.

The fundamental principle of the Assessments and s92 Response is to design the road noise mitigation measures for the 2022 physically existing environment, or what is left of it prior to construction work commencing. The Requiring Authority's approach effectively ignores the future planned environment and proposes no mitigation for what could be a future residential community alongside the Projects, and no pathway through designation conditions that could deliver noise mitigation for future communities. The only exception to this is a soft commitment to implement an asphalt pavement. This may be well-short of the BPO in some instances.

The Requiring Authority's approach shifts the burden of effects and mitigation entirely on to the receiving environment if it did not physically exist in 2022. The only caveat to this is the 'soft' commitment to apply an asphaltic pavement (moderately low noise) for all NoRs. I consider that this alone will be insufficient to avoid potentially significant adverse effects in many circumstances, and it fails allow integration of road design and noise mitigation with the future environment.

I consider that the Requiring Authority's proposed conditions should be revised to require a BPO assessment prior to construction in the future that recognises the receiving environment as it exists at the time.

This approach will ensure that:

- 1) The future BPO assessment recognises all 2022 PPFs that are still present when the final design is confirmed;
- 2) The future BPO assessment properly recognises the future planned environment / receiving environment as it will exist at the time of the future assessment; and
- 3) The future BPO assessment will be capable of taking advantage of any opportunities that may arise between now and the final design process. These opportunities may arise from new land development or changes to the AUP. One example could be a situation where numerous sites are developed in a way that avoids the need for vehicle access to the A2B alignment, making noise barriers practicable and worthwhile.

There are a number of submissions (across all NoRs) from owners/ occupants that raise concerns they will be exposed to increased traffic noise levels. I consider that a number of the submissions raise the same points and are addressed by the recommendations I have made in this review. Some of the submissions require responses directly from the Requiring Authority from the noise models.

I have recommended that the Requiring Authority examine why the computer noise models have omitted some buildings at 86 Fred Taylor Drive, and to rerun the model if indeed those buildings should have been included.

I consider that the designation conditions requiring the future BPO assessment need to be clear, certain and robust, and they need to ensure that the future environment is properly recognised and provided for.

I recommend that the proposed designation conditions are amended to deliver the following specific outcomes:

- 1) The conditions requiring the future BPO assessment should be amended to ensure they have proper regard to the receiving environment that exists or is provided for at the time the future BPO assessment is undertaken.
- 2) The 'low noise pavement' conditions for the other NoRs should be amended to remove the unnecessary qualifiers and to increase the certainty to the type of pavement that will be implemented;
- 3) The conditions should include a requirement to ensure that the predicted noise level contours across FUZ or live-zoned Residential land do not increase.
- 4) The conditions should require barriers where the process in NZS6806:2010 would require them for a single-storey dwelling, regardless of whether the dwelling is in fact multi-storey.

I consider that it would be impracticable to deliver an outcome where the road noise effects are contained wholly within the designation boundaries. I therefore recommend that the designation conditions are crafted (as above) so they improve the likelihood of a properly integrated design for the noise mitigation measures for the physically existing receiving environment and the future receiving environment that either exists at the time of the future BPO assessment or is planned and anticipated.

3C Archaeology and Heritage

**Historic Heritage Technical Memo – Cultural Heritage Implementation Team,
Heritage Unit**

To:	Jess Romhany: Policy Planner – Plans and Places, Auckland Council
CC:	
From:	Mica Plowman: Principal Heritage Advisor, Cultural Heritage Implementation, Heritage Unit.
Date:	18 th March 2023

1.0 APPLICATION DESCRIPTION

Application and property details

Applicant's Name:	Supporting Growth Alliance (Auckland Transport and Waka Kotahi – New Zealand Transport Agency).
Application purpose description:	Notice of Requirements to amend the Unitary Plan and associated Regional Resource Consents to enable the construction, operation and maintenance of five future arterial corridors at Redhills (4 NOR) and Trig Road (1 NOR), west Auckland.
Relevant application numbers:	
Site address:	Multiple sites located at Red Hills and Trig Road.

2.0 INTRODUCTION

2.1 I am a qualified archaeologist who has worked professionally in this field for the past 28 years. I am a Heritage New Zealand Pouhere Taonga (HNZPT) approved archaeologist under section 45 of the HNZPT Act (2014). I have worked as an independent consultant and as a contractor to archaeological and engineering consultancy firms in the North Island. As a result, I have relevant broad-based practical experience in all aspects of cultural heritage resource management and am fully conversant with Local Authority plan processes, the Resource Management Act (RMA) and HNZPT Act 2014 legislative requirements. The focus of my current role as Principal Heritage Advisor for the Auckland Council Heritage Unit (HU) is to provide specialist expertise and leadership in the development and implementation of plans and programmes and operational strategies to identify, conserve and enhance historic heritage features and landscapes within the Auckland region. I support council departments in meeting their requirements of the RMA (Part 2, Section 6 e and f matters) and the HNZPT Act (2014) and I routinely provide statutory and non-statutory heritage advice and reporting outputs into the regulatory process and work programmes across the council.

- 2.2 I have undertaken a review of the HIF Notices of Requirements lodged by the Supporting Growth Alliance, on behalf of Auckland Council in relation to historic heritage and archaeological effects (Table 1).

Table 1: NoRs reviewed in this memo

Notice	Project	Description	Requiring Authority
Redhills- The North West Housing Infrastructure Fund (HIF) are roading upgrades in the Red Hill area that has funding from Central Government. These projects will create new arterial roads, upgrade to arterial roads and upgrade intersections in the Red Hills area.			
NoR1	Redhills North-South Arterial Transport Corridor	New urban arterial transport corridor and upgrade of Don Buck and Royal Road intersections.	Auckland Transport
NoR2a	Redhills East-West Arterial Transport Corridor – Dunlop Road	New urban arterial transport corridor that intersects with Fred Taylor Drive and connects to the remaining East-West connection (NoR2c) at the intersection with the Redhills North-South arterial corridor.	Auckland Transport
NoR2b	Redhills East-West Arterial Transport Corridor – Baker Lane	New urban arterial transport corridor that intersects with Fred Taylor Drive and connects to the intersection of the remaining East-West connection and Dunlop Road (NoR2a).	Auckland Transport
NoR2c	Redhills East-West Arterial Transport Corridor – Nixon Road Connection	New urban arterial transport corridor that intersects with the Redhills East-West Arterial Corridor – Dunlop Road. This includes the upgrade of the existing Red Hills Road / Nelson Road / Nixon Road intersection, and the existing Nixon Road / Henwood Road intersection.	Auckland Transport
Trig Road- The North West Housing Infrastructure Fund (HIF) is to upgrade the section of Trig Road in Whenuapai between State Highway 18 and Hobsonville Road.			
TRHIF	Trig Road Corridor Upgrade	An upgrade of Trig Road, Whenuapai, to an urban arterial corridor. This includes the upgrade of the existing Hobsonville Road / Trig Road and Luckens Road / Trig Road intersections.	Auckland Transport

3.0 ADEQUACY OF INFORMATION

- 3.1 The assessment below is based on the information submitted as part of the application. In particular, I have reviewed the following documents:

Supporting Growth – Redhills Project

- Supporting Growth Memorandum. Gap Analysis of the application documentation for the Trig Road Project and the Redhill Project. Prepared by Auckland Transport 30th September 2022 Volume 1 - Assessment of Effects on the Environment.
- Supporting Growth North-West. Assessment of Effects (AEE) on the Environment, Redhills Arterial Transport Network. Auckland Council Soft Lodgement Draft. Prepared by Auckland Transport August 2020.
 - Appendix A – Proposed Conditions

- Appendix C – Indicative Design drawings (PDF Redhills _ Combined Designation and Design Drawings)
- Appendix D – Designation Drawings (PDF. Redhills _Combined Designation and Design Drawings)
- Appendix I – Assessment of Historic Heritage Effects. Supporting Growth Redhills Arterial Transport Network. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. July 2020.

Sections relevant to my area of expertise;

- Appendix J – Supporting Growth. Redhills Arterial Transport Network. Assessment of Landscape and Visual Effects. Prepared by Kathryn Holyoake July 2020.
 - Supporting Growth. Redhills New Arterial Transport Network. Assessment of Landscape and Visual Effects - Landscape Plans and Images. Prepared by Kathryn Holyoake August 2020.

Supporting Growth – Trig Road Project

- Supporting Growth Memorandum. Gap Analysis of the application documentation for the Trig Road Project and the Redhill Project. Prepared by Auckland Transport 30th September 2022.
- Supporting Growth North-West. Assessment of Effects (AEE) on the Environment. Trig Road Corridor Upgrade. Auckland Council Soft Lodgement Draft. Prepared by Auckland Transport August 2020.
 - Appendix A – Proposed Conditions
 - Appendix E – Indicative Design drawings (PDF Trig Rd Combined Designation and Design Drawings)
 - Appendix F – Designation Drawings (PDF Trig Rd Combined Designation and Design Drawings)
 - Appendix K – Assessment of Historic Heritage Effects. Supporting Growth. Trig Road Corridor Upgrade. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. August 2020.

Sections relevant to my area of expertise;

- Appendix L – Supporting Growth. Trig Road Corridor Upgrade. Assessment of Landscape and Visual Effects. Prepared by Kathryn Holyoake August 2020.
 - Supporting Growth. Trig Road Arterial Project. Assessment of Landscape and Visual Effects - Landscape Plans and Images. Prepared by Kathryn Holyoake August 2020.
- Appendix P – Supporting Growth. Trig Road Corridor Upgrade. Preliminary Site Investigation. Prepared by Auckland Transport. August 2020.

- Appendix 2 - Photographic Log
 - Appendix 4 - Historical Aerial Photographs
- 3.2 It is considered that the information submitted is sufficiently comprehensive to enable the consideration of the effects of the application on an informed basis:
- a. The level of information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the AUP: OiP.
 - b. The extent and scale of any adverse effects on the environment are able to be assessed.
- 3.3 I have assessed the information in these documents against the Auckland Unitary Plan Operative in part (updated February 10 2023) and whether the application can be appropriately mitigated to give effect to s6(f) of the RMA.
- 3.4 In making its assessment, I have also taken into account:
- a. Auckland Council Cultural Heritage Inventory (CHI) <https://chi.net.nz/>
 - b. New Zealand Archaeological Association (NZAA) ArchSite Database <http://www.archsite.org.nz/>
 - c. Heritage New Zealand Pouhere Taonga Rārangi Kōrero/The List <https://www.heritage.org.nz/the-list>
 - d. ICOMOS New Zealand Charter <https://icomos.org.nz/charters/>
 - e. Other relevant sources containing historical and archaeological information.

Definitions used with this memo

- 3.5 Chapter J in the Auckland Unitary Plan Operative in part [AUP OIP] (updated 10 February 2023) defines an archaeological site as having the same meaning as in the in Heritage New Zealand Pouhere Taonga Act 2014. No interpretation of archaeological site is provided within the Resource Management Act 1991; rather historic heritage is interpreted in Part 1, Section 2¹. The interpretation of historic heritage is substantially broader than just an archaeological site and is not limited by inclusion of a *terminus ante quem* date.
- 3.6 As such, when the term ‘archaeological’ is used within this memo, it specifically refers to a site that would meet the definition of an archaeological site as provided in Chapter J in the AUP OIP (updated 10 February 2023). All other sites would fall under the Resource Management Act 1991 definition of historic heritage.
- 3.7 Auckland Council Unitary Plan Operative in part (AUP OiP) schedule IDs and Auckland Council Cultural Heritage Inventory (CHI) numbers have been used within this memo to identify historic heritage / archaeological sites in the first instance and for consistency. Where other identifiers, such as the New Zealand Archaeological Association site reference number have been used, for example within a direct quote, either AUP OiP schedule IDs or CHI numbers have been inserted in italics.

¹ historic heritage— (a) means those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures, deriving from any of the following qualities: (i) archaeological: (ii) architectural: (iii) cultural: (iv) historic: (v) scientific: (vi) technological; and (b) includes— (i) historic sites, structures, places, and areas; and (ii) archaeological sites; and (iii) sites of significance to Māori, including wāhi tapu; and (iv) surroundings associated with the natural and physical resources.

Other Teams Involved

- 3.8 The Trig Road Corridor Upgrade application has been referred to Auckland Council's Built Heritage Implementation Team because the proposed works will also have an effect on built heritage within the application's boundaries.

Exclusions

- 3.9 This memo does not include an assessment of the cultural significance of the application area to mana whenua. The cultural and other values that mana whenua place on the area may differ from its historic heritage values and are determined by mana whenua. It is the applicant's responsibility to liaise with mana whenua to determine mana whenua values.

Site Visit

- 3.10 A site visit was undertaken to the project area on Monday 12th and Tuesday 13th December 2022. The application areas were viewed from the public road. No private properties were accessed.

4.0 ASSESSMENT OF EFFECTS

- 4.1 Details of the project background are provided in the AEEs and supporting application material and will not be repeated here unless when describing direct and indirect, actual, and potential adverse effects on historic heritage.

Historic heritage within the application boundaries

- 4.2 This section summarises the historic heritage of the areas within the Notice of Requirement applications' boundaries and includes any specific historic sites that have been identified. The information derives from the NoR applications and supporting documentation, (in particular the AEE's² and Historic Heritage Assessments (HAA))³ and other relevant sources listed in Section 3.
- 4.3 The HHA's have identified and assessed historic heritage sites within the proposed designation boundaries, and the immediate surrounds to highlight additional areas of heritage potential or sensitivity. Sites were identified primarily through background historical and archaeological research, with supporting field survey over most of the project areas⁴.

Redhills Arterial Transport Network (RATN)

- 4.4 The project divides and describes the RATN NoRs into two sections. NoR1 (Redhills North-South Arterial Corridor and Don Buck Road Upgrade) is referred to as the N-

² A). Redhills Arterial Transport Network AEE; Section 5.1.5, pg. 31; Section 6.4.4, pg. 86; Section 7.4.4, pg.142.

B).Trig Road Corridor Upgrade AEE; Section 4.1.5, pg. 31; Section 7.4, pg. 90.

³ A). Supporting Growth Redhills Arterial Transport Network. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. July 2020. Assessment of Historic Heritage Effects.

B). Supporting Growth Trig Road Corridor Upgrade. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. August 2020.

⁴ The Trig Road Corridor upgrade (TRCU) is predominantly a built environment with minimal ground visibility and consequently the proposed designation area was inspected by vehicle. The majority of the proposed Redhills Arterial Transport Network (RATN) routes were inspected save for two areas.

S project and the remaining NoRs (NoR2a, NoR2b and NoR2c) are collectively referred to as the E-W project.

- 4.5 There are no recorded archaeological sites recorded within the RATN within the proposed arterial connections.⁵ The closest extant archaeological sites to the RATN are located over 400m away from the project area. These sites are all related to the post-European settlement era and include a World War II plane crash site (R11/3097), a gum diggers' camp and associated hut site (R11/1376 and R11/3047).
- 4.6 The Auckland Council CHI records one historic heritage site in close proximity to the RATN NoR 2b project area - the remains of a wooden holding dam/sluice (CHI No 18372) at 60 Bakers Lane. Photographs attached to the record illustrate a small hollowed out log with notches straddling the Ngongetepara Stream and the CHI records possible associated pilings.
- 4.7 The site was identified and recorded in 2009 as part of a pest plant eradication programme by the ARC. The site is not recorded on the NZAA archaeological database and subsequent surveys of the property (2014), including the most recent by the project archaeologist (2019) have not relocated the site. The Bakers Lane area has been recently earth worked for subdivision development and the project archaeologist considers the site has likely been removed or destroyed. Importantly, the recorded location of the site is to the south of the Baker Lane works (RATN NoR 2b) beyond the designation boundary and would not be affected by the project.⁶
- 4.8 Two other historic heritage buildings are recorded in the CHI within 400m of the proposed Redhills arterial connections: CHI 3804, a 1930s Post Office at 399 Don Buck Road (AUP schedule i.d 51) and a historic dwelling at 44 Royal Road (AUP i.d.52). Neither of these or their curtilage are located in proximity to the Project.
- 4.9 These sites are listed below in Table 2 and a map provided in Appendix 1 shows the location of the identified historic heritage sites within the wider RATN project area.
- 4.10 There are no recorded pre-European Māori sites within the project area. The nearest recorded archaeological site related to Māori settlement is some 2km to the east of the RATN area. Similarly, there are no identified Sites of Significance to Mana Whenua identified under the AUP:OIP within or in close proximity to the RATN area.

Table 2: Historic Heritage Sites identified in the HHA in the wider Redhills Arterial Transport Network area.

CHI	NZAA	Site Type	Location	Affected
<i>Redhill Arterial Transport Network and Surrounding Environment</i>				
118372		Wooden Holding Dam/Sluice	60 Bakers Lane	No
	R11/1376	Gum Diggers Camp	295 Taupaki Road	No
	R11/3047	Gum Diggers Hut	295 Taupaki Road	No
	R11/3097	Boeing B17 Plane Crash Site 1945	81 Fred Taylor Drive	No
3804		1930s Post Office	399 Don Buck Road	No
3322		Historic Dwelling	44 Royal Road	No

⁵ Supporting Growth Redhills Arterial Transport Network. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. July 2020. Assessment of Historic Heritage Effects pg.16.

⁶ Supporting Growth Redhills Arterial Transport Network. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. July 2020. Assessment of Historic Heritage Effects pg. 21.

Field Survey

- 4.11 Apart from the western end of the proposed E-W project and the eastern end of the N-S project areas, field survey of most of the alignments were achieved, including stream crossings. The project land is predominantly in pasture, with stream banks visible due to erosion by stock. No archaeological evidence was identified during the field survey.⁷

Historic heritage values and effects of the proposed RATN designations

Historic Heritage Values and Significance

- 4.12 No extant historic heritage sites are recorded within or in the immediate vicinity of the RATN project area and none were identified during the field survey. The HHA concludes that the proposed RATN designations have no known heritage values, and a low potential for unidentified subsurface archaeological remains to be present.
- 4.13 The proposed works, as described in the AEE and supporting documents (HHA), do not affect scheduled archaeological sites in Schedule 14.1 (Schedule of Historic Heritage) in the Auckland Unitary Plan operative in part [AUP OIP].

Historic Heritage Effects

- 4.14 The construction and operation of the RATN will have no effects on any known archaeological or other historic heritage values. However, the HHA cautions that in any area where archaeological sites have been recorded within or in the vicinity of the project area, it is possible that unrecorded subsurface remains may be exposed during development.
- 4.15 The HHA considers this potential unlikely as the project area is located at some distance from the coast and navigable waterways, where Māori and early European sites in the area are concentrated. Additionally, the project area has been held as undeveloped farmland throughout the period of European ownership.

Applicant's proposed designation RATN conditions and advice notes

Mitigation - accidental discovery during construction

- 4.16 The HHA states that an archaeological Authority under the HNZPTA (2014) will not be required for the RATN project as no known archaeological sites would be affected and the potential for unidentified sites to be present is low. The HHA does however note that an HNZPT Authority could be sought as a precaution prior to construction to minimise delays in the unlikely event that an unrecorded site(s) is exposed.⁸
- 4.17 Both the AEE and the HHA conclude that the very limited potential for unidentified archaeological remains to be exposed during construction can be managed through the AUP:OIP Accidental Discovery Rule (E12.6.1) which will be adopted and included or referenced in the Construction Environmental Management Plan

⁷Supporting Growth Redhills Arterial Transport Network. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. July 2020. Assessment of Historic Heritage Effects pg.20-21.

⁸ Supporting Growth Redhills Arterial Transport Network. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. July 2020. Assessment of Historic Heritage Effects pg.28.

(CEMP) for the RATN.

Trig Road Corridor Upgrade (TRCU)

- 4.18 The Auckland Council CHI records one historic heritage site within the TRCU project area, a domestic residence (CHI No 3699) located at 80 Hobsonville Road⁹. The building is described in the CHI site record as a two-storey weatherboard English-style cottage, with a low eaves gable at the front, a brick chimney, and later extensions. The house was constructed on/relocated to the property between the 1960s and 1990s and has no associated archaeological values.
- 4.19 There are no recorded pre-European Māori sites within the project area. The nearest recorded archaeological site related to Māori settlement is some 1.5km to the east along the coast and 1km to the south along the Manutewhau Inlet. Similarly, there are no identified Sites of Significance to Mana Whenua identified under the AUP:OIP within or in close proximity to the RATN area.

Table 3: Historic Heritage Sites identified in the HHA within the Trig Road Corridor Upgrade project area.

CHI	NZAA	Site Type	Location	Affected
<i>Trig Road Corridor Upgrade and Surrounding Environment</i>				
3699	n/a	Domestic House	80 Hobsonville Road	Temporarily affected

Field Survey

- 4.20 The proposed area of works along the road alignments were inspected from the road. The northern end of the project area down to and including the SH18 off ramp is characterised as previously modified by motorway construction with the eastern side of Trig Road predominantly rural properties set in open fields with houses and ancillary buildings. The western side of Trig Road north of Ryan's Road is also characteristically rural, while to the south of Ryans Road are smaller residential lots. The areas affected by the Project comprise roadside berms with some encroachment into adjacent fields.
- 4.21 The affected properties on the northern side of Hobsonville Road are characteristically 20th century or later residential and commercial buildings and with the exception of 80 Hobsonville Road, none are identified heritage buildings.¹⁰

⁹ A number of CHI sites are discussed in the HHA (2020), including properties within the project footprint at 1,3, and 5 Luckens Road (CHI 3328) and north of the project area at 43 (CHI 3704) and 86 Trig Road (3703). Subsequent to the archaeological assessment, all of these properties have been removed from the CHI. Details are provided in the HHA but are not considered in this memo. None are affected by the proposal.

¹⁰ Assessment of Historic Heritage Effects. Supporting Growth. Trig Road Corridor Upgrade. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. August 2020. Pg 21.

Historic heritage values and effects of the proposed TRCU designations

Historic Heritage Values and Significance

- 4.22 The CHI site (CHI No 3699) located at 80 Hobsonville Road is thought to have been shifted or constructed on the site in the latter part of the 20th century. Consequently, it has minimal, if any historic heritage values and no associated archaeological values.¹¹
- 4.23 Apart from this domestic residence (CHI No 3699) there are no extant historic heritage sites recorded within or in the immediate vicinity of the TRCU project area and none were identified during the field survey. The HHA concludes that the proposed TRCU designations have no known heritage values, and a low potential for unidentified subsurface archaeological remains to be present.¹²
- 4.24 The proposed works, as described in the AEE and supporting documents (HHA), do not affect scheduled archaeological sites in Schedule 14.1 (Schedule of Historic Heritage) in the Auckland Unitary Plan operative in part [AUP OIP].

Historic Heritage Effects

- 4.25 The house recorded as CHI 3699 will itself not be affected, but there would be *temporary effects* on the front part of the property adjacent to the road as it is designated as a construction laydown area (AEE HHA section 5.6).
- 4.26 Apart from minor temporary effects on the surrounds of an unscheduled house (CHI 3699) the construction and operation of the TRCU will have no effects on any known archaeological or other historic heritage values of merit. However, the HHA cautions that in any area where archaeological sites have been recorded within or in the vicinity of the project area, it is possible that unrecorded subsurface remains may be exposed during development.
- 4.27 The HHA considers this potential unlikely as the project area is located at some distance from the coast and navigable waterways, where Māori and early European sites in the area are concentrated.¹³

Applicant's proposed TRCU designation conditions and advice notes

Mitigation - accidental discovery during construction

- 4.28 The HHA states that an archaeological Authority under the HNZPTA (2014) will not be required for the RATN project as no known archaeological sites would be affected and the potential for unidentified sites to be present is low. The HHA does however note that an HNZPT Authority could be sought as a precaution prior to construction to minimise delays in the unlikely event that an unrecorded site(s) is exposed.

¹¹ Assessment of Historic Heritage Effects. Supporting Growth. Trig Road Corridor Upgrade. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. August 2020.pg 22.

¹² Ibid.

¹³ Assessment of Historic Heritage Effects. Supporting Growth. Trig Road Corridor Upgrade. Assessment of Historic Heritage Effects. Prepared by Clough and Associates Limited for Auckland Transport. August 2020.

- 4.29 Both the AEE and the HHA conclude that the very limited potential for unidentified archaeological remains to be exposed during construction can be managed through the AUP:OIP Accidental Discovery Rule (E12.6.1) which will be adopted and included or referenced in the Construction Environmental Management Plan (CEMP) for the TRCU.

5.0 SUBMISSIONS

- 5.1 Four submissions from Heritage New Zealand Pouhere Taonga have been received on the HIF applications on matters concerning historic heritage.
- 5.2 These submissions, which relate to the Redhills Arterial Transport Network (RATN) Notice of Requirement NoR1 (submission 10), NoR2a (submission 6), NoR2b (submission 6) and NoR 2c (submission 5) are summarised below.
- 5.3 As the stated reasons for opposition and the remedy sought is the same across all of the HNZPT submissions for the RATN Notice of Requirements, they have been consolidated and presented below using the numbering form HNZPT submission on the Don Buck Road NoR RE1
- 5.4 This memo only considers aspects of the submissions in relation to archaeological matters. Those aspects of the submissions relating to built heritage will be considered by the Auckland Council Heritage Built Team.

Heritage New Zealand Pouhere Taonga (Notice of Requirement Submissions) opposes the Notice of Requirement NoR1, NoR2a, NoR2b and NoR 2c.

- 5.5 The stated reasons for opposition to NoR1, NoR 2a, NoR 2b and NoR 2c are as follows:
- (14). The assessment of archaeological sites and built heritage must be undertaken by separate and specific expertise.
 - (15). The 2020 Assessment of Archaeological Effects as part of the suite of supporting documents for NoR R1 does not provide the relevant assessment of historic heritage values and effects on the built heritage.
 - (16). The consideration, management, and mitigation of effects from the purpose of the designation on potential Historic Heritage should be addressed through the NoR process.
 - (17). Archaeological sites need to be clearly identified (NZAA record) in particular, pre 1900 buildings and structures along with their associated historic curtilage and area of subsurface potential.
 - (18). The protection of historic heritage, and the remedy and mitigation of effects are more appropriately addressed through the existing NoR process.
 - (19). Reliance on the Accidental Discovery Protocol Standards E11.6.1 and E12.6.1 as set out in the Auckland Unitary Plan (Operative in Part) apply where an Archaeological Authority from HNZPT is not otherwise in place.
- 5.6 (20) Heritage New Zealand Pouhere Taonga seeks relief regarding historic heritage through the following decision from Council:

- (21). A more fulsome historic heritage assessment, using the appropriate expertise for each discipline to clearly assess cultural, built heritage and archaeology of the area; to provide the appropriate advice on the consideration, management, and mitigation of effects from the purpose of the designation on potential Historic Heritage should be addressed through the NoR process.
 - (22). These assessments and the analysis of historic heritage (cultural, built, archaeological) is undertaken, and findings used to determine the relevant conditions to be applied to the NoR; and not to defer such matters to the Outline Plan process.
- 5.7 I disagree with HNZPT summation in relation to archaeological matters. In my opinion the applicant has addressed archaeological matters adequately and is not deferring archaeological matters to the Outline Plan Process.
- 5.8 There are no recorded pre-1900 or post-1900 archaeological sites within the designation footprints and research and field survey undertaken by the applicants' archaeologist has indicated that the risk of encountering archaeological features is low.
- 5.9 The conclusions and recommendations provided by the Clough and Associates assessment in relation to archaeological matters for the RATN are supported by several archaeological assessments for the project area and immediate surrounds.^{14, 15}
- 5.10 In such instances where the risk of encountering archaeological evidence has been assessed as low, reliance on the Accidental Discovery Protocol Standards E11.6.1 and E12.6.1 as set out in the Auckland Unitary Plan (Operative in Part) is an acceptable mitigation strategy.
- 5.11 It is an operational decision by the applicant to determine whether they obtain an Authority under the Heritage New Zealand Pouhere Taonga Act 2014. This decision is not an RMA matter.
- 5.12 In relation to HNZPT submission point 19, is important to clarify and emphasise that the Accidental Discovery Rule is a standard within the AUP that provides an operational management process for six defined sensitive materials, which includes an archaeological site. The provisions of this rule will only drop away if it has been expressly provided for by a resource consent or other statutory authority. For example, for an archaeological site, if an Authority were granted under the Heritage New Zealand Pouhere Taonga Act 2014 any archaeological sites or land parcel not

¹⁴ 1). *Red Hills Special Housing Area, Hugh Green Properties Archaeological Assessment. Report to Civil Plan and Hugh Green Limited.* Prepared by Jacqueline Craig and Arden Cruickshank July 2015. 2). *Northern Region Strategic Development Heritage Assessment.* Report Prepared for Waitakere City Council by Rod Clough and Vanessa Tanner 2014. 3). *Westgate Partnership Structure Plan: Historic Heritage Assessment.* Prepared by Clough and Associates (S Phear and J. Low) for Haines Planning Consultants on behalf of the Westgate Partnership 2014.

¹⁵ In particular; the 2015 CFG assessment for the Redhills Special Housing Area Development undertook detailed research of historic maps, property titles and extensive field survey for much of the land enclosed by the RATN project footprint. This research demonstrated that the original 1725 acre Brigham Claim and the land west of the Nongetarparo Stream was subdivided after 1896 with the land sold in 1899 without apparent development or occupation and on-sold or leased in the early 1900s-1920s. Extensive field survey did not identify any archaeological sites or features and the report recommendation was for the project to operate under the AUP ADR.

expressively provided for by the Authority would default to the ADR process. Further discussion on the ADR is provided in sections 6.5-6.9 below.

5.13 Further discussion on the proposed mitigation is provided in section 6.0 below.

6.0 CULTURAL HERITAGE IMPLEMENTATION TEAM'S ASSESSMENT

- 6.1 This section sets out Auckland Council's Cultural Heritage Implementation Team's assessment of the impact of the proposed designations, as described in the submitted documents, against the provisions in the Auckland Unitary Plan Operative in part (updated 10 February 2023) and whether the application can be appropriately mitigated to give effect to s6(f) of the RMA.
- 6.2 I appreciate the Historic Heritage Assessments submitted by the applicant in support of the proposed RATN and TRCU designations. I concur with the conclusions and recommendations in relation to archaeological matters proposed in the AEE's and the HHA's for both the RATN and TRCU designations.
- 6.3 While I am supportive of the approach to manage potential historic heritage effects of both the RATN and TRCU developments through the AUP:OIP Accidental Discovery Rule (E12.6.1), the project archaeologist cautions both the TRCU and the RATN Projects of the legal requirements of archaeological discovery under section 44a of the HNPTA and the benefits of obtaining an Authority in advance of earthworks as a precautionary measure.
- 6.4 Further clarification on the AUP OIP Accidental Discovery Rule is provided in paragraphs 6.5 to 6.9 (below).
- 6.5 Archaeological sites are subject to additional rules to manage activities that have the potential to adversely affect archaeological values, such as land disturbance, or disturbance of the foreshore and seabed. The AUP OIP Accidental Discovery Rule [ADR] is a district/regional rule and provided for in Chapters E11.6.1 and E12.6.1. The rule is there to protect presently unknown archaeological, cultural and natural values that may be discovered when works or development is undertaken. The ADR rule states that despite any other rule in the AUP OIP permitting earthworks or land disturbance or any activity associated with earthworks or land disturbance: in the event of the discovery of sensitive material which is not expressly provided for by any resource consent or other statutory authority¹⁶, the standards and procedures set out in this rule must apply.
- 6.6 For the purpose of this rule, 'sensitive material' means:
- Human remains and kōiwi;
 - An archaeological site;
 - A Māori cultural artefact/taonga tūturu;
 - A protected New Zealand object as defined in the Protected Objects Act 1975 (including any fossil or sub-fossil);

¹⁶ For example, if an Authority was granted under the Heritage New Zealand Pouhere Taonga Act 2014 any archaeological sites or land parcel not expressly provided for on the Authority would default to the ADR process.

- Evidence of contaminated land (such as discolouration, vapours, asbestos, separate phase hydrocarbons, landfill material or significant odour);
 - A lava cave greater than 1m in diameter on any axis.
- 6.7 As the ADR is a district/regional rule that requires adherence or compliance it does not need to be attached as a condition to the designation, but it is recommended that an advice note drawing attention to it is attached to the designation. An advice note to this effect is recommended in section 7.
- 6.8 It is important to note that archaeological/historic heritage sites (such as WW1 or WW2 military sites) that do not meet the definition of an archaeological site in the AUP OIP or meet the definitions provided in the Protected Objects Act 1975 are not covered by the ADR and additional management processes need to be considered where there is reasonable cause to suspect the presence of these sites.
- 6.9 Within the the RATN and TRCU, historic heritage sites that fall outside of the definition of an archaeological site could include domestic settlement features relating to the early 20th century. Additional management processes need to be considered where there is reasonable cause to suspect the presence of these sites. A condition for managing post-1900 archaeological features is provided in section 7.
- 6.10 Should any unrecorded subsurface archaeological sites be exposed during earthworks, it is important that these sites are recorded on the Auckland Council Cultural Heritage Inventory to ensure that the council has the most current information on the status of the site on which to make informed decisions and to add to the collective and easily accessible knowledge for the site and locality. A condition to attach to the designation to this effect is recommended in section 7.
- 6.11 As both the Heritage New Zealand Pouhere Taonga Act 2014 and the Protected Objects Act 1975 have a direct relevance to archaeological sites and artefacts, it is recommended that two advice notes drawing attention to these acts are also attached to the designations. Advice notes to this effect are recommended in section 7.

7.0 CONDITIONS AND ADVICE NOTES

- 7.1 The following conditions are recommended to attach to the RATN and TRCU designations:

Post 1900 archaeological sites

The following protocol will apply should any post-1900 subsurface features associated with early 20th century settlement activity be exposed during works associated with the RATN and TRCU designations:

- *The consented works will be halted while an archaeologist is called in to assess the features.*
- *The features will be recorded and analysed in accordance with current archaeological practice.*
- *A report on any features exposed will be provided by the project archaeologist to Auckland Council's Heritage Unit for inclusion in the*

Auckland Council Cultural Heritage Inventory.

Including Unrecorded Archaeological Sites within the Cultural Heritage Inventory

In the event that any unrecorded archaeological sites are exposed as a result of consented work on the RATN and TRCU designations, then these sites shall be recorded by the requiring authority for inclusion within the Auckland Council Cultural Heritage Inventory. The requiring authority shall prepare documentation suitable for inclusion in the Cultural Heritage Inventory and forward the information to the Team Leader: Monitoring (for the Manager: Heritage Unit, heritageconsents@aucklandcouncil.govt.nz) within one calendar month of the completion of work on the site.

7.2 The following advice notes are recommended to attach to the designation:

Accidental Discovery Rule

Should the consented work result in the identification of any previously unknown sensitive materials (i.e. archaeological sites), the requirements of land disturbance - District Accidental Discovery rule [E12.6.1] set out in the Auckland Unitary Plan Operative in part (updated 20 February 2023)) shall be complied with.

Heritage New Zealand Pouhere Taonga Act 2014

The Heritage New Zealand Pouhere Taonga Act 2014 (hereafter referred to as the Act) provides for the identification, protection, preservation and conservation of the historic and cultural heritage of New Zealand. All archaeological sites are protected by the provisions of the Act (section 42). It is unlawful to modify, damage or destroy an archaeological site without prior authority from Heritage New Zealand Pouhere Taonga. An Authority is required whether or not the land on which an archaeological site may be present is designated, a resource or building consent has been granted, or the activity is permitted under Unitary, District or Regional Plans.

According to the Act (section 6) archaeological site means, subject to section 42(3) – any place in New Zealand, including any building or structure (or part of a building or structure), that –

- 1) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 19; and*
- 2) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and*
- 3) includes a site for which a declaration is made under section 43(1).*

It is the responsibility of the consent holder to consult with Heritage New Zealand Pouhere Taonga about the requirements of the Act and to obtain the necessary Authorities under the Act should these become necessary, as a result of any activity associated with the consented proposals.

For information please contact the Heritage New Zealand Pouhere Taonga

Archaeologist - 09 307 0413 / archaeologistMN@historic.org.nz.

Protected Objects Act 1975

Māori artefacts such as carvings, stone adzes, and greenstone objects are considered to be tāonga (treasures). These are taonga tūturu within the meaning of the Protected Objects Act 1975 (hereafter referred to as the Act).

According to the Act (section 2) taonga tūturu means an object that –

- (a) relates to Māori culture, history, or society; and*
- (b) was, or appears to have been –*
 - (i) manufactured or modified in New Zealand by Māori; or*
 - (ii) brought into New Zealand by Māori; or*
 - (iii) used by Māori; and*
- (c) is more than 50 years old.*

The Act is administered by the Ministry of Culture and Heritage. Tāonga may be discovered in isolated contexts, but are generally found within archaeological sites. The provisions of the Heritage New Zealand Pouhere Taonga Act 2014 in relation to the modification of an archaeological site should to be considered by the consent holder if tāonga are found within an archaeological site, as defined by the Heritage New Zealand Pouhere Taonga Act 2014.

It is the responsibility of the consent holder to notify either the chief executive of the Ministry of Culture and Heritage or the nearest public museum, which shall notify the chief executive, of the finding of the taonga tūturu, within 28 days of finding the taonga tūturu; alternatively provided that in the case of any taonga tūturu found during the course of any archaeological investigation authorised by Heritage New Zealand Pouhere Taonga under section 48 of the Heritage New Zealand Pouhere Taonga Act 2014, the notification shall be made within 28 days of the completion of the field work undertaken in connection with the investigation.

Under section 11 of the Act, newly found taonga tūturu are in the first instance Crown owned until a determination on ownership is made by the Māori Land Court. For information please contact the Ministry of Culture and Heritage - 04 499 4229 / protected-objects@mch.govt.nz.

8.0 RECOMMENDATION

- 8.1 The assessment in this memo does not identify any reasons to withhold consent, and the aspect of the proposal considered by this memo could be granted consent, subject to recommended conditions. Subject to the imposition of the consent conditions and advice notes outlined in section 7, it is considered that the adverse effects on historic heritage are less than minor.

9.0 REVIEW

Memo reviewed by:

Chris Mallows – Team Leader Cultural Heritage
Implementation, Heritage Unit.

Signature:

Date:

9th June 2023

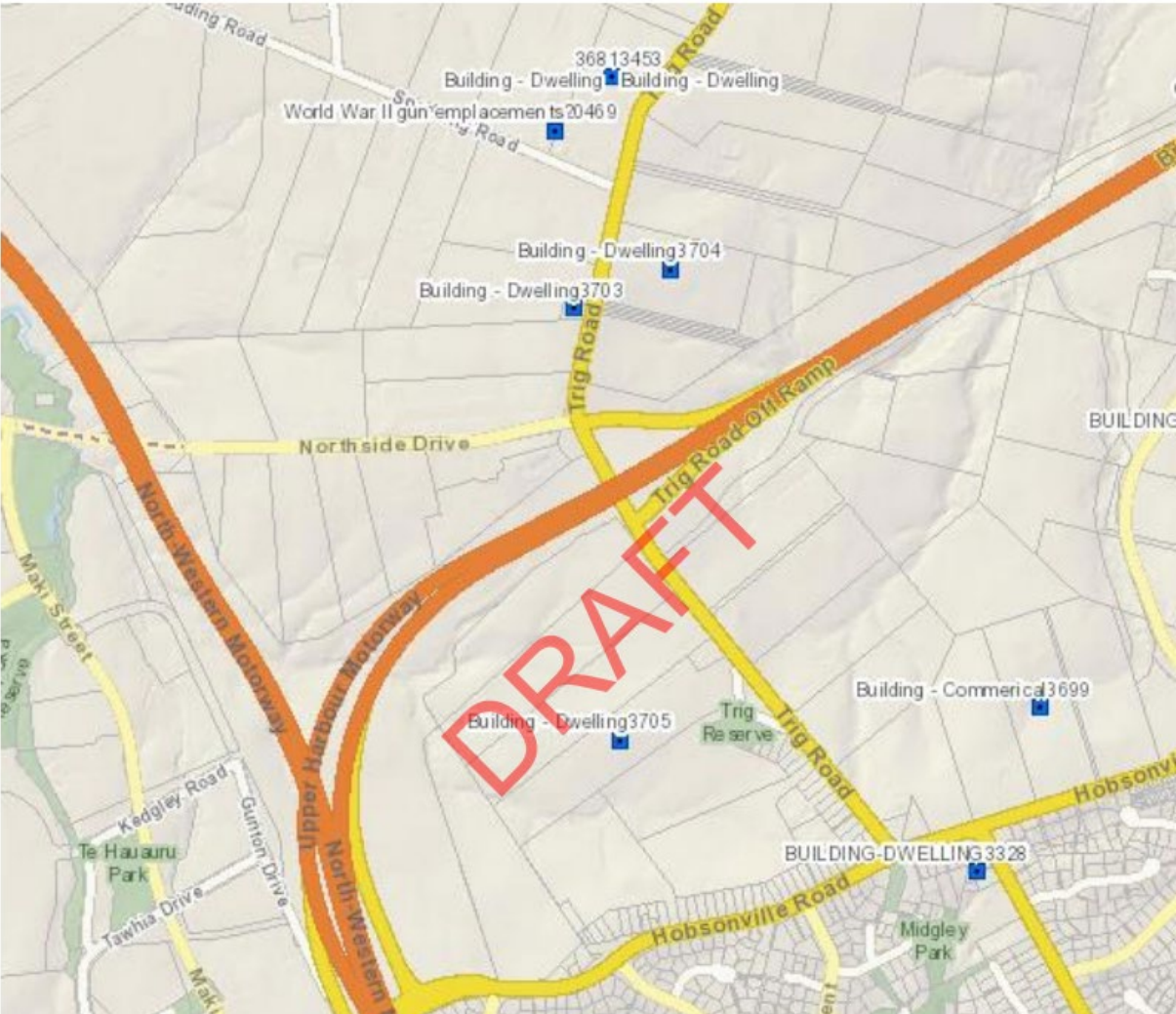
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Appendix 1: Historic Heritage Maps of Proposed RATN Designations.



Historic heritage sites recorded on the Auckland Council CHI (blue squares indicate heritage buildings or structures). Project area indicated in red. Source RATN HHA Figure 8.

Appendix 2: Historic Heritage Maps of Proposed TRCU Designations.



Historic buildings/structures recorded on the Auckland Council CHI in 2019 in the vicinity of the TRCU. Note: all of these properties save for 80 Hobsonville Road have been removed from the CHI. Source Figure 9 TRCU HHA.

3D Landscape and Visual

10 July 2023

To: Jo Hart / Ben Willis / Jess Romhany, Reporting Planners
Copy: Todd Elder, Senior Policy Planner
From: Peter Kensington, Consultant Landscape Architect

Subject: Te Tupu Ngātahi Supporting Growth Programme – North West (Local Arterials / Housing Infrastructure Fund) Projects – Landscape Assessment Review

1.0 Introduction

1.1 I have undertaken a review, on behalf of Auckland Council, in relation to the landscape effects of the following thirteen North West Local Arterials (**Local**) and Housing Infrastructure Fund (**HIF**) Notices of Requirements (**NoRs**) in Whenuapai, Red Hills and Riverhead that have been lodged by Te Tupu Ngātahi, the Supporting Growth Alliance (**SGA**), representing Waka Kotahi / the New Zealand Transport Agency (**NZTA**) and Auckland Transport (**AT**), as requiring authorities:

Whenuapai Local Arterials NoRs

1. AT NoR W1 – Trig Road North upgrade (Whenuapai)
2. AT NoR W2 – Māmari Road FTN upgrade (Whenuapai)
3. AT NoR W3 – Brigham Creek Road upgrade (Whenuapai)
4. AT NoR W4 – Spedding Road, East and West (Whenuapai)
5. AT NoR W5 (alteration to Designation 1437) – Hobsonville Road (Hobsonville)

Redhills and Riverhead Local Arterials NoRs

6. AT NoR RE1 – Don Buck Road (Massey) FTN upgrade
7. AT NoR RE2 (alteration to Designation 1433) – Fred Taylor Drive (Massey / Whenuapai)
8. AT NoR R1 – Coatesville - Riverhead Highway upgrade

Redhills Arterial Transport Networks HIF Projects

9. AT NoR 1 – Red Hills North-South Arterial Transport Corridor
10. AT NoR 2a – Red Hills East-West Arterial Transport Corridor, Dunlop Road
11. AT NoR 2b – Red Hills East-West Arterial Transport Corridor, Baker Lane
12. AT NoR 2c – Redhills East-West Arterial Transport Corridor, Nixon Road Connection

Trigg Road HIF Project

13. AT TRHIF – Trig Road Corridor upgrade (West Harbour)

1.2 I am also providing specialist landscape assessment review advice on the application for resource consent associated with the AT Trig Road HIF Project (TRHIF) at West Harbour.

1.3 I am aware that landscape architect, Ainsley Verstraeten is providing similar assessment of landscape effects review advice, on behalf of Auckland Council, in relation to the following SGA **Strategic** NoRs which are located in Whenuapai, Kumeū, Huapai and Red Hills:

- A. NZTA NoR S1 – Alternative State Highway, including Brigham Creek Interchange
- B. NZTA NoR S2 – State Highway 16 (SH16) Main Road Upgrade (Huapai)
- C. NZTA NoR S3 – Rapid Transit Corridor (Kumeū), with Regional Active Mode Corridor
- D. NZTA NoR KS – Kumeū Rapid Transit Station
- E. NZTA NoR HS – Huapai Rapid Transit Station
- F. AT NoR S4 – Access Road Upgrade (Kumeū)

I have worked closely with Ms Verstraeten when undertaking my review, including undertaking a joint site visit with the SGA landscape architect, Tom Lines in May 2023. I also understand that Jennifer Esterman is providing specialist urban design review of the Strategic, Local and HIF NoRs for Auckland Council; and that other specialists are providing arboricultural, ecological and 'parks planning' review advice, all of which have some overlap with landscape effects.

1.4 My relevant qualifications and experience includes:

- Bachelor of Landscape Architecture (Hons) 1995 from Lincoln University (Canterbury); and Bachelor of Regional Planning (Hons) 1993 from Massey University (Palmerston North);
- Registered member of Tuia Pito Ora / New Zealand Institute of Landscape Architects; and full member of Te Kokiringa Taumata / the New Zealand Planning Institute; and
- 25-years work experience as a landscape architect and a planner, focussed on projects within the landscape planning specialty of landscape architecture, where an assessment of the effects of development and activity on landscape, natural character, and/or visual amenity values is required to inform statutory (including NoRs) or non-statutory processes.

1.5 In writing this memo, I have reviewed all of the documentation that has been lodged with and notified by Auckland Council for the Local and HIF NoRs. I have also overviewed the Strategic NoR documentation to gain an understanding of context, but I have not reviewed that material in any detail, leaving that task to Ms Verstraeten. At the start of each review commentary below, I have outlined which of the SGA assessments of landscape effects documents are of relevance.

1.6 I note that the SGA assessments of landscape effects documents have been prepared and authored by a variety of Registered NZILA Landscape Architects, generally in accordance with the NZILA *'Te Tangi a te Manu, Aotearoa New Zealand Landscape Assessment Guidelines'*, including adoption of a seven-point scale of adverse effects as recommended in the guide.

2.0 Review of each NoR and associated submissions

Whenuapai Local Arterials NoRs

2.1 AT NoR W1 – Trig Road North upgrade (Whenuapai)

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Whenuapai, Landscape Effects Assessment, Version 1.0, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment 'baseline' and 'likely future environment' (agreed).
- Low through to moderate adverse landscape and visual effects during construction activities; reduced to very-low through to low-moderate with the inclusion of proposed mitigation measures (agreed).
- Low through to low-moderate adverse landscape and visual effects overall; reduced to very-low through to low with the inclusion of proposed mitigation measures; and diminishing over time as the planting becomes established (agreed).
- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form, increased 'green infrastructure', slower vehicle speeds and delivery of indicative esplanade reserves (agreed).
- Recommendation for Urban and Landscape Design Management Plan (**ULDMP**) to include a vegetation projection plan (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- Submitter 12.1 - Carl and Melanie Laurie, 96A Trig Road, Whenuapai (oppose)
 - Adverse landscape and visual amenity effects, including from vegetation clearance.
Response: agree that localised adverse effects will arise – address through ULDMP.
- Submitter 13.1 - Marlene and Ronald Patten, 96 Trig Road, Whenuapai (oppose)
 - Adverse landscape and visual amenity effects, including from vegetation clearance.
Response: agree that localised adverse effects will arise – address through ULDMP.

- Submitter 16.1 - RWPT Limited, 96A Trig Road, Whenuapai (oppose)
 - Requests further information about how the area between the proposed road upgrades and 96A Trig Road will be treated in terms of landscaping.
- Response: requested detail to be addressed / provided through ULDMP.

2.2 AT NoR W2 – Māmari Road FTN upgrade (Whenuapai)

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Whenuapai, Landscape Effects Assessment, Version 1.0, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment 'baseline' and 'likely future environment' (agreed).
- Low through to moderate-high adverse landscape and visual effects during construction activities; reduced to low through to low-moderate with the inclusion of proposed mitigation measures (agreed).
- Very-low through to moderate adverse landscape and visual effects overall; reduced to low through to low-moderate with the inclusion of proposed mitigation measures; and diminishing over time as the planting becomes established (agreed).
- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form, increased 'green infrastructure', slower vehicle speeds and delivery of indicative esplanade reserves (agreed).
- Recommendation for a condition of the designation to promote the stockpile and re-use of topsoil from pastoral land impacted by the proposed earthworks (agreed).
- Recommendation for ULDMP to include vegetation projection plan (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- No submissions raising landscape and visual effects issues.

2.3 AT NoR W3 – Brigham Creek Road upgrade (Whenuapai)

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Whenuapai, Landscape Effects Assessment, Version 1.0, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment 'baseline' and 'likely future environment' (agreed).
- Low through to moderate-high adverse landscape and visual effects during construction activities; reduced to very-low through to low-moderate with the inclusion of proposed mitigation measures (agreed).
- Low through to low-moderate adverse landscape and visual effects overall; reduced to very-low through to low-moderate with the inclusion of proposed mitigation measures; and diminishing over time as the planting becomes established (agreed).
- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form, increased 'green infrastructure', slower vehicle speeds and delivery of indicative esplanade reserves (agreed).
- Recommendation for ULDMP to include vegetation projection plan (agreed).
- Proposed ULDMP condition appears appropriate.
- ***Potential removal of the large mature trees at the south east of the Whenuapai Settlement Open Space (disagree with removal – trees should be retained).***

Submissions review:

- Submitter 14.2 - Carl and Melanie Laurie, 96A Trig Road, Whenuapai (oppose)
 - Adverse landscape and visual amenity effects, including from vegetation clearance.
Response: agree that localised adverse effects will arise – address through ULDMP.
- Submitter 15.2 - Marlene and Ronald Patten, 96 Trig Road, Whenuapai (oppose)
 - Adverse landscape and visual amenity effects, including from vegetation clearance.
Response: agree that localised adverse effects will arise – address through ULDMP.

2.4 AT NoR W4 – Spedding Road, East and West (Whenuapai)

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Whenuapai, Landscape Effects Assessment, Version 1.0, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment 'baseline' and 'likely future environment' (agreed).
- Low through to moderate-high adverse landscape and visual effects during construction activities; reduced to very-low through to low-moderate with the inclusion of proposed mitigation measures (agreed).
- Low through to moderate adverse landscape and visual effects overall; reduced to low through to low-moderate with the inclusion of proposed mitigation measures; and diminishing over time as the planting becomes established (agreed).
- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form, increased 'green infrastructure', slower vehicle speeds and delivery of indicative esplanade reserves (agreed).
- Recommendation for ULDMP to include vegetation projection plan (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- Submitter 8.1 - Carl and Melanie Laurie, 96A Trig Road, Whenuapai (oppose)
 - Adverse landscape and visual amenity effects, including from vegetation clearance.
Response: agree that localised adverse effects will arise – address through ULDMP.
- Submitter 9.1 - Marlene and Ronald Patten, 96 Trig Road, Whenuapai (oppose)
 - Adverse landscape and visual amenity effects, including from vegetation clearance.
Response: agree that localised adverse effects will arise – address through ULDMP.

2.5 AT NoR W5 (alteration to Designation 1437) – Hobsonville Road (Hobsonville)

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Whenuapai, Landscape Effects Assessment, Version 1.0, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment 'baseline' and 'likely future environment' (agreed).
- Low-moderate through to moderate-high adverse landscape and visual effects during construction activities; reduced to low through to moderate with the inclusion of proposed mitigation measures (agreed).
- Low through to moderate adverse landscape and visual effects overall; reduced to very-low through to low-moderate with the inclusion of proposed mitigation measures; and diminishing over time as the planting becomes established (agreed).
- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form, increased 'green infrastructure', slower vehicle speeds and delivery of indicative esplanade reserves (agreed).
- Recommendation for ULDMP to include vegetation projection plan (agreed).

- Proposed ULDMP condition appears appropriate.
- ***Potential removal of the scheduled notable trees adjacent to the Hobsonville School (disagree with removal – trees should be retained).***

Submissions review:

- Submitter 20.4 – Ministry of Education, Hobsonville School (neutral)
 - property assessed as having moderate to high visual amenity effects (without mitigation) and moderate visual amenity effects (with mitigation) during construction because classrooms face directly into the construction area. Support for the inclusion of a condition that requires visually impermeable hoarding during construction.
- Response: support inclusion of specific condition to achieve temporary mitigation.

Redhills and Riverhead Local Arterials NoRs

2.6 AT NoR RE1 – Don Buck Road (Massey) FTN upgrade

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Redhills and Riverhead, Assessment of Landscape Effects, Version 1, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment 'baseline' and 'likely future environment' (agreed).
- Adverse effects from loss of riparian vegetation within established wetlands (agreed).
- Very-low through to moderate adverse landscape and visual effects overall, including during construction, without mitigation (agreed).
- With mitigation, very-low through to low-moderate during the construction phase and very-low through to low adverse landscape and visual effects resulting (agreed).
- Moderate adverse effects on natural character without mitigation and low adverse with the implementation of mitigation measures (agreed).
- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form and slower vehicle speeds (agreed).
- Recommendation for ULDMP with specific requirements suggested (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- No submissions raising landscape and visual effects issues.

2.7 AT NoR RE2 (alteration to Designation 1433) – Fred Taylor Drive (Massey / Whenuapai)

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Redhills and Riverhead, Assessment of Landscape Effects, Version 1, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment 'baseline' and 'likely future environment', including that the surrounding urbanised landscape has a low sensitivity to change (agreed).
- Very-low through to moderate adverse landscape and visual effects overall, including during construction, without mitigation (agreed).
- With mitigation, very-low through to low-moderate during the construction phase and very-low through to low adverse landscape and visual effects resulting (agreed).
- Low-moderate adverse effects on natural character without mitigation and very-low adverse with the implementation of mitigation measures (agreed).

- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form and slower vehicle speeds (agreed).
- Recommendation for ULDMP with specific requirements suggested (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- Submitter 10.1 – Alesana and Stacie Levi, 151 Fred Taylor Drive, Whenuapai (neutral)
 - Loss of privacy from removal of hedge / trees / fence at front boundary of property.Response: agree that localised adverse effects will arise – address through ULDMP.

2.8 AT NoR R1 – Coatesville - Riverhead Highway upgrade

Assessment document reviewed:

- Te Tupu Ngātahi Supporting Growth, North West Redhills and Riverhead, Assessment of Landscape Effects, Version 1, December 2022 (Oliver May / John Goodwin).

Key issues:

- Approach to assessment ‘baseline’ and ‘likely future environment’ (agreed).
- Adverse effects from loss of screening vegetation in rural/urban front yards (agreed).
- Very-low through to moderate-high adverse landscape and visual effects overall, including during construction, without mitigation (agreed).
- With mitigation, very-low through to moderate during the construction phase and very-low through to moderate adverse landscape and visual effects resulting (agreed).
- Positive landscape and visual effects will result including landscaped streetscapes to support emerging urban form and slower vehicle speeds (agreed).
- Recommendation for ULDMP with specific requirements suggested, including tree protection plan to be prepared for scheduled notable trees (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- Submitter 20.7 – Ray and Judy Chong, 1363 Coatesville-Riverhead Highway (oppose)
 - Removal of existing vegetation within property alongside the road corridor will negatively impact the environmental ecosystem (birds and other wildlife).Response: issue appears to be more ecology focussed, but with some landscape overlap – agree that localised adverse effects will arise – address through ULDMP.
- Submitter 5 – Stephen and Hayley Plowman, Hallertau Brewery, 1171 Coatesville-Riverhead Highway (oppose)
 - Raises issues relating to effects on existing business operations, including adverse visual amenity effects, which require specific considerations during the detailed design and construction phases of the project (to be captured within designation conditions). *“Hallertau have invested in providing a unique visual amenity along the road frontage on the land which the project will seek to acquire. In particular the Hop plants which are harvested each year, and which would otherwise need to be purchased.”* Suggests that conditions of the NoR require a mitigation planting plan and reuse of the Hop plants in a revised location on the property; and a specific condition requiring the temporary and then permanent relocation of signage.Response: agree that the adverse landscape and visual effects issues being raised by Hallertau are relevant and require mitigation, with this to be achieved through specific conditions of the NoR and inclusion of specific measures within the ULDMP (noting that the current version of the draft conditions has not included such measures).

Assessment documents reviewed:

- Supporting Growth, Redhills Arterial Transport Network, Assessment of Landscape and Visual Effects, Version 1.0, August 2020 (Kathryn Holyoake / John Goodwin).
- Redhills Arterial Transport Network, Addendum to the 2020 Landscape and Visual Effects Assessment, Version 0.3, March 2023 (Riyasp Bhandar / Catherine Hamilton).

Key issues:

- Approach to assessment utilising 'future receiving landscape' and assumptions (agreed), noting that the existing landscape is predominantly rural and peri-urban but with clearly anticipated / signalled planning provisions for this landscape to be urbanised, which will result in a noticeable change to the existing landscape character.
- Temporary adverse landscape and visual effects during construction will be low through to low-moderate, taking into account proposed mitigation measures, noting adverse visual effects are likely to be heightened (low through to moderate) for private viewing audiences directly adjacent to the road corridor during the construction phase (agreed).
- Following construction, adverse effects on landscape, natural character and visual amenity values will be very-low through to low-moderate and reducing over time, taking into account the proposed mitigation (agreed).
- ULDMP condition to capture requirements (agreed).
 - Specific recommendations under section 6.3 of the August 2020 assessment; and at sections 7.2 and 7.4 of the March 2023 assessment, for inclusion in the ULDMP.
- Proposed ULDMP condition appears appropriate.

Submissions review:

- Submitter 6.2 – Ministry of Education, Westbridge Residential School (neutral)
 - Concern over potential adverse visual amenity effects during construction. Suggests inclusion of a condition requiring visually impermeable hoarding during construction.

Response: support inclusion of condition to achieve temporary mitigation, if required.

2.10 AT NoR 2a – Red Hills East-West Arterial Transport Corridor, Dunlop Road

Assessment document reviewed:

- Supporting Growth, Redhills Arterial Transport Network, Assessment of Landscape and Visual Effects, Version 1.0, August 2020 (Kathryn Holyoake / John Goodwin).

Key issues:

- Approach to assessment utilising 'future receiving landscape' and assumptions (agreed), noting that the existing landscape is predominantly rural and peri-urban but with clearly anticipated / signalled planning provisions for this landscape to be urbanised, which will result in a noticeable change to existing landscape character.
- Temporary adverse landscape and visual effects during construction will be low through to low-moderate, taking into account proposed mitigation measures, noting adverse visual effects are likely to be heightened (low through to moderate) for private viewing audiences directly adjacent to the road corridor during the construction phase (agreed).
- Following construction, adverse effects on landscape, natural character and visual amenity values will be very-low through to low-moderate and reducing over time, taking into account the proposed mitigation (agreed).
- ULDMP condition to capture requirements (agreed).
- Specific recommendations under section 6.3 of the assessment (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- No submissions raising landscape and visual effects issues.

2.11 AT NoR 2b – Red Hills East-West Arterial Transport Corridor, Baker Lane

Assessment document reviewed:

- Supporting Growth, Redhills Arterial Transport Network, Assessment of Landscape and Visual Effects, Version 1.0, August 2020 (Kathryn Holyoake / John Goodwin).

Key issues:

- Approach to assessment utilising ‘future receiving landscape’ and assumptions (agreed), noting that the existing landscape is predominantly rural and peri-urban but with clearly anticipated / signalled planning provisions for this landscape to be urbanised, which will result in a noticeable change to existing landscape character.
- Temporary adverse landscape and visual effects during construction will be low through to low-moderate, taking into account proposed mitigation measures, noting adverse visual effects are likely to be heightened (low through to moderate) for private viewing audiences directly adjacent to the road corridor during the construction phase (agreed).
- Following construction, adverse effects on landscape, natural character and visual amenity values will be very-low through to low-moderate and reducing over time, taking into account the proposed mitigation (agreed).
- Specific recommendations under section 6.3 of the assessment (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- No submissions raising landscape and visual effects issues.

2.12 AT NoR 2c – Redhills East-West Arterial Transport Corridor, Nixon Road Connection

Assessment document reviewed:

- Supporting Growth, Redhills Arterial Transport Network, Assessment of Landscape and Visual Effects, Version 1.0, August 2020 (Kathryn Holyoake / John Goodwin).

Key issues:

- Approach to assessment utilising ‘future receiving landscape’ and assumptions (agreed), noting that the existing landscape is predominantly rural and peri-urban but with clearly anticipated / signalled planning provisions for this landscape to be urbanised, which will result in a noticeable change to existing landscape character.
- Temporary adverse landscape and visual effects during construction will be low through to low-moderate, taking into account proposed mitigation measures, noting adverse visual effects are likely to be heightened (low through to moderate) for private viewing audiences directly adjacent to the road corridor during the construction phase (agreed).
- Following construction, adverse effects on landscape, natural character and visual amenity values will be very-low through to low-moderate and reducing over time, taking into account the proposed mitigation (agreed).
- Specific recommendations under section 6.3 of the assessment (agreed).
- Proposed ULDMP condition appears appropriate.

Submissions review:

- Submitter 1.3 – Linda Christensen, 8 Nelson Street, Taupaki (oppose)
 - Item 3.1 in submission document suggests that a full assessment of landscape and visual effects is required to address impacts that will arise on existing property.

Response: agree that localised adverse effects will arise – address through ULDMP.

Trigg Road HIF Project

2.13 AT TRHIF – Trigg Road Corridor upgrade (West Harbour)

Assessment documents reviewed:

- Supporting Growth, Trigg Road Corridor Upgrade, Assessment of Landscape and Visual Effects, Version 1.0, August 2020 (Kathryn Holyoake / John Goodwin).
- Trigg Road Corridor Upgrade, Addendum to the 2020 Landscape and Visual Effects Assessment, Version 0.3, March 2023 (Riyasp Bhandar / Catherine Hamilton).

Key issues:

- Approach to assessment utilising 'future receiving landscape' and assumptions (agreed).
- Low adverse landscape effects from earthworks activity / vegetation clearance (agreed).
- Moderate adverse visual effects during construction (agreed).
- Very-low adverse effects on natural character and adverse visual effects overall (agreed).
- Low initial then very-low adverse visual effects for private viewing audiences (agreed).
- Inclusion of landscape mitigation measures likely to result in improved natural character, landscape and amenity values in an area that will transition to urban over time (agreed).
- ULDM condition to capture requirements (agreed).
 - Specific recommendations under section 7.1(a)-(j) and 7.2(a)-(d) of the March 2023; and sections 7.1.4 and 7.2.3 of the August 2020 assessment for inclusion.

Note: ULDM condition not provided in current version of proposed conditions.

Submissions review:

- Submitter 8.1 – John Kahukiwa and Lisa Roberts, Corban Revell Lawyers, 2 Trigg Road, Whenuapai (oppose)
 - Suggest more research (alternatives) required given adverse effects on the current environment, including adverse visual effects.

Response: agree adverse visual effects will arise, but able to be mitigated via ULDM.
- Submitter 11.1 – Nicola Craig, Davenports West Lawyers, 2 Trigg Road, Whenuapai (oppose)
 - Suggest more research (alternatives) required given adverse effects on the current environment, including adverse visual effects.

Response: agree adverse visual effects will arise, but able to be mitigated via ULDM.

3.0 Submission themes

Thank you for providing a summary of the relevant submission themes that arise for all of the NoRs (Strategic, Local and HIF). I note that the following themes / issues have relevance to an assessment of landscape effects:

- A. Changes to / loss of character.
- B. Landscape and amenity – and reinstatement of property.
- C. Construction effects.

Broadly these themes / issues have been addressed through the assessments of landscape effects which accompany each of the NoRs; and where specific submission points have raised relevant issues, I have noted these in the discussion at section (2.0) above.

4.0 Proposed conditions

I support the proposals to include conditions of the NoRs requiring the preparation and implementation of ULDMs for each of the designated corridors. Compliance with these management plan documents will assist with the ongoing avoidance, remediation and mitigation of adverse landscape and visual effects and ensure an integrated and positive outcome.

From my overview of the currently proposed draft conditions, while the intent appears to be captured within the ULDM condition wording, it has been somewhat difficult to reach a definitive

conclusion as to whether all of the recommendations from the various assessments of landscape effects have been specifically recorded for each particular NoR (with no such condition provided for the 'TRHIF – Trig Road Corridor upgrade (West Harbour)' NoR, for example).

I suggest that the SGA evidence is best placed to provide this clarification, for my further review (or as facilitated through an expert conferencing process, for example), in order to assist decision makers by providing certainty of outcome for each localised corridor.

5.0 Conclusions and recommendations

Following my review of the assessments of landscape effects which accompany the thirteen Local and HIF NoRs and my review of the submissions that have been received, I confirm that I am in agreement with the conclusions reached by the SGA landscape architects. I also agree that the approach of requiring the preparation and implementation of ULDMPs for each of the designated corridors is appropriate in achieving positive and integrated landscape outcomes.

Having said the above, I recommend that the following issues / matters require resolution:

1. Ensure there is an explicit requirement for the retention and protection of the large mature trees that exist at the south east of the Whenuapai Settlement Open Space within 'NoR W3 – Brigham Creek Road upgrade (Whenuapai)'.
2. Ensure there is an explicit requirement for the retention and protection of the scheduled notable trees adjacent to the Hobsonville School within 'NoR W5 (alteration to Designation 1437) – Hobsonville Road (Hobsonville)'.
3. Ensure there are specific conditions and relevant ULDMP requirements that address the suggestions made by Hallertau Brewery for the preparation and implementation of a mitigation planting plan and for existing signage relocation (temporary and permanent).
4. Include the specific recommendations from the landscape assessments (under section 6.3 of the August 2020 assessment; and at sections 7.2 and 7.4 of the March 2023 assessment) within the ULDMP condition for 'NoR 1 – Red Hills North-South Arterial Transport Corridor'.
5. Include the specific recommendations from the landscape assessments (under section 7.1(a)-(j) and 7.2(a)-(d) of the March 2023 assessment and sections 7.1.4 and 7.2.3 of the August 2020 assessment) within the ULDMP condition for 'TRHIF – Trig Road Corridor upgrade (West Harbour)'.
6. In addition to recommendations (3) and (4) above, for all NoRs, double-check the ULDMP conditions to ensure that the specific recommendations from each of the relevant landscape assessment reports have been captured; and any further requirements relating to specific mitigation measures raised through submissions.

Subject to resolution of the above, I confirm that adverse landscape and visual effects can be effectively avoided, remedied or mitigated, with positive landscape and visual effects also being facilitated through the NoRs and the associated ULDMP conditions.

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3E Ecology

16/06/2023

To: Robert Scott - Reporting Planner (North West Strategic),
Jo Hart and Ben Willis - Reporting Planner (North West Local)
Jess Romhany - Reporting Planner (North West HIF - Redhills)

From: Jason Smith, Senior Environmental Scientist, Consultant to Auckland Council (As Regulator)

Subject: Supporting Growth Alliance – (Strategic/Local/Housing Infrastructure Fund (HIF)) – Ecology Assessment

1.0 Introduction

- 1.1 My name is Jason Graham Smith, and I am a Senior Environmental Scientist at Morphem Environmental Limited.
- 1.2 I have undertaken a review of the Strategic/Local/HIF Notices of Requirements (**NoRs**) on behalf of Auckland Council (As Regulator) in relation to ecological effects (both freshwater and terrestrial).
- 1.3 I hold the qualification of Bachelor of Science (Hons.) – Geography (2011) from the University of Auckland.
- 1.4 I have 12 years' experience as a professional Environmental Scientist, including 8 specialising in ecology. My experience includes undertaking ecological assessments, preparing and peer reviewing ecological impact assessments, and providing technical advice to support district and regional plan changes, including NoRs.
- 1.5 In my current role I regularly provide advice to Auckland Council, as well as, several other district and regional councils, in relation to earthworks, streamworks, and ecology (both freshwater and terrestrial).
- 1.6 Prior to my employment with Morphem Environmental, I was employed by Auckland Council as an Earthworks and Streamworks Specialist in a similar role providing technical input primarily on resource consent applications.
- 1.7 I have completed the Ministry for the Environment 'Making Good Decisions Course'.
- 1.8 I am a member of the New Zealand Freshwater Science Society and the International Erosion Control Association.

2. Overview and scope of technical memorandum

- 2.1. The Applicant, as a requiring authority, has served the Council with a series NoRs, in summary:
 - a. Six NoRs for route protection for an alternative State Highway 16 alignment, an upgrade to the current State Highway 16, and a new Rapid Transit Corridor with two new Rapid Transit Stations. (these are referred to as: **North West Strategic**)
 - b. Eight NoRs for upgrades to existing roads in the Whenuapai and Redhills areas, six of which are also for construction at a later date (these are referred to as: **North West Local**).
 - c. Five NoRs, collectively referred to **HIF**. Comprised of 4 NoRs for upgrades to existing arterial roads and intersections in the Redhills area (**North West HIF – Redhills**), as

well as one for the upgrade of Trig Road in Whenuapai to an arterial road (**North West – Trig Road**).

- 2.2. The NoRs were collectively publicly notified on 23 March 2023, and submissions closed on 21 April 2023.
- 2.3. I have reviewed the NoRs and supporting information (**Application**) with reference to the requirements and provisions in the Auckland Unitary Plan (Operative in Part) (**AUP:OP**) to assist the preparation of the Council's reporting planner's reports.
- 2.4. More specifically, my technical memorandum assesses the effects on terrestrial and freshwater ecology associated with the Application and covers the following matters:
 - a. The current ecological values of the site and receiving environment.
 - b. The actual and potential environmental effects of the proposal.
 - c. The adequacy of the effects management proposed.
 - d. Summary of the submissions received.
 - e. Conclusions and recommendations.

Expert witness code of conduct

- 2.5 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this evidence. Other than where I state that I am relying on the advice of another person, this evidence is within my area(s) of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.
- 2.6 I have qualified my evidence where I consider that any part of it may be incomplete or inaccurate, and identified any information or knowledge gaps, or uncertainties in any scientific information or mathematical models and analyses that I am aware of, and their potential implications. I have stated in my evidence where my opinion is not firm or concluded because of insufficient research or data or for any other reason, and have provided an assessment of my level of confidence, and the likelihood of any outcomes specified, in my conclusion.
- 2.7 During the pre-application phase I attended the site visit arranged by the applicant on 7 September 2022.
- 2.8 The assessment in this technical memorandum does not cover:
 - a. Stormwater or flooding matters.
 - b. Arboriculture matters.
- 2.9 In writing this memo, I have reviewed the following documents:

Strategic:

- a. *North West Strategic Assessment of Effects on the Environment Volume 2*, prepared by Te Tupu Ngātahi, dated December 2022 (**AEE**).
- b. *North West Strategic Appendix A - Assessment of Alternatives*, prepared by Te Tupu Ngātahi, dated December 2022 (**Assessment of Alternatives**).
- c. *North West Strategic Proposed Conditions*, prepared by Te Tupu Ngātahi, undated (**Proposed Conditions**).

- d. *North West Strategic Assessment of Ecological Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**EciA**).
- e. *North West Strategic Assessment of Landscape Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**Landscape Effects Assessment**).
- f. The following drawing sets provided with the Application:
 - a. *General Arrangement Plans – Strategic*
 - b. *General Arrangement Plans – Alternative State Highway*
 - c. *General Arrangement Plans – SH16 Main Road*
 - d. *General Arrangement Plans – Rapid Transport Corridor*
 - e. *General Arrangement Plans – Kumeu Station*
 - f. *General Arrangement Plans – Access Road*
- g. Plans prepared by Te Tupu Ngātahi, Revision B, dated November 2022.

Local:

- a. *North West Local Arterials Assessment of Effects on the Environment Volume 2*, prepared by Te Tupu Ngātahi, dated December 2022 (**AEE**).
- b. *North West Local Arterials Appendix A - Assessment of Alternatives*, prepared by Te Tupu Ngātahi, dated December 2022 (**Assessment of Alternatives**).
- c. *North West Local Proposed Conditions*, prepared by Te Tupu Ngātahi, undated (**Proposed Conditions**).
- d. *North West – Conditions Alteration to Existing Designation Set*, prepared by Te Tupu Ngātahi, undated (**Proposed Conditions Existing Designations**).
- e. *North West Whenuapai Assessment of Ecological Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**EciA - Whenuapai**).
- f. *North West Redhills Riverhead Assessment of Ecological Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**EciA – Redhills Riverhead**).
- g. *North West Whenuapai Assessment of Landscape Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**Landscape Effects Assessment - Whenuapai**).
- h. *North West Redhills and Riverhead Assessment of Landscape Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**Landscape Effects Assessment – Redhills and Riverhead**).
- i. The following drawing sets provided with the Application:
 - a. *General Arrangement Plans – Brigham Creek Road*
 - b. *General Arrangement Plans – Mamari Road*
 - c. *General Arrangement Plans – Trig Road*
 - d. *General Arrangement Plans – Spedding Road*
 - e. *General Arrangement Plans – Hobsonville Road*

- f. *General Arrangement Plans – Fred Taylor Drive*
 - g. *General Arrangement Plans – Don Buck Road*
 - h. *General Arrangement Plans – Coatesville-Riverhead Highway*
 - i. *General Arrangement Plans – Whenuapai*
 - j. *General Arrangement Plans – Redhills*
- j. Plans prepared by Te Tupu Ngātahi, Revision B, dated December 2022.

HIF - Redhills

- a. *North West Assessment of Effects on the Environment – Redhills Arterial Transport Network*, prepared by Te Tupu Ngātahi, dated December 2022 (**AEE**).
- b. *Redhills Arterial Transport Network Assessment of Alternatives*, prepared by Te Tupu Ngātahi, dated December 2022 (**Assessment of Alternatives**).
- c. *North West Redhills Arterial Transport Network Draft Conditions*, prepared by Te Tupu Ngātahi, undated (**Proposed Conditions**).
- d. *Redhills Arterial Transport Network Assessment of Ecological Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**EclA – Redhills Arterial**).
- e. *Redhills Arterial Transport Network Assessment of Landscape Effects*, report prepared by Te Tupu Ngātahi, dated August 2020 (**Landscape Effects – Redhills Arterials**).
- f. The drawing set: *Location Plan, General Notes, Drawing List*, plans prepared by Te Tupu Ngātahi, Revision E, dated December 2022.

HIF – Trig Road

- a. *North West Assessment of Effects on the Environment – Trig Road Corridor Upgrade*, prepared by Te Tupu Ngātahi, dated December 2022 (**AEE**).
- b. *Trig Road Corridor Upgrade Assessment of Alternatives*, prepared by Te Tupu Ngātahi, dated December 2022 (**Assessment of Alternatives**).
- c. *Trig Road Corridor Upgrade Proposed Designation Conditions*, prepared by Te Tupu Ngātahi, undated (**Proposed Conditions**).
- d. *Trig Road Corridor Upgrade Assessment of Ecological Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**EclA**).
- e. *Trig Road Corridor Upgrade Assessment of Landscape Effects*, report prepared by Te Tupu Ngātahi, dated August 2020 (**Landscape Effects – Trig Road Arterial**).
- f. *Trig Road Corridor Upgrade Assessment of Stormwater Effects*, report prepared by Te Tupu Ngātahi, dated December 2022 (**Stormwater Effects – Trig Road Arterial**).
- g. *Trig Road Corridor Upgrade Erosion and Sediment Control Plan*, report prepared by Te Tupu Ngātahi, dated December 2022 (**ESCP – Trig Road Arterial**).
- h. The drawing set: *Trig Road and Hobsonville Road Location Plan, General Notes, Drawing List*, plans prepared by Te Tupu Ngātahi, Revision E, dated December 2022.

- 2.9 At the date of preparing this memorandum, I have not taken part in formal expert witness conferencing.
- 2.10 I have also been engaged separately by Auckland Council to provide a technical review of the effects for the resource consents that the applicant has applied for the upgrade to Trig Road, from a regional earthworks, streamworks and ecology perspectives under both the AUP:OP and the National Environmental Standards for Freshwater (**NES:FW**) (Council Reference: BUN60413797). The scope of this review is only for the NoRs.

3 Key Ecology Issues – Strategic, Local and HIF

- 3.1 Reasons for NoR: ecology.
- 3.2 The AUP:OP provides for earthworks, as well as vegetation removal and alteration for infrastructure through Chapter E26.
- 3.3 Chapter E26 includes both regional and district land use provisions.
- 3.4 The activities proposed that relate to ecology, and that would require a district land use consent, have been identified in:
- a. Strategic –
 - Table 8-9 (section 8.3.1.1 page 56, and appendix 5 of the EclA). The reason for consent are identified in appendix 2, page 240 of the EclA.
 - b. Local –
 - For Whenuapai, this is detailed in appendix 3, page 160 (EclA – Whenuapai).
 - For Redhills and Riverhead, this is detailed in appendix 3, page 92 (EclA – Redhills and Riverhead).
 - c. HIF –
 - For Redhills, this is detailed in appendix C, page 71 (EclA – Redhills Arterial).
 - For Trig Road, no specific reasons for consent, in respect to the matters considered within this review have been identified.
- 3.5 Regional consents would still be required for earthworks, streamworks as well as vegetation removal/alteration under the AUP:OP, and potentially the NES:FW.
- 3.6 I consider that the:
- a. Methodologies, standards and guidelines used to assess the terrestrial and freshwater values are appropriate and conform to industry best practice.
 - b. Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects.
 - c. Reported results are transparent, accurate and a fair representation of the ecological values.
- 3.7 I generally concur with the Applicant's description of the current ecological values, the potential effects, and the magnitude of those effects on terrestrial and aquatic ecology.
- 3.8 In my opinion, sufficient evidence has been provided to demonstrate that the proposed effects management measures would appropriately manage the identified effects on ecological values that may arise from the proposal.

3.9 An important note for the ecological context, the NoR package largely follows the alignment of existing urban and peri-urban roadways. The exception is the Alternative State Highway which traverse an area more rural in location and ecological values.

4 Supporting Growth Alliance Assessment – Strategic, Local and HIF

4.1 An assessment of the effects is contained in the following sections of the various AEE's:

a. Strategic –

- Section 12, page 103¹.

b. Local –

- For Whenuapai, sections 8 – 12, starting from page 26 (EclA – Whenuapai).
- For Redhills and Riverhead, sections 8 – 10, starting from page 23 (EclA Redhills and Riverhead).

c. HIF –

- For Redhills Arterials, section 8, page 40 (EclA – Redhills Arterial).
- For Trig Road Arterial, section 7, page 29 (EclA Trig Road – Arterial).

4.2 The National Policy Statement: Freshwater Management (2020) (**NPS:FM**), through the effects management hierarchy, recognises that as a first step adverse effects should be *avoided* where practicable. Similar provisions are contained within the AUP:OP for both freshwater and terrestrial ecology (see B7.2.1(2), B7.3.1(2)(3) and B7.3.2(4)).

4.3 In the Application the starting point for avoiding adverse effects on ecological values are the Assessment of Alternatives which I have reviewed. As it relates to ecological matters, I consider:

- a. the methodology appropriate, to have been transparently applied, and to have given due consideration of potential ecological impacts; and
- b. that, recognising the functional and operational needs of infrastructure, avoidance to have been demonstrated to the extent practicable.

4.4 The assessment methodology for determining ecological values used by the Applicant is detailed in the various EclA's:

a. Strategic –

- Sections 3 and 4, beginning on page 116.

b. Local –

- For Whenuapai, sections 3 and 4 beginning on page 10 (and expanded upon in appendix 1 of the EclA – Whenuapai).
- For Redhills and Riverhead, sections 3 and 4 starting on page 9 (and expanded upon in appendix 1, page 83 of EclA Redhills and Riverhead).

c. HIF –

¹ Note page numbers here are given as those used in the report.

- For Redhills Arterials, section 8, page 40 (and expanded upon in appendix A of (EclA – Redhills Arterial).
- For Trig Road Arterials, section 6, page 20 (and expanded upon in appendix 2 of (EclA – Trig Road Arterial).

4.5 The reporting of the ecological values is detailed in the various EclA's:

a. Strategic –

- Section 6 (page 25), with a summary of the current ecological values provided in tables in section 8 (page 35 onwards).

b. Local –

- For Whenuapai, each NoR is individually assessed in sections 8 – 12, starting from page 26 of EclA – Whenuapai.
- For Redhills and Riverhead, each NoR is individually in sections 8 – 10, starting from page 23 of EclA – Whenuapai.

c. HIF –

- For Redhills Arterials, section 8, page 40 (EclA – Redhills Arterial).
- For Trig Road Arterials, Table 7-13, section 7.1.6 page 45 (EclA – Trig Road Arterials).

4.6 The EclA utilises the Environmental Institute of Australia and New Zealand (**EIANZ**) Ecological Impact Assessment (2018) guidelines to describe the current ecological values, the magnitude of the effects and derive the level of effect.

4.7 I consider that the methodology, as well as the standards and guidelines used are appropriate and conform to industry best practice. I also consider that the effort expended in the site investigations is appropriate for the scale of proposed works and potential effects and that the reported results are transparent, accurate and a fair representation of the ecological values.

5 Assessment of ecology effects and management methods

Effects assessment

5.1 The ecological effects are separated into construction and operational phases.

5.2 Across all of the EclA's, potential construction effects are recognised as:

- Permanent loss of habitat, fragmentation, and edge effects due to district plan vegetation removal.
- Loss of foraging and roosting habitat (for birds and bats).
- Potential for native lizards, birds and bats to be killed/injured.
- Disturbance and displacement of native birds and bats due to construction activities (noise, light and dust).

5.3 Across all of the EclA's, potential operational effects are recognised as:

- Loss of connectivity for indigenous fauna.
- Disturbance and displacement of native birds and bats due to construction activities (noise, light and dust).

5.4 I consider that the EclA has identified the likely actual and the potential ecological effects that would result from the proposed activities.

Effects management

5.5 The EclA provides specific mitigation measures proposed by the Applicant for the actual and potential ecological effects identified, including:

a. Strategic –

- Bat Management Plan (BMP), with the detail described in section 8.4.2 of the EclA (page 81).
- Management of Birds in accordance with Wildlife Act.
- Management of Lizards in accordance with Wildlife Act.

b. Local –

- For Whenuapai (as summarised in Table 13-1, section 13 page 145 of the EclA – Whenuapai):
 - i. Bat Management Plan: Trig Road North, Mamari Road, Brigham Creek Road and Spedding Road.
 - ii. Bird Management at Brigham Creek Road.
- For Redhills Riverhead:
 - i. Bat Management Plan: Coatesville-Riverhead.
 - ii. Bird Management at Don Buck Road.

c. HIF –

- For Redhills Arterials: Bat Management Plan, Bird Management.
- For Trig Road Redhills, nothing designation specific – notes on wildlife.

The BMP includes buffer planting along road corridors, stream crossings, lighting design considerations, and retention of large mature trees where practicable (section 11, page 79 of EclA – Whenuapai).

5.6 In general:

- a. The contents of the BMP would include (where relevant) habitat surveys prior to construction, siting of compounds and laydown areas to avoid bat habitat, lighting design to reduce light level, restrictions on nights works around bat habitat and the location of any buffer planting along road corridors, stream crossings and retention of large mature trees (where practicable).
- b. It is not specifically stated what actions that would be covered by 'Management of Birds in accordance with Wildlife Act', 'Bird Management and 'Management of Bats' in accordance with Wildlife Act'. The conditions provide indicative measures that could be included. These are generally appropriate depending on the specific values identified at the time of implementation.

5.7 Note that the wildlife management provision differ across the NoRs.

6 Conditions and recommendations

- 6.1 The following section comments on the proposed conditions that have been offered by The Applicant and include in the application material. Where I do not comment on a condition, from an ecological perspective it is considered appropriate as proposed.

Strategic

6.2 The proposed conditions for all the strategic designations include:

- a. Condition 25 for a Pre-Construction Ecological Survey.
 - i. I find there no reason to limit this survey to just the Identified Biodiversity Areas, given the lapse time on the duration habitat for native species could be formed that would not be captured by the existing assessment. The condition should be amended to refer to a pre-construction survey for the works area.
 - ii. Species management in accordance with the Wildlife Act would first require knowledge of their presence. This is specifically relevant to native lizards which are not otherwise included in the ecological management plan conditions.
 - iii. There is also an error in the cross-referencing, which current cross-references to condition 21 and 22 (which relates to a Construction Noise and Vibration Management Plan (**CNVMP**) and a schedule for the CNVMP. The correct reference is presumably condition 26 (the Ecological Management Plan (**EMP**)).
- b. Condition 26 for an Ecological Management Plan. The condition itself is generally appropriate; however there is an error in the cross-reference referring to the pre-construction Ecological Survey, which should be referring to condition 25.
- c. I would also raise the appropriateness of stipulating the EIANZ 2018 revision, as this could be superseded by the time the designations are given effect to (the previous revision was 2015) I would recommend that the condition be amended to include: *or any updated version*.

Local

6.3 The proposed conditions for all the new designation include:

- a. Pre-Construction Ecological Survey. I make the same assessment as above on the Strategic NoRs.

6.4 For the alteration to existing conditions:

- a. I would again raise the appropriateness of stipulating the EIANZ 2018 revision, as this could be superseded by the time the designations are given effect to (the previous revision was 2015). I would recommend that the condition be amended to include: *or any updated version*.

HIF: Redhills Arterials

- a. I would again raise the appropriateness of stipulating the EIANZ 2018 revision and the condition for a Pre-Construction Ecological Survey. I find there no reason to limit this survey to just the Identified Biodiversity Areas, given the lapse time on the duration habitat for native species could be formed that would not be captured by the existing assessment.

Trig Road – Arterials

6.5 There are no specific concerns with the conditions as provided.

7 Submissions

7.1 The NoRs have been publicly notified, and a range of submissions has been received.

7.2 I have been provided with a summary of the submissions by Auckland Council and have assessed those that raise matters related to ecology.

7.3 Strategic –

- a. No submissions have been received on the Huapai Rapid Transit Station (HS), Kumeu Rapid Transit Station (KS) and Access Road (S4) that relate to ecological matters.
- b. The submissions on Alternative State Highway (S1), State Highway 16 – Alteration to Designation 6766 (S2) and Rapid Transit Corridor (S3), that relate to ecology, have been assessed in Appendix 1.

7.4 Local –

- a. No submissions have been received on Don Buck Road (RE1), Alteration to designation 1433 Fred Taylor Drive (RE2), Trig Road North (W1), Mamari Road (W2), Spedding Road (W4), Alteration to designation 1437 Hobsonville Road (W5) that relate to ecological matters.
- b. Submission has been received on Coastesville – Riverhead Highway (R1)Brigham Creek Road (W3) in relation to ecological matters and has been assessed in Appendix 1.

7.5 HIF –

- a. No submissions have been received on Trig Road Corridor Upgrade (HIFTR), Redhills North-South Arterial Transport Corridor (NoR1), Redhills East-West Arterial Transport Corridor (NoR2b) that relate to ecological matters.
- b. Redhills East-West Arterial Transport Corridor (NoR2a) has a single submission and Redhills East-West Arterial Transport Corridor – Nixon Road Connection (NoR2c) has two submissions that relate to ecological matters.

7.6 The submissions do not raise any new matters for consideration from an ecological perspective that haven't already been considered in this assessment.

7.7 I have addressed each submission that relates to ecological matters in the assessment provided in Appendix 1.

8 Conclusions and recommendations

8.1 have reviewed the Application with reference to the requirements and provisions in the Auckland Unitary Plan (Operative in Part) to assist the preparation of the Council's reporting planner's reports from a terrestrial and freshwater ecology perspective.

8.2 I consider that the:

- a. Methodologies, standards and guidelines used to assess the terrestrial and freshwater values are appropriate and conform to industry best practice.
- b. Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects.
- c. Reported results are transparent, accurate and a fair representation of the on-site values.

8.3 I concur with the Applicant's description of the current ecological values, the potential effects, and the magnitude of those effects on terrestrial and aquatic ecology.

8.4 Concern has also been expressed with the:

- a. Conditions for Pre-Construction Ecological Surveys. I find there no reason to limit this survey to just the Identified Biodiversity Areas, given the lapse time on the duration habitat for native species could be formed that would not be captured by the existing assessment.

- b. Conditions stipulating the EIANZ 2018 revision, as this could be superseded by the time the designations are given effect to.

8.5 Small amendments to the proposed conditions have been suggested as relief to these concerns.

8.6 Overall, I am able to support the NoRs, with modifications.

Appendix 1: Submission Assessments

Strategic – S1:

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
12.1	Te Kawerau a Maki (Te Kawerau Iwi Tiaki Trust)	Effects on Wai Māori from construction and operation near freshwater ways (including flooding from secondary impact of urban development).	Reject the ASH component	<p>I have read <i>Cultural Impact Assessment for Te Tupu Ngātahi North West Project (Local and Strategic Transport Network)</i>, report prepared by Te Kawerau a Maki, version 2, dated December 2022. (CIA).</p> <p>My reading of the CIA is that, with the exception of the ASH component, Te Kawerau a Maki do not object to the NoRs.</p> <p>The reason for the objection to the ASH component relates to large adverse residual effect on Te Awa Kumeū.</p> <p>This assessment is made from a cultural perspective, and I acknowledge and respect the concerns raised. However, I recognise that mana whenua are best placed to identify cultural values and cultural effects. I am not mana whenua and it is not within my area of expertise. Therefore, having regard to the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note, I do not provide further comment on this topic.</p>
47.2	John Richard Baker Phillipa Clare Baker Gwillim Family Trust	Have also invested into developing wetland and the stream back to a native area to encourage ecological growth, visual enjoyment and encourage wildlife which is now threatened by this project.	Purchase the land designated to maintaining the environment including wetlands, native bat routes, any native plants and animals to ensure planting and maintenance to existing waterways starts well before construction. Native flora and fauna take substantial time to be established. This would allow natural visual barriers and noise reduction methods.	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements.</p> <p>It is noted that the Wildlife Act would remain in effect, requiring a permit for any direct harm to native species.</p> <p>Should any biodiversity offsetting be required, undertaking the enhancement action in advance of the impacts occurring would reduce the time lag between the impact occurring and the positive action that aims to counterbalance such an impact. I consider that this assessment is best deferred to the time consents for such activities are sought, as this will be when the impact is fully known and the equivalence assessment can be made. Such a requirement at this time would not be consistent with standard industry practice in the Auckland region for the given ecological values present.</p>

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
56.1	Paul Jared Kennedy	I do not believe the NOR for my home is necessary for bat-mitigation purposes	Decline the NoR, or make with the amends suggested	<p>The EclA submitted with the application assesses the need for bat mitigation and provides the rationale for the location for the mitigation planting (proximity to stream corridor, within the designation and strategic location in crossing road as bats move across the landscape), which are supported.</p> <p>Whilst bats may not have been recorded at the subject address, bats have large home and foraging ranges and the property would be within such ranges from the nearest recording.</p> <p>Whilst there is a cluster of bat recordings south of Kumeu, movement to the north is important has it would link to the larger areas of Riverhead forest and the Significant Ecological Area on the Kumeu/Kaipara River to the North.</p>
56.3		I believe an approach could be to preserve the house and surrounding land, with only the other parts of the land (i.e. the paddocks to the north and south) which link towards the stream be subject to the NOR as set out on the attached map which is Schedule B.		
56.4		Further, if my home is intended to be used to benefit bats in the area, I question why the land would not be taken now and planted out so that there are established mature plantings ready rather than waiting for 20 years		
60.1	Simply Events Holdings Ltd	1. It will remove a lake/wetland that was created for conservation purposes by requirement of Auckland Council, which will negatively impact the wildlife in the area	The Alternative State Highway route be re-planned.	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements, including those in relation to wildlife and any freshwater habitat.</p>
66.1	Ray Chong and Judy Chong	1. Adverse environmental impacts, in particular increased noise levels and pollution in the Brighams Creek area, carbon pollution and visual pollution. The environmental ecosystem would be	Suspend current proposal	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements, including those in relation to native fauna and flora.</p>

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
		irreversibly disturbed and disrupted to the detriment of people, animals and vegetation.		
70.1	Simon Papa	The bypass is unnecessary. It is very costly and significantly impacts on amenity and local ecology.	Oppose Notice of Requirement	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements.</p>

Strategic – S2:

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
27	Michael Davis Family Trust	<p>The proposed culverting of the tributary on 411 Matua Road is unnecessary and results in the significant loss of stream, wetland, biodiversity area and ecological corridor. The applicant has not demonstrated sufficiently or assessed alternatives appropriately (i.e., bridging of watercourse) to allow the significant loss of this and other watercourses.</p> <p>The applicant has not undertaken an options assessment to an appropriate level for the project (including stormwater options, earthworks, and loss of watercourse etc...). This includes the selection of a wetland (identified as SH16 Wetland 11) and culverts on 411 Matua Road, adjacent to 379 Matua Road</p>	<p>Amend the plans to remove 379 Matua Road from the NoR/designation area.</p> <p>Amend the plans to remove the proposed culvert, earthworks and SH16 Wetland 11 located on 411 Matua Road.</p> <p>Limit the extent of piping and filling of natural waterways and wetlands.</p>	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR. This includes within the assessment of alternatives.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements, where a greater level of detail can be required and known.</p> <p>I consider that the application material, as it relates to ecological matters is sufficiently detailed to enable assessment.</p>

Strategic – S2:

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
23	Nickolas Salter & Donna Young	<p>The proposed bat corridor along Ngongetepara Stream near the Brigham Creek interchange, and the extent and impact of the NoR will have on our property which is adjacent Ngongetepara Stream.</p>	<p>We ask that the NoR corridor boundary along Ngongetepara Stream be revised and the impact on our property be reduced as outlined in our submission.</p>	<p>The EclA submitted with the application assesses the need for bat mitigation and provides the rationale for the location. Whilst bats may not have been recorded at the subject address, bats have large home and foraging ranges and the property would be within such ranges from the nearest recording.</p> <p>Whilst there is a cluster of bat recordings south of Kumeu, movement to the north is important as it would link to the larger areas of Riverhead forest and the Significant Ecological Area on the Kumeu/Kaipara River to the North.</p> <p>Note that the ABMs did record a larger degree of bat activity further upstream, and that as bats utilise stream corridors as foraging and movement corridors the indication of this area as bat mitigation is entirely appropriate.</p>
71	Michael Davis Family Trust	<p>The proposed culverting of the tributary on 411 Matua Road is unnecessary and results in the significant loss of stream, wetland, biodiversity area and ecological corridor. The applicant has not demonstrated sufficiently or assessed alternatives appropriately (i.e., bridging of watercourse) to allow the significant loss of this and other watercourses.</p> <p>The applicant has not undertaken an options assessment to an appropriate level for the project (including stormwater options,</p>	<p>Amend the plans to remove 379 Matua Road from the NoR/designation area.</p> <p>Amend the plans to remove the proposed culvert, earthworks and SH16 Wetland 11 located on 411 Matua Road.</p> <p>Limit the extent of piping and filling of natural waterways and wetlands.</p>	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR. This includes within the assessment of alternatives.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements, where a greater level of detail can be required and known.</p> <p>I consider that the application material, as it relates to ecological matters is sufficiently detailed to enable assessment.</p>

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
		earthworks, and loss of watercourse etc...). This includes the selection of a wetland (identified as SH16 Wetland 11) and culverts on 411 Matua Road, adjacent to 379 Matua Road		
72	Ray Chong and Judy Chong		Suspend current proposal	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements.</p>
83	Anca Joicey	The proposed plan will require the removal of many trees and other vegetation, which will have a negative effect on the biodiversity of the area.	Oppose the Notice of Requirement	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR. This includes within the assessment of alternatives.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements, where a greater level of detail can be required and known.</p> <p>I consider that the application material, as it relates to ecological matters is sufficiently detailed to enable assessment.</p>

Local: R1

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
20.7	Ray Chong and Judy Chong	9. Vegetation will be removed alongside the existing road corridor.	Suspend current proposal	<p>I consider that the application material has sufficiently identified current ecological values and contains sufficient provision for management of any impacts associated with the NoR.</p> <p>The AUP contains sufficient provision to manage ecological effects from regional resource consent requirements.</p>

Local: W3

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
8.1	Michelle van Rensburg	<p>Options assessment is incorrect: Option 1 allows for a greater buffer between the widened road and the Totara Creek reducing the potential for adverse ecological effects</p> <p>Potential for more significant ecological effects due to less buffer between the widened road corridor and Totara Creek.</p>	<ol style="list-style-type: none"> 1. No change to the 2 lane Brigham Creek Road 2. Or if decision is made to alter the road: <ol style="list-style-type: none"> 1. Compensation for property value decrease expected from the road upgrade 2. Extra explanation of what mitigation options will be provided to property owners in Noise Category C houses with stated available mediation processes if agreement on options cannot be reached 3. Use of AC-14 or equivalent low noise road surfacing. 4. Option 2 for widening of the road to accommodate 4 lanes is chosen for Segment 1 (widening on the southern side only retaining northern boundary) 	<p>The relevant options were:</p> <p>Option 2: widen road on the south and retain northern boundary.</p> <p>Option 1: (selected): widen both the northern and southern side of the road and retain the centerline.</p> <p>Overall, ecology scored equally across all options. However additional commentary provided (table 8-2, page 72 of the Options Assessment) provides additional specific details regarding the preference for Option 2 as it relates to ecological matters.</p> <p>Ultimately the applicant has opted for Option 1. The options assessment has to make an overall assessment cognisant to the functional needs of infrastructure and as all options score the same (overall), as it relates to ecology, across the various options the practicalities of infrastructure</p>

HIF: Trig Road Corridor Upgrade

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
8.1	John Kahukiwa and Lisa Roberts	There should be more research done in regard to the effects on the current environment, visually, ecologically and economically.	Oppose Notice of Requirement	<p>I consider that the:</p> <ul style="list-style-type: none"> • Methodologies, standards and guidelines used to assess the terrestrial and freshwater values are appropriate and conform to industry best practice. • Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects. • Reported results are transparent, accurate and a fair representation of the on-site values. <p>I concur with the Applicant's description of the current ecological values, the potential effects, and the magnitude of those effects on terrestrial and aquatic ecology.</p> <p>In my opinion, sufficient evidence has been provided to demonstrate that the proposed effects management measures would appropriately manage any effect on ecological values that may arise from the proposal.</p>
11.1	Nicola Craig	There should be more research done in regard to the effects on the current environment, visually, ecologically and economically.	Oppose Notice of Requirement	

HIF: Redhills NoR2a

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
3	Redhills Green Limited	<p>The proposed alignment requires works to and over streams and wetlands, which will require resource consent under the AUP and the NES Freshwater, with appropriate mitigation and/or offsetting to manage associated effects. It appears that limited consideration has been given to these effects and implications, and how these could potentially be managed, such that this could pose a significant risk to the consenting and delivery of the works. The changes sought to the alignment seek to reduce the extent of affected stream/wetland to minimised this impact.</p>	<p>That the NoR Designation areas for NoR 1, 2a, 2b and 2c are adjusted to accord with the amended arterial alignment and associated stormwater management approach shown on the Redhills Green Arterial Route Masterplan attached to this submission.</p>	<p>For NoR2a, as it relates to ecology, the submission specifically seeks re-alignment of the road west of the Ngongetepara Stream to reduce the length of bridge required.</p> <p>The changes are best captured on the SGA—DRG-NEW-0010CI-1005 of the lodged and notified plan set; and plan UD103 attached to the submission.</p> <p>Whilst the proposed alignment of the submission would reduce the number of structures within watercourses, the impact from an ecological perspective would appear to be greater as the plan infers that a portion of the stream and wetland would be reclaimed to realise this alignment ('wetland to be filled' marked on plan.</p> <p>It is also noted that the plans attached to the submission are also noted as highly indicative, with raises questions on the level of supporting assessment that has been undertaken to support this alignment.</p> <p>I would disagree that the alternative alignment sought reduces impact on streams and wetlands, and hence this submission is not supported.</p>

HIF: Redhills NoR2c

Submitter No.	Name	Submission Point /Issue Raised	Relief Sought	Technical Assessment
8	Redhills Green Limited	The proposed alignment requires works to and over streams and wetlands, which will require resource consent under the AUP and the NES Freshwater, with appropriate mitigation and/or offsetting to manage associated effects. It appears that limited consideration has been given to these effects and implications, and how these could potentially be managed, such that this could pose a significant risk to the consenting and delivery of the works. The changes sought to the alignment seek to reduce the extent of affected stream/wetland to minimised this impact.	That the NoR Designation areas for NoR 1, 2a, 2b and 2c are adjusted to accord with the amended arterial alignment and associated stormwater management approach shown on the Redhills Green Arterial Route Masterplan attached to this submission.	<p>For NoR2c, as it relates to ecology, the submission specifically seeks re-alignment of the road to reduce the number of stream crossings require, reduce the length of the bridge and also has a lesser impact on bats.</p> <p>I acknowledge reducing the number of crossing (from 2 to 1), corresponds to a lesser degree of vegetation clearance required for removal.</p> <p>However, note that this roading alignment would require the greater degree of reclamation as noted on these submitters point in NoR2a; along with additional wetland reclamation in this specific section.</p> <p>It is also noted that the plans attached to the submission are also noted as highly indicative, with raises questions on the level of supporting assessment that has been undertaken to support this alignment.</p> <p>I would disagree that the alternative alignment sought reduces impact on streams and wetlands, and hence this submission is not supported.</p>
11	Nation Shine Limited	Also the proposed arterial road alignment leaves “no man's land” between an existing watercourse and the road alignment.	We would like the roundabout moved approx. 15m west and lowered 2-3m from existing road levels.	<p>Moving the roundabout further to the west, has the effect of moving it closer to the stream.</p> <p>This may require further reclamation, or as the submitter also suggests a retaining wall to support the roundabout.</p> <p>Either option requires a greater degree of effect on the stream and hence is not supported.</p>

3F Stormwater and Flooding

Healthy Waters Technical Response on SGA North West NoR data submitted in December 2022

Scope of the Review

This review has been prepared by Danny Curtis, Principal Catchment Planning and considers a technical review of the stormwater management allowances in the Notice of Requirements (**NOR**) as set out in the data submitted by Supporting Growth Alliance (**SGA**). In general, these NORs are related to land take required to facilitate the proposed transport infrastructure with allowances for stormwater management included.

The review is based on the supplied information from SGA and the available Healthy Waters (**HW**) information as of 12 January 2023.














Note that some of the proposed NORs traverse the Future Urban Zone (FUZ), some areas which are currently undergoing Private Plan Change requests. In these instances, there may be further consideration required by SGA as a result of localised earthworks associated with the plan change developments. The scope of this assessment is beyond the HW review of the current proposals.

Documents Reviewed:

























HIF Local Roads (Housing Infrastructure Funding)

- Redhills
 -  05_AEE - Redhills
 -  18_Flooding Assessment - Redhills
- Trig Road
 -  02_AEE - Trig Road
 -  16_Stormwater - Trig Road

SGA Local NoRs

-  09_NW Local Arterials - Assessment of Effects on the Environment
-  13-14_NW Local Arterials - General Arrangement Plans – Brigham Creek Rd
-  15-16_NW Local Arterials - General Arrangement Plans – Mamari Rd
-  17-18_NW Local Arterials - General Arrangement Plans – Trig Rd
-  19-21_NW Local Arterials - General Arrangement Plans - Spedding Road
-  22-24_NW Local Arterials - General Arrangement Plans – Hobsonville Road
-  25_NW Local Arterials - General Arrangement Plans – Fred Taylor Drive
-  26_NW Local Arterials - General Arrangement Plans – Don Buck Road
-  27_NW Local Arterials - General Arrangement Plans - Coatesville-Riverhead HWY
-  28_NW Local Arterials - General Arrangement Plans – Whenuapai
-  29_NW Local Arterials - General Arrangement Plans - Redhills
-  36_NW Local Arterials - Assessment of Flooding Effects - Whenuapai
-  45_NW Local Arterials - Assessment of Flooding Effects – Redhills Riverhead

Strategic

-  07_NW Strategic - Assessment of Effects on the Environment
-  13_NW Strategic - General Arrangement Plans - Strategic
-  14_ NW Strategic – General Arrangement Plans – Alternative State Highway - Part 1 of 2
-  15_ NW Strategic – General Arrangement Plans – Alternative State Highway - Part 2 of 2
-  16_ NW Strategic – General Arrangement Plans – SH16 Main Road - Part 1 of 5
-  17_ NW Strategic – General Arrangement Plans – SH16 Main Road - Part 2 of 5
-  18_ NW Strategic – General Arrangement Plans – SH16 Main Road - Part 3 of 5
-  19_ NW Strategic – General Arrangement Plans – SH16 Main Road - Part 4 of 5
-  20_ NW Strategic – General Arrangement Plans – SH16 Main Road - Part 5 of 5
-  21_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 1 of 10
-  22_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 2 of 10
-  23_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 3 of 10
-  24_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 4 of 10
-  25_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 5 of 10
-  26_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 6 of 10
-  27_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 7 of 10
-  28_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 8 of 10
-  29_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 9 of 10
-  30_ NW Strategic – General Arrangement Plans – Rapid Transit Corridor - Part 10 of 10
-  31_NW Strategic - General Arrangement Plans - Kumeu Station
-  32_NW Strategic - General Arrangement Plans - Huapai Station
-  33_NW Strategic - General Arrangement Plans - Access Road_Part 1 of 2
-  34_NW Strategic - General Arrangement Plans - Access Road_Part 2 of 2
-  41_ NW Strategic - Assessment of Flooding Effects

General Comments all NORs

- The stormwater management of the proposed includes for water quality, hydrology mitigation and attenuation for the 100-year event to pre-development flows. Conceptual sizing of communal devices has been undertaken considering a surface area equivalent to 10% of the contributing catchment. This approach is considered appropriate for NOR designations; however, from experience an allowance of between 12 and 15% is more appropriate for concept sizing to allow for maintenance and access tracks to be incorporated into the devices.
- The SGA NORs are for roading projects that may impact the natural flow of water through the catchment. The assessments currently completed by SGA have identified crossing locations for these flows based on available information included on GeoMaps and modelling. Although this is considered appropriate at this concept stage, as the design proceeds it is recommended that site walkovers be completed to confirm the locations and catchments of culverts.
- Stormwater management requirements for the different NORs, and even along the Strategic NOR alignments may differ due to catchment specific issues. It is recommended that SGA undertake the necessary assessments of the designs and propose stormwater management to Healthy Waters for discussion.

- Stormwater management requirements may alter to reflect the changes in vertical alignment that occur through the design process.

HIF Local Roads (Redhills)

The Redhills Arterial Transport Network Assessment of Flooding Effects (SGA, December 2022) provides a summary of the hydrologic and hydraulic modelling that has been carried out to support the development of the arterial alignments.

Modelling considered the Maximum Probable Development (**MPD**) scenario, in accordance with the Redhills Structure Plan land uses, which is appropriate based on current information.

SGA considered 2.1 degrees and 3.8 degrees climate change impacts on the design rainfall profiles.

The ground topography is based on 2016 regionwide LiDAR data, which is the latest information that HW holds for the area. It will not include for the earthworks that have been undertaken as part of developments within the catchment, although currently these areas are relatively small and will unlikely have a significant effect on the wider catchment flows.

The modelling report identifies a number of stream crossings that will require culverting or bridging as part of the design process (10x culverts and three bridges). Included in the modelling are anticipated flows and water levels for the 100-year events; however, there has been no design of these structures provided as part of the submission.

The report is not clear on how these crossings were included in the modelling of the proposed arterial alignment. It is possible that these were simply cut into the Digital Elevation Model (**DEM**) to facilitate a flow conveyance through the catchment. This simplified approach is considered appropriate for the conceptual design and Assessment of Environmental Effects (**AEE**) associated with an NOR; however, more detail will be required through the design process to adequately size the culverts and bridge structures to ensure that there are no negative impacts on other catchment landowners / users.

Stormwater management (treatment and volume control) is proposed to be through three constructed wetlands. For conservatism, these wetlands have been sized to provide full 100-year attenuation of discharges from the road to pre-development flows. This approach is considered appropriate as it should provide a maximum land take required to facilitate the NOR.

At this stage there is no design of the wetlands provided, and the text suggests that land take has been based on 10% of the contributing catchment area draining to the device. This approach is acceptable for an NOR; however, from experience it is recommended that between 12 and 15% should be used for this sizing to ensure associated maintenance access tracks can be incorporated into the device. It would be beneficial to provide a plan indicating the wetlands with the proposed designation overlaid to confirm that there is adequate space allowed.

The provision of centralised wetlands to provide stormwater management for the road will result in several diversions of flows from their natural discharge points. For most of the areas the impacts should be minor considering the relatively narrow road profile; however, it is recommended that the effects are considered in more detail through the design process, particularly for permanent streams.

There is no specific mention of SMAF retention and detention hydrology mitigation provided in the document, which will be required by the arterial road construction. The provision of 100-year attenuation within the wetlands means that there will be adequate volume for the provision of hydrology mitigation; however, this will need to be considered in more detail through the design process as it will impact on the routing of runoff through the wetland.

HIF Local Roads (Trig Road)

The documentation provided for Trig Road differs from the Redhills arterial in that there is a specific stormwater management report, as opposed to simply a flood assessment. Stormwater management for the proposed upgrade to Trig Road is provided in the Trig Road Corridor Upgrade Assessment of Stormwater Effects (SGA, December 2022).

The Trig Road corridor is located within the FUZ associated with the Whenuapai area. As such the assessment that has been completed as part of the SGA assessment considers the existing stormwater infrastructure on the road and does not consider potential effects of earthworks from future developments. Trig Road is constructed on a ridge line through the area with land dropping away on either side. It is unlikely that any future development will increase runoff onto the road and so this is not considered a big risk item.

The SGA assessment uses the current HW models and Auckland Council GeoMaps information to identify flood risks, flowpaths and infrastructure relevant to the Trig Road project. In the absence of site-specific investigations, this is considered an appropriate approach, although it is recommended that the infrastructure indicated on GeoMaps is reviewed on site to ensure it is correct.

The SGA report states that they 'Healthy Waters are yet to confirm whether 100-year attenuation is required' as part of this development. I do not see this as a correct statement to be made. Healthy Waters is not proposing a development and therefore SGA need to undertake the relevant assessment to determine their impacts and whether it is required to be mitigated. Despite this statement the dry detention pond will be sized to provide attenuation of the 100-year event and therefore is a conservative approach for the NOR designation.

Design on the detention basin's performance will also need to meet operational requirements as set out by the New Zealand Defence Force (**NZDF**) due to the proximity of the project to the Whenuapai Airforce Base.

The modelling undertaken as part of the Trig Road project is limited to HEC-HMS hydrological assessment with adjusted rainfall to reflect 2.1 degrees climate change increases to the 24-hour design rainfall.

Water quality management appears to be being provided for Trig Road itself through raingardens that will conform with the Auckland Transport Technical Design Guide (**TDG**) document. SMAF detention of the 95th percentile storm event will be provided through dry detention basins located within the designation.

Part of Hobsonville Road included in the Trig Road project area but remaining connected to the existing stormwater drainage network will not receive treatment or volume control. This is a relatively small area of the total Trig Road Project (approx. 6% of the total project area); however, SGA should provide a justification why this development area will not be providing stormwater management, particularly as Hobsonville Road will be a High Contaminant Generating Area (**HCGA**) by definition in the Auckland Unitary Plan (**AUP**).

Conceptual design of the detention / attenuation basin has been completed using HEC-HMS and the sizing of the device has been incorporated into the designation plans indicating that there is sufficient room allowed to fit the current design. There is also a significant allowance of available land that can incorporate alterations to the size and shape of the device as the design process continues.

North West Local Arterial Road NORs

The method of assessment that has been completed for the Local Arterial Road NORs is the same as undertaken for the Redhills HIF NOR; flood assessment only, with no specific design of stormwater management devices completed, and considering both 2.1 degrees and 3.8 degrees climate change impacts of flooding.

The assessment considers a number of projects and presents modelling results exclusive and inclusive of mitigation at key locations in the catchment. This approach is considered appropriate at this concept stage of design.

The basis of design for the NORs appears to be water quality management, SMAF 1 hydrology mitigation (retention and detention of the 95th percentile rainfall event) and an allowance to attenuate the 100-year rainfall event to pre-development levels. This is considered to provide a conservative approach and will allow for the adequate designation of land to be completed for the NORs. At this stage the sizing of the device appears to be relatively generic, which is acceptable at the concept stage. Each device will be refined through the design process.

As for the HIF projects, the 2016 regionwide LiDAR data set has been used to represent the ground profile. This will not include any developments that have occurred since 2016 (e.g., the Whenuapai 1 and 2 Precincts) which may impact on proposed vertical alignment of the roads and catchments draining to the proposed arterial roads. As the arterial road projects advance, the design will need to be updated to reflect actual ground profiles and this data will be required to be collected by SGA.

As per the Redhills HIF project, sizing of the devices has been based on 10% of the contributing catchment area. As previously said, experience suggests that this approach is acceptable for and NOR; however, a percentage of between 12 and 15% should be used for sizing to ensure adequate space for maintenance accessways. This may not be a significant issue, as mostly the device locations have an appropriate buffer of land around them within the designation.

The NORs include for a number of bridges and culverts to be constructed to maintain flow connectivity of flowpaths and watercourses. There will likely be diversions of the natural inflows into these channels as a result of the centralised stormwater management devices proposed. A more detailed assessment of the impacts of these diversions will be required through the design process.

The General Arrangement plans submitted as part of the Coatesville-Riverhead Highway is missing Sheet 4, which is potentially where the proposed wetland is to be located. This should be provided as part of the submission to confirm that the method of stormwater management.

For the proposed works in the Whenuapai catchment it will be important to design any stormwater device to meet the operational performance required by the NZDF. For part of the catchment between Hobsonville Road and Upper Harbour Highway existing Network Discharge Consents for the Waiarohia Stream will need to be complied with.

Strategic NORs

The SGA Strategic NORs cover an area from Whenuapai in the east past Huapai town centre in the west. The alignments pass through a number of stormwater catchments and in some areas extends outside of the Rural Urban Boundary (**RUB**) as defined in the AUP.

The stormwater assessment used for the Strategic NORs is the same that has been used for the HIF Redhills and Local Arterial Road NORs; only a flooding assessment presented considering both 2.1 degrees and 3.8 degrees climate change impacts on design rainfall.

The potential stormwater management devices have again been sized based on a 10% land take compared to the drainage catchment and are considered to provide 100-year attenuation of post development flows to pre-development levels. As previously said, experience suggests that this approach is acceptable for an NOR; however, a percentage of between 12 and 15% should be used for sizing to ensure adequate space for maintenance accessways. This may not be a significant issue, as mostly the device locations have an appropriate buffer of land around them within the designation.

The proposed stormwater management includes hydrology mitigation, water quality treatment and attenuation up to the 100-year event. This approach is acceptable for an NOR and will be refined and the design process proceeds.

The Strategic NORs include for a number of bridges and culverts to be constructed to maintain flow connectivity of flowpaths and watercourses. There will likely be diversions of the natural inflows into these channels as a result of the centralised stormwater management devices proposed. A more detailed assessment of the impacts of these diversions will be required through the design process.

Flood modelling of the Strategic NORs has been undertaken utilising existing HW catchment models (Whenuapai and Redhills) or derived catchment models by SGA as part of this work (Taupaki and Kumeu – Huapai). The 100-year floodplain differences between the SGA pre-development and post development scenarios (for 2.1 degrees climate change) are presented in the report at locations where there are existing culverts / bridges, or where these will be required in the future as a result of new roads.

In general, the post development modelling indicates increased flooding on the upstream side of the roads, with decreased flooding on the downstream side. The current report presents flood differences (i.e., changes in depth) which does not provide the full details of the effects. For example, the flood lobe may increase, but the extent of flooding may not differ considerably due to flow being retained within the channel. In that instance the effects would be negligible. The increases in flood depth upstream of the roads are expected as the road will effectively act as a dam; however, it will be necessary to undertake detailed assessments of the crossings as the design proceeds to ensure that the effects are better understood.

There are Strategic NORs proposed in the Kumeu – Huapai area, which have recently experienced significant flooding. Although (as the flood report clearly states) the strategic NORs will not be able to resolve the impacts of flooding there may be opportunities for the SGA projects to have a positive impact in some local areas. It is recommended that when this area is being looked at in more detail, SGA contact HW to see if there is any updated modelling that can be used to inform the SGA design.

3G Economics

Memo: Technical specialist report to contribute towards Council's section 42A hearing report

23 June 2023

To: Reporting Planners, Supporting Growth North West NoRs:

Robert Scott (North West Strategic NoRs)

Jo Hart (North West Local NoRs)

Jess Romhany (North West HIF NoRs)

From: Derek Foy, Director, Formative Limited

**Subject: Supporting Growth Alliance North-West– (Strategic, Local, and HIF NoRs)
Economics Assessment****1.0 Introduction**

- 1.1 I have undertaken a review of the Strategic, Local, and Household Infrastructure Fund (“HIF”) Notices of Requirements (“NoR”) lodged by the Supporting Growth Alliance, on behalf of Auckland Council in relation to economic effects.
- 1.2 I am a Director of Formative, an independent consultancy specialising in social, economic, and urban form issues. Prior to this, I was an Associate Director of Market Economics Limited, a research consultancy for six years, and was employed by Market Economics for 18 years.
- 1.3 I have 23 years consulting and project experience, working for commercial and public sector clients. I specialise in retail analysis, assessment of demand and markets, the form and function of urban economies, the preparation of forecasts, and evaluation of outcomes and effects.
- 1.4 I have applied these specialties in studies throughout New Zealand, across most sectors of the economy, notably assessments of housing, retail, urban form, land demand, commercial and service demand, tourism, and local government. I have been involved in assessments for greenfields developments around Auckland, including in the north-west (Kumeū-Huapai, Redhills and Whenuapai), Warkworth, Silverdale, Waiuku, and Drury.
- 1.5 This memo responds to economics matters arising out of the Strategic, Local and HIF NoRs, because many of the matters are relevant to all three NoRs. Where matters are not relevant to all three, I limit my assessment on that matter.
- 1.6 In writing this memo, I have reviewed the expert reports lodged with the NoRs, with a particular focus on those I consider to be most relevant to economics matters, being:
- The form 18 NoRs for a designation of land for each of the NoRs
 - “North West Strategic Assessment of Effects on the Environment Volume 2”, December 2022, Supporting Growth (the “Strategic AEE”)
 - “North West Strategic Social Impact Assessment, December 2022, Supporting Growth

- “North West Strategic Assessment of Transport Effects”, December 2022, Supporting Growth
- “North West Local Arterials Assessment of Effects on the Environment Volume 2”, December 2022, Supporting Growth (the “Local AEE”)
- “North West Whenuapai Assessment of Transport Effects” December 2022, Supporting Growth
- “Supporting Growth North West Assessment of Effects on the Environment – Redhills Arterial Transport Network Volume 2”, December 2022, Supporting Growth (the “Redhills AEE”)
- “Redhills Arterial Transport Network Assessment of Transport Effects”, December 2022, Supporting Growth
- “Supporting Growth North West Assessment of Effects on the Environment – Trig Road Corridor Upgrade Volume 2”, December 2022, Supporting Growth (the “Trig Rd AEE”)
- “Trig Road Assessment of Transport Effects”, December 2022, Supporting Growth

1.7 I have also reviewed the submissions lodged on the NoRs, including the summaries of submissions prepared by the reporting planners.

1.8 I refer to the various NoRs using the following references (project name and notice label) provided in the application materials.

1.9 NW Strategic Package:

Highway Connections

- S1 Alternative State Highway (“ASH”)
- S2 SH16 Main Road

Rapid Transit

- S3 Rapid Transit Corridor (“RTC”)
- HS Huapai Station
- KS Kumeū Station

Local Rooding

- S4 Access Road

1.10 NW Local

- W1 Trig Road
- W2 Māmari Road
- W3 Brigham Creek Road
- W4 Spedding Road
- W5 Hobsonville Road
- RE1 Don Buck Road
- RE2 Fred Taylor Drive
- R1 Coatesville – Riverhead Highway

1.11 NW HIF

- NoR1 Redhills North-South Arterial Transport Corridor
- NoR2a Redhills East-West Arterial Transport Corridor – Dunlop Road
- NoR2b Redhills East-West Arterial Transport Corridor – Baker Lane
- NoR2c Redhills East-West Arterial Transport Corridor – Nixon Road Connection
- TRHIF Trig Road Corridor Upgrade.

2.0 Key economic issues

2.1 In my opinion there are both positive and negative economic issues associated with the proposed designations. I summarise those issues in the tables below (one for positive effects, and one for negative effects).

2.2 The key outcomes of the NoRs which have positive economic effects are listed in Figure 2.1.

Figure 2.1: Outcomes of NoRs that will have positive economic effects

Notice of requirement	Outcomes that have positive economic effects
All 19 NoRs	The existing road network is inadequate to handle projected traffic volumes, giving rise to increasing travel times and congestion, and deteriorating access to economic and social opportunities, with costs associated with longer and less predictable travel times. The designations aim to improve travel times and reduce congestion, which will have positive economic effects.
All 19 NoRs	The designations aim to create an improved transport network, and to improve safety for road users, reducing costs associated with responding to injuries and deaths associated with road use.
All 19 NoRs	Designation provides property owners, businesses and the community with increased certainty regarding the presence and location of future infrastructure, so they can make informed decisions, including relating to investment in property and buildings.
All 19 NoRs	Designation provides certainty to Auckland Council as a basis for its planning relating to future urban areas, allowing future spending to be known and prioritised, reducing long-term costs for local and central government and enable more effective land use and transport outcomes.
All 19 NoRs	Changed access to active modes and multi-modal journeys will provide alternatives to and promote a shift from private vehicle trips, providing a greater range of transport options and giving users different cost options.
All 19 NoRs, but particularly S2, S3, S4, HS, KS, W3,	Traffic movement patterns will change, with potential for both negative and positive outcomes for commercial centres that rely in part on pass by traffic.

Notice of requirement	Outcomes that have positive economic effects
R1, RE1, RE2, TRHIF	
HS, KS	The development of the Kumeū and Huapai RTS stations will enable higher density development around them, potentially increasing nearby land values and business viability once development is complete.
All Strategic NoRs	The Strategic NoRs will together improve traffic flows and reduce congestion and traffic volumes through the Kumeū and Huapai centres, improving accessibility to businesses in those centres and the experience for shoppers in them. this is likely to have positive effects on business performance in the centres, once construction is complete, subject to the maintenance of adequate parking to accommodate shoppers' demands.
All 19 NoRs	The improved transport network will enable development to occur in greenfields areas, supporting new urban environments and the development of new business areas. This will increase local employment opportunities, and provide access to new business areas, and improved access to existing business areas, and to the goods and services provided by those businesses.
All 19 NoRs	Construction of new transport infrastructure will yield economic benefits, including direct, indirect and induced benefits through the economy, arising from expenditure on materials and labour. Benefits (including employment) will accrue to both local residents and across the wider Auckland and New Zealand economies. Some of that additional spend may be a transfer effect that would have been directed to other transport projects in the absence of being directed to the North West.

2.3 In my opinion the NoRs will have a number of significant positive effects, which the NoRs are required to enable the transport infrastructure which is required to enable development of the North West area as planned by Auckland Council.

2.4 The key outcomes of the NoRs which have negative economic effects are listed in Figure 2.2.

Figure 2.2: Outcomes of NoRs that will have negative economic effects

Notice of requirement	Outcomes that have negative economic effects
All 19 NoRs	Timing uncertainty. The timing of when new infrastructure is required is uncertain, and is expected to be linked to growth trends and development patterns. That uncertainty can impact investment decisions in properties, leading to maintenance and improvement being delayed, deferred, or foregone, with implications for the environment those properties are in, including potential for vacant premises and 'planning blight'. The uncertainty is directly related to the proposed 20 year lapse period for the designations arising from the Strategic NoRs, and 15-20 for North West Local and North West HIF designations (accepting that the lapse date is a limit not a target). This uncertainty may make it more difficult to sell

Notice of requirement	Outcomes that have negative economic effects
	properties affected by the designations, or reduce their value to reflect the uncertainty.
All 19 NoRs, but particularly S2, S3, S4, HS, KS, W3, R1, RE1, RE2, TRHIF	Changed travel patterns. Traffic movement patterns will change, with potential for both negative and positive outcomes for commercial centres that rely in part on pass by traffic.
S2, S3, S4, HS, KS, W2, W3, W4, W5, R1, RE1, RE2, TRHIF	Business interruption. During the construction phase there is likely to be interruption to businesses in works areas, due to changed visibility from the road, and changed accessibility. Consumers may find it more difficult to access or find (due to changed visibility) businesses and parking, and so might shop elsewhere during construction, with adverse effects on business sales. Landlords may find it difficult to tenant properties, due to perceived concerns about adverse effects on businesses occupying their tenancies, both in the construction phase, and after the construction (for example if a building becomes less accessible or has reduced parking, as a result of new infrastructure).
All 19 NoRs	Travel time disruption. During the construction phase, the time required for trips through construction areas may increase, incurring costs for business-related travel (including freight), and personal time costs for non-business travel. This will be a temporary effect and as noted above, travel times are expected to improve post-construction.
All 19 NoRs except HS and KS	<p>Farming operations. During the construction phase there may be some disruption to farm activities, with potential adverse effects for farm productivity. Adverse effects might arise where temporary occupation of land is required during construction, where access interrupts normal farming operations, and where construction noise and vehicle movements require a change to farming practices.</p> <p>There will also be impacts on the operation of some farms as a result of usable areas being permanently changed, which can occur in several ways:</p> <ul style="list-style-type: none"> • Where land is lost for infrastructure (taken for roads etc.), reducing the size of the productive part of the farm • Where the farm has infrastructure pass through it, severing parts of the farm, resulting in two discrete parts that are separated by a new road corridor, with no direct access between the two parts • Requirement for parts of the farm to be removed from productive use for use as protected ecological areas (e.g. for bats).¹

¹ NoR Strategic AEE, section 19.4.1 .4.1

3.0 Supporting Growth Alliance assessment

- 3.1 In this section I review the applications' coverage of, and conclusions reached in relation to economic outcomes of the NoRs, and conditions proposed to manage those effects.
- 3.2 The Supporting Growth Alliance has not provided separate assessments of economics effects for any of the NoRs. However, the application material does identify most of the key economic outcomes listed in section 2.0 (above) in various documents, including in the AEEs (Strategic, Local, Redhills and Trig Road AEEs), SIA (Strategic) and assessments of transport effects (Strategic, Local, Redhills and Trig Road). My review of the applications' assessment of economic effects therefore draws from a range of application materials, as I reference below.
- 3.3 As noted above in section 2.0, a range of positive economic effects are likely to arise as a result of the transport infrastructure sought to be enabled by all of the designations. I agree with coverage in the application materials that, common to all NoRs:
- New transport infrastructure will be required to enable planned urban growth in Kumeū-Huapai, Whenuapai, and Redhills.
 - New infrastructure needs to be planned for now, and its location and function needs to be public so as to allow current and future residents, businesses and other affected parties to have some certainty about what is planned, and where.
 - The designations would provide appropriate certainty about those matters for residents and businesses, in relation to which properties will be affected, and the location and path of new infrastructure.
 - The designations would support Council planning for urban growth.
 - From the information provided in the NoRs, the traffic infrastructure planned will improve certainty of travel times, provide for active modes, and reduce the likely of death and serious injuries. All of those matters will yield positive economic effects, as identified in the NoRs.
- 3.4 I also add that although not explicitly identified in the application materials, other positive economic effects of the NoRs will include:
- Economic activity that will be generated by the planning and construction of the proposed transport infrastructure.
 - Some of the planned infrastructure, particularly the Kumeū and Huapai RTS stations (NoRs KS and HS), might induce higher density development to occur around them, potentially increasing nearby land values and business viability once development is complete.
- 3.5 These are benefits of the NoRs, and should be taken into account when assessing the merits of the NoRs, but I do not discuss them further because they do not require any conditions to be imposed to mitigate them.
- 3.6 In the table below I summarise the applicant's assessment of the negative economic effects I have identified in Figure 2.2, including the conclusion(s) reached in relation to those effects, and conditions proposed to manage them.
- 3.7 As a general observation in relation to the negative economic outcomes, the management and mitigation measures are focussed on communication to inform affected parties that

effects are likely to arise, and when effects will arise. Reference is made to several plans (e.g. Construction Environmental Management Plans and Community Consultation Plans) that will be used to manage these effects, but there is little in the way of specific mitigation measures identified in the NoRs.

Figure 3.1: Discussion of negative economic effects of NoRs

Notice of requirement	Outcomes that have negative economic effects
All 19 NoRs	<p>Timing uncertainty. All NoRs identify the potential for negative adverse effects arising from the uncertainty (during the pre-construction phase) as to when construction might begin. There is no assessment of the potential scale of negative effects, such as the degree to which property values may be affected, or the spatial extent or degree of planning blight that might occur, although I recognise that scale would be very difficult to assess at this stage.</p> <p>The NoRs note that this uncertainty is an inevitable outcome of the length of the lapse period (which varies between 15 and 20 years), and that the lapse periods proposed are required to “provide a sufficient timeframe to enable the construction of each of the transport corridors in response to the progressive urbanisation of the FUZ and align with planned release of land and project funding availability”² (or similar justification from the Local and HIF NoRs).</p> <p>The recommended measures to address this uncertainty included in the Strategic and Local NoRs are “ongoing and effective communication”,³ and implementation of strategies to mitigate effects. The content of those strategies has not yet been determined, but will involve the following plans:</p> <ul style="list-style-type: none"> • Construction Traffic Management Plan (“CTMP”) • Construction Environment Management Plan (“CEMP”) • Construction Noise and Vibration Management Plan (“CNVMP”) • Stakeholder and Communication and Engagement Management Plan (“SCEMP”).⁴ <p>The recommended measures to address potential uncertainty are focussed on “ongoing and effective communication”,⁵ while the Redhills and Trig Road HIF NoRs discuss the restrictions that designations impose, and conclude they will result in “no more than minor effects on property, land use and business”.⁶</p> <p>In my opinion the uncertainty may result in more than minor effects on some landowners, because their ability to use their property in the same way they have done, and ability to sell or redevelop their</p>

² NoR Strategic AEE, section 24.3, p165

³ NoR Strategic AEE, section 24.3, p166, with similar references in the NoR Local AEE (section 25.3).

⁴ NoR Strategic AEE, section 23.7

⁵ NoR Strategic AEE, section 24.3, p166, with similar references in the NoR Local AEE (section 25.3).

⁶ NoR Redhills AEE, section 8.3.9.1; and NoR Trig Road AEE, section 9.8.2

Notice of requirement	Outcomes that have negative economic effects
	<p>property may be changed or removed as a result of designations. A restriction of private property rights is highly likely to incur some change in property value, and depending on the extent of restrictions on each property, that change could be significant. As I understand it that uncertainty and any associated reduction in property values is not able to be compensated under the Public Works Act (“PWA”).</p>
<p>All 19 NoRs, but particularly S2, S3, S4, HS, KS, W3, R1, RE1, RE2, TRHIF</p>	<p>Changed travel patterns and travel time disruption. Travel patterns throughout the north-west area, beyond the NoR boundaries, will potentially change as a result of the new transport infrastructure enabled by the NoRs. This will occur during the construction and post construction phases and will affect both travel to access businesses (as discussed in my “Business interruption” response immediately below) and for non-business travel.</p> <p>Non-business travel will give rise to some potential costs and benefits at different phases of the projects, as households at first incur greater travel times as a result of construction works disruption, but then come to derive savings in travel time as the result of a more efficient travel network once works are completed.</p> <p>The mitigation measures proposed to deal with this are the suite of four management plans (CTMP, CEMP, CNVMP, SCEMP) that are intended to minimise disruption, and manage its effects where possible, although no specifics have yet been presented. Changes in travel times might in some cases be significant, although that depends on how the management plans mitigate interruption.</p>
<p>S2, S3, S4, HS, KS, W2, W3, W4, W5, R1, RE1, RE2, TRHIF</p>	<p>Business interruption. These NoRs are located in areas in which business activity currently occurs, and where interruption to that business activity is possible during the construction phase.</p> <p>There has been no assessment of the potential scale of negative effects, such as the degree to which business turnover might decrease as a result of access to businesses becoming more difficult, or visibility of businesses decreasing and patronage dropping as a result. I recognise that those effects would be very difficult to assess at this stage, particularly because those effects will not accrue for many years yet, and the nature of businesses affected is not yet known, as it is likely to change from the businesses currently operative.</p> <p>Further, not all businesses or business areas that will exist during the construction works are in existence now, because areas of FUZ are yet to be developed. Construction works for the NoRs may (although will not necessarily) precede the development of new business and business areas.</p> <p>The AEEs identify a number of existing businesses and business areas that are located within some of the NoRs, including:</p>

Notice of requirement	Outcomes that have negative economic effects
	<ul style="list-style-type: none"> • The Kumeū and Huapai centres along SH16 (S2, S3, S4, HS, KS) • The Whenuapai centre on Brigham Creek Road, relevant to both W2⁷ and W3⁸ • Part of the Spedding Road corridor (W4) near SH18 (zoned industrial, and urbanising now)⁹ • The Hobsonville Road corridor (W5)¹⁰ • The Don Buck Road corridor (RE1)¹¹ • The Fred Taylor Drive corridor (RE2)¹² • The Coatesville-Riverhead Highway corridor (R1)¹³ • Within the Trig Road NoR (TRHIF)¹⁴ along Hobsonville Road, although a number of commercial businesses there are not identified,¹⁵ with the AEE’s focus on community organisations. <p>I note that there will also be other businesses not on designated properties, but located on side streets, which have customers that would have to travel through construction works to visit the businesses, and therefore which could be affected by the construction works. The AEEs do not identify potentially affected businesses in that category, or recognise that they might be affected.</p> <p>The AEEs provide the following assessment of the potential for effects on businesses:</p> <ul style="list-style-type: none"> • The Strategic AEE recognises that construction could temporarily impact people’s ability or desire to impact businesses along SH16, including in and around the Kumeū and Huapai centres.¹⁶ • In Whenuapai impacts are described as being “generally limited to canopies. Along Hobsonville Road, there are multiple commercial facilities (such as supermarkets) and whilst community access will be disrupted during works this can be managed”.¹⁷ • There will be impacts on the existing industrial and commercial area at Don Buck Road, although most properties

⁷ NW Local AEE, table 10.3

⁸ NW Local AEE, section 10.4.5.1

⁹ NW Local AEE, section 10.5.5.1

¹⁰ NW Local AEE, section 10.6.5.1

¹¹ NW Local AEE, section 11.2.5.1

¹² NW Local AEE, section 11.3.5.1

¹³ NW Local AEE, section 11.4.5.1

¹⁴ NW HIF Trig Road AEE, section 5.1.6

¹⁵ A cattery, orthodontist, and tattoo studio

¹⁶ Strategic AEE, section 23.5

¹⁷ NW Local AEE, section 24.4

Notice of requirement	Outcomes that have negative economic effects
	<p>have access from the rear (Westgate shopping centre) which will reduce dependence on Don Buck Road. Direct impacts are relatively limited, and will decrease as the community becomes aware of new road layouts, and works are not expected to result in business displacement or loss.¹⁸</p> <ul style="list-style-type: none"> • In Riverhead there are few commercial sites affected and no sites required in full. Works are expected to have minor effects only on the entrance and parking areas of Huapai Golf Course and Hallertau Brewery, but not to impact the main buildings.¹⁹ • The Local AEE identifies that for existing businesses and commercial properties there is the potential for impacts from construction work along each corridor, these impacts include traffic disruption and impacts on visibility and accessibility, including for services and deliveries, of shops, office and other commercial areas. These impacts can be mitigated and / or managed via a CEMP and ongoing engagement with businesses and the wider community, via a Community Consultation Plan.²⁰ • For businesses and commercial properties that fall entirely within the designation footprint these businesses will be acquired to allow the upgrade of the corridor. The landowners of these businesses will have recourse through the PWA, and communication with the impacted businesses will be required to allow them to plan ahead.²¹ In terms of the wider community, while they will no longer have access to the displaced businesses, they will have access to new businesses and centres as the FUZ areas urbanise. • There is no recognition in the NW HIF Trig Road AEE of potential disruption to businesses (section 9.8.3), although some are identified <p>There do not appear to be any businesses within the NW Redhills NoRs (NoR1, NoR 2a, NoR 2b and NoR 2c) that would be likely to be adversely affected during the construction phase, other than rural businesses such as farms, which I address below.</p> <p>The recommended measures to address potential business effects are focussed on communication with potentially affected parties, and future use of the suite of four management plans (CTMP, CEMP, CNVMP, SCEMP) to manage and mitigate effects on businesses. The AEEs which signal the greatest likelihood of</p>

¹⁸ NW Local AEE, section 24.4

¹⁹ NW Local AEE, section 24.5

²⁰ NW Local AEE, section 24.3

²¹ NW Local AEE, section 24.3

Notice of requirement	Outcomes that have negative economic effects
	<p>adverse effects on businesses are the Strategic and NW Local AEEs, although the Redhills and Trig Road HIF AEEs discuss the restrictions that designations impose, and conclude they will be temporary, and result in “no more than minor effects on property, land use and business”.²²</p> <p>In my opinion adverse effects on businesses could be significant in some locations, with reduced visibility and access, combined with a construction environment nearby resulting in a range of disincentives to continue shopping in centres subject to construction works. I accept that those adverse effects would only exist during and soon after the construction phase, however during that phase it is possible that the viability of some individual businesses could be threatened. There is no recognition of that possibility in the NoRs.</p>
All 19 NoRs except HS and KS	<p>Farming operations. The AEEs identify the potential for adverse effects on rural production and farms arising from construction activities. These effects are also proposed²³ to be managed and mitigated by the use of the suite of four management plans (CTMP, CEMP, CNVMP, SCEMP), as for effects on other businesses.</p> <p>Provision is made for reintegration of rural (and other) land where property features (such as driveways, parking, fences, gardens and yards) are damaged, with reintegration to be discussed with landowners and to follow provisions under the PWA.²⁴</p> <p>The PWA can also be used to provide recourse to property owners where acquisition of part of their land has impacted the operation of their business.²⁵</p> <p>The NoRs do not explicitly recognise the potential for farming operations to be adversely affected as a result of land fragmentation and severance, or reduced productive areas that occur as a result of land being acquired either for transport infrastructure or associated mitigation works (such as ecological areas).</p>

4.0 Assessment of economics effects and management methods

4.1 In this section I review the NoRs’ assessments of economics effects, and the measures proposed to mitigate those effects. As identified in section 3.0, the main economic effects are those arising as a result of:

- Interruption to business and farming operations

²² NoR Redhills AEE, section 8.3.9.1.; and NoR Trig Road AEE, section 9.8.2

²³ NoR Strategic AEE, section 24.4; NoR Local AEE, section 25.5; NoR Redhills AEE, section 8.3.9.2; and NoR Trig Road AEE, section 9.8.3

²⁴ NoR Strategic AEE, section 24.6; NoR Local AEE, section 25.5; NoR Redhills AEE, section 7.1.4.7; and NoR Trig Road AEE, section 7.4.7

²⁵ NoR Local AEE, section 24.3

- Timing uncertainty
- Changed travel patterns and travel time disruption.

Interruption to business operations

- 4.2 The AEEs have not assessed the scale of potential effects of interruption to business operations during the construction phase. Instead, the AEEs identify the likelihood that some effects will eventuate, and the areas in which there are existing businesses that may be affected. Some AEEs do note the ability for recourse under the PWA, and the possibility for the acquisition of properties where all of the property falls within the designation footprint.
- 4.3 In my opinion the AEEs' approach is appropriate, and more detailed or specific assessment of those effects is not required, and would not be able to be undertaken with any confidence, for two reasons.
- 4.4 First, because construction is not likely to start soon, given the up to 20 year lapse periods, it is not known which businesses will exist in affected areas at the time construction works start. There is likely to be significant turnover of businesses between now and when construction works start for each of the projects, given the natural churn in business tenancies, and the relatively long (likely 10+ years in many instances) until construction begins.
- 4.5 Second, because there is uncertainty about the specific design of new infrastructure, it is difficult to understand exactly which businesses, or parts of business areas, would be likely to be affected when construction does begin. Once more detailed designs have been completed, plans for staging of works etc. have been settled, and it is closer to the time of construction works, it will be possible to have a greater understanding of which businesses or locations might experience disruption to their trading and accessibility.
- 4.6 In my opinion it is reasonable that the AEEs have identified that there is the potential for effects to arise, and for there to be some strategies for dealing with those, but that more specific impacts have not been assessed.
- 4.7 However, from my review of the AEEs while most areas and businesses potentially affected have been specifically identified, some have not. Businesses that may be affected but which have not been identified include those on Hobsonville Road near the end of Trig Road (TRHIF), and businesses that are outside the various NoRs, but which rely (at least in part) on having customer access through the area of construction works.
- 4.8 Further, there is no recognition in the NoRs that adverse effects on businesses could be significant in some locations. While I accept that those adverse effects would only exist during and soon after the construction phase, in that time the viability of some individual businesses could be threatened. Some mitigation or compensation measures should be considered for those businesses, including (if possible) properties that are outside the designation area, but still affected by the construction works.
- 4.9 There is also no recognition in the AEEs of the potential effects on property owners of tenancing their premises. It may become difficult to tenant some premises if construction works will, or are perceived to, make access more difficult, reduce parking, or create an unattractive environment in which to do business. That difficulty may persist in the post-construction phase, with adverse effects for property owners, and with the possible effect of increasing the number of vacant premises in centres and business areas, which would contribute to planning blight.

- 4.10 Business operations may also be adversely affected if the NoRs change the amount of car parking available near businesses. A large proportion of trips to North West businesses will occur by car, and if car parking provision is materially changed as a result of the NoRs, and it becomes more difficult to access local businesses, a decrease in patronage of those businesses would be likely.

Interruption to farming operations

- 4.11 As noted in relation to business operations, the AEEs have not assessed the scale of potential effects of interruption to farming operations during the construction phase, only identified the fact that there is potential for effects to arise, and that they will be addressed using the suite of four management plans. Also as for other businesses, I accept that assessment of those effects will be difficult without direct consultation with farmers. That consultation could easily identify which farms are most likely to suffer adverse effects during the construction phase, and would be a more appropriate, and direct way to establish potentially affected farms, than a desktop assessment for an AEE.
- 4.12 As I note in section 2.0, there is also potential for farming activities to be interrupted on a permanent basis as a result of usable farm areas being permanently changed, where land is taken for infrastructure (land within the designation area), where infrastructure passes through farms severing parts of some properties into areas with no direct access between them, or where land is required to be used for non-farming uses (such as protected ecological areas).
- 4.13 That potential may in some cases make farms much less economic, or uneconomic, to run as an agricultural business, due to reduced economy of scale, practical difficulties moving between parts of a landholding, and reverse sensitivity effects (for example road noise affecting stock).
- 4.14 The Local AEE²⁶ recognises that potential:
- Where a partial acquisition of a site is required communication with the landowner and occupier will be required to discuss the ongoing operation of the site. Depending whether the partial acquisition will impact on the operation of the business, landowners may have recourse through the PWA.*
- 4.15 The Local AEE states that potential much more explicitly than the other three AEEs, which are vaguer about the potential for the PWA to be available to provide recourse for property owners of businesses that are impacted by the works:
- The Strategic AEE proposes to provide information to landowners about the PWA,²⁷ limiting coverage of PWA matters to identification that there are PWA processes which guide property acquisition and compensation, but with no coverage of compensation for impacted businesses as a result of any acquisition.
 - The NW HIF Redhills and Trig Road AEEs both identify that the PWA can be used to mitigate effects of temporary acquisition²⁸ and the loss of productive and residential land,²⁹ but does not refer to land which becomes uneconomic to use for the same purpose as a result of acquisition.

²⁶ NoR Local AEE, section 24.3

²⁷ Strategic AEE, section 24.6

²⁸ NW Redhills AEE, section 8.3.9.2

²⁹ NW Redhills AEE, section 8.3.9.3

- 4.16 Other than reference to the PWA being able to be used to mitigate effects on the operation of the business (e.g. farms), the AEEs do not identify any mitigation measures for these permanent effects. Instead, the assessment elsewhere in the AEEs is that for private properties one of the following outcomes will occur:
- Land that is required for the corridor will have been purchased, resulting in no ongoing effects for those parties
 - Property owners whose land is not purchased will experience only temporary effects, and those will be mitigated through reinstatement of accessways, fences, parking etc, meaning there will be “no ongoing property impacts”.³⁰
- 4.17 It will be important that the approach identified in the Local AEE is recognised across all NoRs, and that if farming (or indeed other business) operations are adversely affected by changes to their property, than property owners be made aware of the extent of options available to them. The Strategic and HIF AEEs are less than explicit about the ability for compensation under the PWA for impacted business operations, but landowners affected by those NoRs should be informed in the same way as landowners affected by the Local NoR.

Timing uncertainty

- 4.18 There has been no assessment of the potential economic effects of the uncertainty of the timing of construction works on property owners. The potential for those effects has been identified, including in relation to the risk of planning blight, although not in relation to the potential for property values to decrease due to uncertainty about the future environment.
- 4.19 In my opinion it is not possible to accurately assess the potential effects associated with uncertainty at present, and it may not be able to improve that accuracy in the future. Response to these potential effects will vary significantly between affected parties, depending on many factors, including:
- the location of affected properties
 - the age and condition of affected properties
 - property owners’ plans for future use of their property
 - property owners’ perceptions of how they might be affected, and their decision making as a result.
- 4.20 While it is not necessary to predict how and where effects might occur, it will be important to monitor any material changes in property condition that arise, and manage those effects appropriately. For example, if there is significant planning blight that is adversely affecting the amenity of commercial areas, and the role that a centre plays for its community, it may be necessary to implement some measures to mitigate that blight and avoid community disenablement.
- 4.21 The AEEs recognise the potential for blight to occur, but do not propose any specific mitigation or management measures should blight be identified. In my opinion they should propose management measures, and have a process to monitor the quality of particular urban environments, especially commercial areas. Planning blight is unlikely to have significant economic effects when it applies to individual, privately owned buildings or in rural areas, but

³⁰ Strategic AEE, section 24.5

will be more of a problem when enjoyment of or access to public space and commercial activities becomes compromised.

- 4.22 I am not aware of any mechanism to mitigate any reduction in property values that might arise as a result of properties becoming subject to designation(s). The AEEs have not assessed the potential magnitude of any such reductions, or even identified the potential for such effects to occur.
- 4.23 Reductions in property values will be difficult to assess, and likely to be temporary in many cases, because there is a potential for future uplift in property values once works are finished, and access to the area is improved. However, some reduction in values will be more sustained, such as where a property's outlook and natural environment is significantly changed by the introduction of (for example) a new road passing by, but with no change in development activity enabled (e.g. a rural area that will remain rural, as opposed to where a new road enables urban development of a currently rural area, yielding an uplift in property values).

Changed travel patterns and travel time disruption

- 4.24 The third key economic issue identified is changed travel patterns and travel time disruption. Effects under this heading are difficult to quantify or predict at present, and the AEEs propose a number of management plans to mitigate the potential effects of this disruption. While specifics of those plans have not yet been set, this type of disruption is common in relation to the construction of transport infrastructure, and I expect that the plans will adequately address potential effects, drawing on experience from other infrastructure projects.
- 4.25 Negative effects under this heading (slower travel times) will occur during the construction phase, with expected improved post construction, so the effects are likely to be of limited duration, as noted in the AEEs.

5.0 Submissions

- 5.1 I have reviewed the submission lodged in relation to the NoRs, and summarise in Figure 5.1 (below) the issues relating to economics.
- 5.2 Relevant submission matters include some categorised in the summaries of submissions as social and property effects, however not all property and social effects are included in my summary. Some property-related submissions, such as requests to exclude a property from a designation or for more certainty regarding a specific change to a design are excluded below.
- 5.3 Only submissions identifying negative effects are included in the table. A number of positive effects were identified in submissions as well, with the main reasons identified in support being recognition of benefits in improving the quality of transport infrastructure in the area, although usually without specific recognition of related benefits such as improved certainty of travel times. Many submissions requested that works begin as soon as possible, particularly in relation to S1 (ASH), in order to alleviate exiting traffic concerns and improve efficient movement to businesses and households throughout the North West.

Figure 5.1: Summary of economics matters raised in submissions (orange cells indicate submissions identified that issue in relation to a particular NoR)

NoR	Effects on businesses/ development potential	Uncertainty and length of lapse period	Planning blight	Access and loss of parking	Compensation	Property value
North West Strategic						
S1						
S2						
S3						
S4						
HS						
KS						
North West Local						
W1						
W2						
W3						
W4						
W5						
RE1						
RE2						
R1						
North West HIF - Redhills						
NoR1						
NoR2a						
NoR2b						
NoR2c						
North West HIF - Trig Road						
TRHIF						

5.4 In my opinion the submissions lodged do not identify any matters that are not identified and discussed earlier in my review.

5.5 The key economics-related concerns raised in the submissions are:

- Certainty:** A lack of certainty in what works will be undertaken, and when works will occur. Submissions identify that that uncertainty may give rise to planning blight, makes effective use of property difficult, and might be expected to result in a decrease in property values. Many submissions request a shorter lapse period to provide a shorter period of uncertainty.
- Access:** Many submissions raise concerns that the NoRs will change the environment in ways that make property access more difficult, or impossible, with adverse effects for both residential and non-residential occupants. These effects include reduced parking as a result of land being required for infrastructure or construction works, the need to create new access points as a result of barriers (e.g. batters) created by the infrastructure, reduced access to service lanes, and property becoming landlocked or requiring access across other properties.
- Business interruption:** Submissions raising this issue include businesses concerned with access issues, property owners who believe their ability to develop their land might be reduced or removed (e.g. because of reduced property size, or diminished attractiveness), reduced visibility to potential customers, and business owners concerned for the ongoing viability of their businesses during the construction phase.

- **Relief:** Several types of relief are requested in the submissions, including redesign to avoid perceived problems, changing properties to not be subject to a designation, consultation and engagement to improve certainty and understanding of development plans, use of management plans to mitigate effects, and compensation for reduced property value or business effects.

5.6 I agree with the range of economics issues identified by submitters, and recommend the following responses.

Certainty

5.7 The NoRs clearly set out why lapse periods of up to 20 years are required for the designations, and I accept that rationale. The long term nature of the lapse periods will inevitably give rise to some uncertainty for property owners, with a real risk of planning blight in some places as property owners are disincentivised from property maintenance and upkeep, due to restrictions imposed by the designations, and uncertainty about return on investment given the likelihood that the post-construction environment will differ significantly from today's environment.

5.8 I agree with the NoRs' assessment that communication with affected parties is one method of mitigating that uncertainty, however in my opinion there should be some requirements for monitoring of the environment to ensure that planning blight does not adversely affect public use and enjoyment of public areas such as commercial centres. Blight on private property will be difficult, (and possibly unnecessary in most instances) to manage, but if it becomes part of a multi-property decay and results in unattractive or unsafe places to visit for shopping, recreation or accessing community services, then there should be some recognition and management of that.

5.9 While the AEEs note the ability of compensation under the PWA for property that is acquired under the designations, I am not aware of any mechanisms to provide compensation for a (real or perceived) reduction in property values that might occur because of the uncertainty created by the designations. I accept submitters' points that some such reduction might occur, particularly on properties where development rights are limited because of the designation, but also on other properties outside the designation area but close to proposed infrastructure. If there are potential remedies to address this issue, they should be considered to address submitter concerns.

5.10 A matter not raised in submissions, but which should in my opinion be made clear to property owners, is that identified in the Local AEE³¹ which recognises that if partial acquisition of a site is required and that impacts the operation of a business, the landowner may have recourse through the PWA. That situation may apply to farmers with land subject to a NoR, but concerns about farm operation were not identified in submissions. I have not seen any assessment of the number of farms that would experience the loss of a significant proportion of their area, or severance that will create uneconomic residual areas.

Access and business interruption

5.11 The NoRs identify the potential for access difficulties, and propose a range of measures (consultation and communication, including SCEMPs and CEMPs) to identify and remedy any access difficulties to private property. The AEEs undertake to reintegrate affected properties

³¹ NoR Local AEE, section 24.3

post-construction, and appear cognisant of the concerns raised in submissions, including in relation to residential and business properties. I do not consider that any additional mitigation measures are required to manage the effects of changed access in the post construction phase, assuming access to affected properties is reinstated, or replaced with comparable alternate access.

- 5.12 During construction, changed access may affect business turnover, and in some cases even business viability, if access challenges are not adequately managed and mitigated. Recognition of this possibility in the AEEs is limited, however as I note above is identified in the Local AEE in relation to properties where part of the site has been acquired.
- 5.13 However, for neighbouring or nearby properties that are not subject to an acquisition, but to which access has materially changed, with adverse effects on business operation and profitability, it may be appropriate to provide some compensation or to offer mitigation. Response could include compensation for reduced sales, improved signage and wayfinding to attract customers, and other temporary environmental improvements (new parking areas, temporary landscaping and public art) to attempt to offset access difficulties and provide some separation from the construction environment.

6.0 Conclusions and recommendations

- 6.1 The SGA has not provided a separate assessment of potential economics effects for any of the 19 NoRs, however has in my opinion adequately covered economics matters in the four AEEs, and other supporting documents. My conclusions and recommendations below apply to all 19 NoRs, unless otherwise stated.
- 6.2 I do however note several matters around which more information could be provided to potentially affected parties in order to provide greater clarity on potential mitigation measures, some of which matters could also be addressed by way of conditions. The following matters were widely raised in submissions, and could be incorporated in the SCEMPs for each NoR when those are developed:
- Adverse effects on farming operations and farm viability as a result of severance and reductions in farm area.
 - Interruption to business operations during the construction phase, including for businesses located on properties outside the designation area for which access might be impacted by construction works (either for customer or freight). The NoRs focus on business operations on properties that are at least partly within the designation area.
 - Interruption to business operations and accessibility in the post-construction phase, such as due to a reduction in car parking. Retention of sufficient and well located car parking is identified as a matter of concern in submissions, particularly in relation to NoR S2 SH16 Main Road, but is not a matter identified in the AEEs, and it is unclear whether there is any intent for SGA to mitigate the loss of parking spaces during both the construction and post construction phases.
 - Effects arising from a reduced ability to use property in the future, such as where subdivision becomes precluded as a result of reduced property size or access.
 - Compensation. Many submitters questioned whether compensation would be available for various types of effects, and it would be helpful for the SCEMP to include some

explicit mention of what effects compensation might be available for. For example, whether any compensation will be available for reduced property value arising from either limitations imposed by the designation (i.e. reduced development rights during the lapse period), or future proximity to new transport infrastructure. Compensation for reduced ability to tenant premises is also of interest to some submitters.

- 6.3 The conditions proposed in relation to the SCEMP do not specify who are the stakeholders that should be consulted with, only that a list of stakeholders will be included in the SCEMP. In my opinion it should be a condition of the SCEMP that stakeholders include, at minimum, the community generally (including households, businesses and other organisations), and not be limited only to property owners/occupiers of land subject to the designations. That condition would assist in ensuring many of the submission points raised in relation to economics are able to be responded to directly with affected parties, and that the range of stakeholders included in the SCEMP is not too narrow.
- 6.4 In my opinion the NoRs are consistent with the direction and framework of the Auckland Unitary Plan (AUP), including giving effect to the Regional Policy Statement (“RPS”). Key relevant parts of the AUP include objectives and policies to provide sufficient feasible development capacity for housing, which the NoRs would enable by providing necessary transport infrastructure to allow new residential areas to be developed.³² That enablement is also consistent with the Future Urban Land Supply Strategy, and the Auckland Plan 2050³³ which both provide direction for managing Auckland’s growth in a sustainable, cohesive manner. In my opinion the NoRs set out a logical plan to enable growth consistent with those planning documents.
- 6.5 The NoRs aim to provide good, and improved access within the North West, and between the North West and other parts of Auckland, including related to accessing employment opportunities and businesses selling goods and services, which is a core part of community wellbeing and a concern identified in the AUP.³⁴ In my opinion the NoRs would achieve that aim, and provide much improved access between new and existing residential and business areas, supporting economic wellbeing and providing efficient access to businesses.
- 6.6 Overall I support the NoRs, and propose only one modification to the condition in relation to the SCEMP for each NoR, namely that stakeholders include, at minimum, the community generally (including households, businesses and other organisations), and not be limited only to property owners/occupiers of land subject to the designations. Other conditions such as requirement to employ specific mitigation measures could be considered in response to submissions, although may be more appropriately applied in the consenting phase.

³² As discussed in the Strategic AEE table 28-1, and Local AEE table 29-1, under “Urban growth and development capacity”

³³ As discussed in NW HIF Trig Road (Table 21) and NW HIF Redhills AEEs (Table 28)

³⁴ As discussed in the Strategic AEE table 28-1, and Local AEE table 29-1, under “Business zones”

3H Urban Design

Memo: Technical specialist memorandum for notices of requirement for North-West Local Arterials and Housing Infrastructure Fund Package

21 June 2023

To: Reporting Planners:
Local W1, W2, W3, W4, W5, RE1, RE2: Jo Hart
Local R1: Ben Willis
HIF Redhills and Trig Road: Jess Romhany

From: Jennifer Esterman, Senior Urban Designer, Mein Urban Design and Planning Limited

Subject: Notices of Requirements: North West Local Arterials and Housing Infrastructure Fund (HIF) Packages, Urban Design Review

1 Introduction

- 1.1 Auckland Transport and Waka Kotahi NZ Transport Agency, as requiring authorities, have lodged eight Local Arterial Notices of Requirement (**NoRs**) and five Housing Infrastructure Fund (**HIF**) NoRs to ensure route protection for the North-West Local Arterial Road network.
- 1.2 I have undertaken a review of the Strategic, Local and HIF NoRs lodged by the Supporting Growth Alliance (**SGA**), on behalf of Auckland Council in relation to urban design effects. This memo specifically relates to the Local Arterials and HIF NoR packages.
- 1.3 The NoRs are outlined below:

Whenupai Local Arterials NoRs:

- a. NoR W1 Trig Road North upgrade
- b. NoR W2 Māmari Road FTN upgrade
- c. NoR W3 Brigham Creek Road upgrade
- d. NoR W4 Spedding Road, East and West
- e. NoR W5 (alteration to Designation 1437) – Hobsonville Road

Redhills and Riverhead Local Arterial NoRs

- f. NoR RE1 Don Buck Road FTN upgrade
- g. NoR RE2 (alteration to Designation 1433) - Fred Taylor Drive
- h. NoR R1 Coatesville Riverhead Highway upgrade

Redhills Arterial Transport Networks HIF Projects

- i. NoR1: Redhills North- South Arterial Transport Corridor
- j. NoR2a: Redhills East-West Arterial Transport Corridor – Dunlop Road
- k. NoR2b: Redhills East-West Arterial Transport Corridor – Baker Lane
- l. NoR2c: Redhills East-West Arterial Transport Corridor – Nixon Road Connection

Trig Road HIF Project

- m. AT TRHIP - Trig Road Corridor upgrade

2 Qualifications and Relevant Experience

- 2.1 I hold the qualifications of Bachelor of Planning (2009) and Master of Urban Design (2014) from the University of Auckland. I am an intermediate member of Te Kokiringa Taumata - the New Zealand Planning Institute and a member of the Urban Design Forum Aotearoa.
- 2.2 I have some 13 years' experience as an urban designer and planner in New Zealand. I am a senior urban designer at Mein Urban Design and Planning Limited. Prior to working for Mein Urban Design and Planning Limited, I worked as an urban designer for Auckland Council for 7 years and at Palmerston North City Council for 2 years.
- 2.3 Recent relevance experience includes the following:

Auckland Council, Private Plan Change 69

Urban design review of Proposed Private Plan Change 69 to the AUP-OP to rezone approximately 52ha of land from Future Urban Zone to Business- Light Industry Zone and introduce a new precinct. Review of submissions and preparation of material for the s42A report.

Auckland Council, Private Plan Change 86 (Notified)

Urban design review of Proposed Private Plan Change 86 to the AUP-OP to rezone approximately 5.2ha of land located at 41-43 Brigham Creek Road, Whenuapai from Future Urban Zone (FUZ) to Residential-Mixed Housing Urban (MHU). Review of submissions and preparation of material for the s42A report.

3 Overview and Scope of Technical Memorandum

- 3.1 In drafting this memo, I have reviewed the following documents:

Local Arterial NoRs:

- North West Local Arterials Assessment of Effects on the Environment Volume 2, prepared by Te Tupu Ngātahi – Supporting Growth, dated December 2022
- NW Local Arterials Form 18, NOR W1, W2, W3, W4, W5, RE1, RE2, R1
- NW Local Appendix B New Designation Proposed Conditions
- NW Local Arterials Appendix B Alteration to Existing Designation Proposed Conditions
- General arrangement plans: Brigham Creek Road, Māmari Road, Trig Road, Spedding Road, Hobsonville Road, Fred Taylor Drive, Don Buck Road, Coatesville Riverhead Highway, Whenuapai, Redhills
- Relevant submissions for NoR W1, NoR W2, NoR W3, NoR W4, NoR W5, NoR RE1, NoR RE2, NoR R1

HIF Redhills and Trig Road

Redhills

- Redhills Arterial Transport Network: Urban Design Evaluation
- North West Assessment of Effects on the Environment- Redhills Arterial Transport Network Volume 2, prepared by Te Tupu Ngātahi – Supporting Growth, dated December 2022
- Indicative Design and Designation Drawings- Redhills, prepared by Te Tupu Ngātahi – Supporting Growth, dated December 2022
- Draft conditions (Redhills)
- Relevant submissions for NoR 1, NoR 2a, NoR 2b, NoR 2c

Trig Road

- North West Assessment of Effects on the Environment – Trig Road Corridor Upgrade, Volume 2. Prepared by Te Tupu Ngātahi – Supporting Growth, dated December 2022
- Indicative Design and Designation Drawings- Trig Road, prepared by Te Tupu Ngātahi – Supporting Growth, dated December 2022
- Proposed Designation Conditions
- Relevant submissions

- 3.2 This technical memorandum assesses urban design considerations and any actual or potential effects on amenity associated these NoRs. These are addressed separately for each NoR, to assist the preparation of the Council's reporting planner's report under s42A of the RMA.

4 Supporting Growth Alliance Urban Design Assessment

Overall NoRs

- 4.1 A diagram of the proposed north-west transport network is illustrated in Figure 1 below. This diagram depicts the overall transport network the proposed NoRs will enable. The intent of the NoRs is to designate the land to provide route protection, ensuring the intended transport network for the north-west can be progressed in the longer term. This transport network is broken into several packages: under the umbrellas of strategic, local arterials and HIF. The assessment below provides urban design commentary on each of the local arterials and HIF NoRs within these two of the three packages.

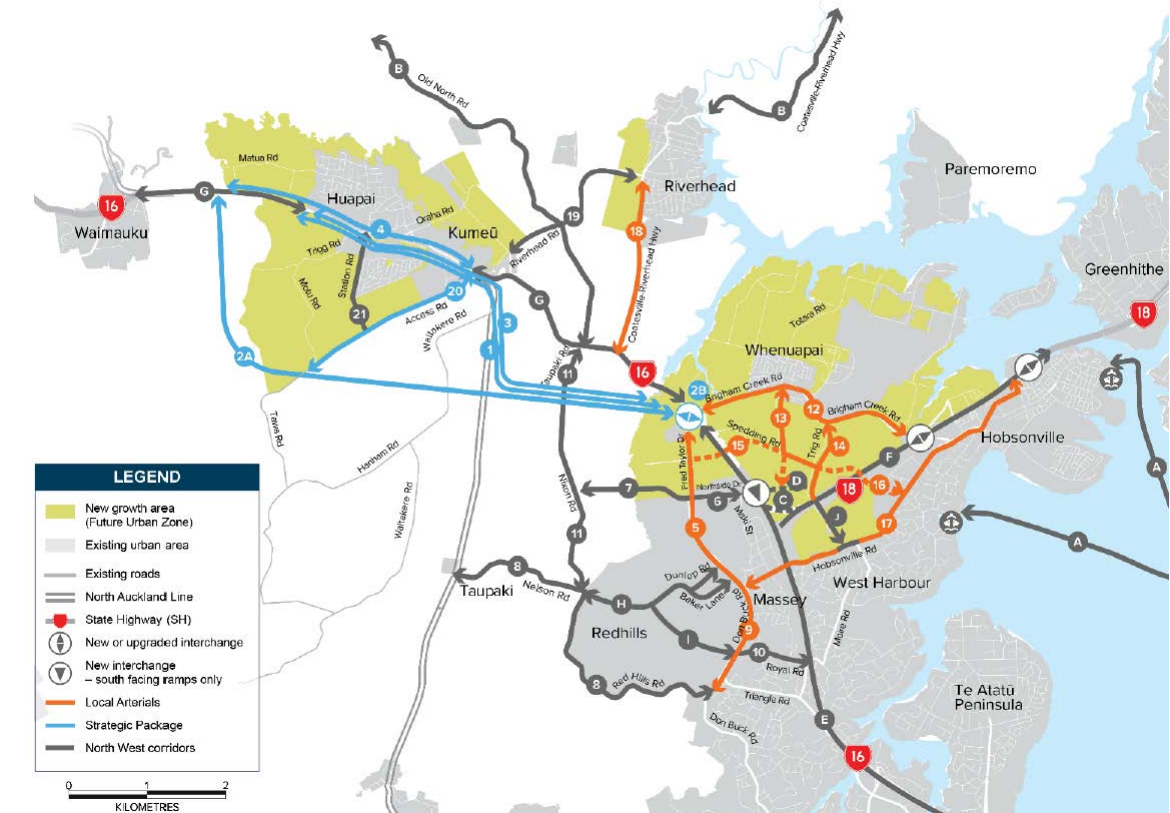


Figure 1: Diagram to show the proposed north west transport network that the designations will enable

Local Arterial NoRs

- 4.2 An urban design evaluation prepared by SGA, is included within the AEE¹. This evaluation utilises the principles outlined in Figure 2. As described in the AEE, the "NW Local Arterials Package consists of the future extended and / or upgraded transport corridors in Whenuapai, Redhills and Riverhead"². Six new designations and two alterations to existing designations (1437 and 1433) are proposed. The urban design evaluation proposes a condition that requires an ULDMP. This condition is supported, subject to additions which are outlined in the conditions section of this memo. I support the methodology the applicant used for this evaluation and agree with the conclusions reached.

Housing Infrastructure Fund NoRs: Redhills and Trig Road

- 4.3 An urban design evaluation was prepared by SGA for the Redhills NoRs. This provides an overview of the urban design considerations and inputs that applied during option development

¹ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume 2, P214-222

² Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume 2, P11

and refinement and the identification of future transport and land use integration opportunities for the Redhills Arterial Transport Network (**RATN**). The evaluation utilises the principles outlined in Figure 2. Four new destinations are proposed within the RATN.

- 4.4 No urban design evaluation was provided for the Trig Road corridor upgrade, but urban design input was provided within the AEE³. The level of urban design input is considered adequate as Trig Road is an existing corridor that is proposed to be upgraded.

System layers	Design Principles
Environment	1.1 Support and enhance ecological corridors and biodiversity
	1.2 Support water conservation and enhance water quality in a watershed
	1.3 Minimise land disturbance, conserve resources and materials
	1.4 Adapt to a changing climate and respond to the microclimatic factors of each area
Social	2.1 Identity and place
	2.2 Respect culturally significant sites and landscapes
	2.3 Adaptive corridors
	2.4 Social cohesion
	2.5 Safe corridors
Built form	3.1 Align corridors with density
	3.2 Corridor scaled to the surrounding context and urban structure
	3.3 Facilitate an appropriate interface between place and movement
Movement	4.1 Connect nodes
	4.2 Connect modes
	4.3 Support access to employment and industry
	4.4 Prioritise active modes and public transport
	4.5 Support inter-regional connections and strategic infrastructure
	4.6 Support legible corridor function
Landuse	5.1 Public transport directed and integrated into centres
	5.2 Strategic corridors as urban edges

Figure 2: Design principles described in Te Tupu Ngātahi (SGA) Design Framework

5 Urban Design Assessment of individual NoRs: Local Arterials Package

- 5.1 As outlined in section 4.2, six new designations and two alterations to existing designations are being sought via these NoRs. The existing designations are 1437 – Hobsonville Road Transport Corridor and 1433- Fred Taylor Drive Transport Corridor. All proposed designations relate to future extensions and / or upgraded transport corridors in Whenuapai, Redhills and Riverhead. From an urban design perspective, I generally support the future extensions and upgrades proposed. Specific comments on each NoR is provided below.

³ Te Tupu Ngātahi- Supporting Growth (2022) North West Assessment of Effects on the Environment – Trig Road Corridor Upgrade, Volume 2, P57-59

WHENUAPAI TRANSPORT CORRIDORS

6 NOR W1 Trig North (Road)

- 6.1 This is a proposal for an upgrade of the Trig Road (North) corridor to a 24m wide two-lane urban arterial cross-section with separated active mode facilities on both sides of the corridor. The indicative cross section for Trig Road is shown in Figure 3 below.



Figure 10-6: NOR W1 Trig Road (North) typical cross section – corridor

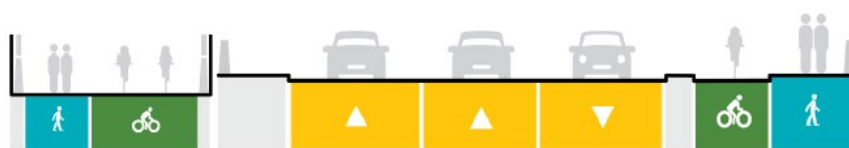


Figure 10-7: NOR W1: Trig Road (North) typical cross section – existing bridge and new active mode bridge

Figure 3: Indicative cross sections of Trig Road

- 6.2 As described in the AEE, the current zoning along this corridor is predominantly Future Urban Zone (**FUZ**). The Whenuapai Structure Plan (**WSP**) provides further detail of the likely future zoning of this area, identifying land north of Hobsonville Road as Business- light industry and the area south of Hobsonville Road as medium density residential.
- 6.3 In terms of social infrastructure, a proposed sports park is anticipated at 90 Trig Road/ 5 Spedding Road (corner of Spedding Road and Trig Road (North)), the AEE notes that Auckland Council has purchased this land however it is not yet zoned or classified as park. The proposed corridor is futureproofed allowing for access to this future park by active modes and public transport.
- 6.4 There is also a designation (4667) for a primary school and early childhood centre by Ministry of Education at 15 Trig Road. As active modes are provided along the extent of the corridor, I consider safe access to these education facilities is adequately provided for.
- 6.5 I agree with the commentary in the AEE that as development occurs and the surrounding population grows, more community and recreational facilities may be added to the wider Whenuapai area, however as Trig Road (North) is proposed to be zoned light industrial, additional community and recreational facilities are anticipated to be limited.⁴
- 6.6 The design of the intersection of Trig Road and Northside Drive will be important to ensure safe, direct connection between Trig Road and the new bus station facility at Northside Drive. The general arrangement plans provided show where the connection with the Northside Upgrade will occur. No further detail is provided within the application material for the Northside Drive upgrade.
- 6.7 The Trig Road NoR raises no urban design concerns. I note this connects with the HIF Trig Road NoR.
- 6.8 The urban design evaluation within the AEE suggests the inclusion of a ULDM condition. This condition is included within Appendix B- New Designation Proposed Conditions. I support the

⁴ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume 2, P58

inclusion of this condition, subject to minor amendment outlined in the condition section of this memo.

NoR W1 Submissions received:

- 6.9 Twenty-one submissions were received relating to NoR W1. The key theme of relevance to urban design in these submissions is the extent of corridor proposed.
- 6.10 Seven submitters are concerned with the extent of widening proposed as part of the designation. This is not solely an urban design issue; however, the take of land also affects the built form and public realm outcomes at the edge of the corridor and therefore I am addressing the submissions that raise issues pertinent to urban design here.
- 6.11 Submitter 6, Oyster Capital Limited, was the applicant of a recently approved Private Plan Change (PC69) for the 'Spedding Block Precinct'. This included land at 23-27 & 31 Brigham Creek Road and 13 & 15-19 Spedding Road, Whenuapai. The submitter has lodged an application to carry out bulk earthworks across approximately 25.3ha of the Spedding Block Precinct area, as well as a subsequent resource consent application to enable Stage 1 of the Spedding Block development. The submitter opposes the extent of the designation boundary which extends beyond the anticipated extent of works and seeks this be reviewed.
- 6.12 Submitter 8 is concerned about the extent of the corridor encroaching into the submitters' private outdoor space and the impact on an existing gabion rock wall. I note this submission has been coded incorrectly and relates to NoR W5.
- 6.13 Submitter 11, Neil Construction Limited, has interest in land at 69, 71, 73, and 94 Trig Road. The submitter would like clarity about the extent of land required within the corridor.
- 6.14 Submitter 21, Kāinga Ora Homes and Communities, has concerns about the extent of the corridor and proposes the incorporation of a periodic review condition where the extent of the designation boundary is reviewed every 12 months following the lodgement of the OPW(s) to ensure this is being refined continually, and that any land no longer required for construction and operation as a result of the refinement exercise shall be uplifted from the designation.
- 6.15 I note a designation review condition is included in the NoR package (this condition is unnumbered). The condition is as follows:
- 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
- (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.

- 6.16 It is recommended the SGA project team review the extent of land within the corridor to ensure the least area of land as possible. I support submitter 21 in the suggestion of a review period to minimise disruption to property owners. It is recommended the existing designation review condition be updated with addition of the following clauses :

- (a) The Requiring Authority shall, within 12 months of lodgement of the outline plan of works:
 - (i) in conjunction with the landowner(s), review the extent of designation required for construction purposes and identify any areas that are no longer required for construction or operation of the Project; and
 - (ii) give notice to the Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.

7 NOR W2 Māmari Road

- 7.1 Māmari Road is an existing semi-rural road (including a section that is still only a paper road) that extends from the intersection of Brigham Creek Road and Totara Road in the north to the

intersection with Spedding Road in the south. I agree with the description provided in 10.3.5.1 of the AEE⁵.

- 7.2 The proposed Māmari Road upgrade will extend the corridor south to connect with Northside Drive.
- 7.3 As described in the AEE, Māmari Road will provide an important Frequent Transit Network (FTN) bus link with public transport priority lanes to connect commuters from Whenuapai to the future rapid transit station at Westgate (via Northside Drive).
- 7.4 This corridor is well located in terms of existing social infrastructure within Whenuapai. Whenuapai Settlement Playground and the Parkhouse eatery are located at the intersection of Brigham Creek Road / Totara Road. Across Totara Road is land zoned local centre and an existing neighbourhood centre is a short walk from the main intersection. As described in the AEE, Māmari Road will provide an important north-south connection between Whenuapai town centre and the proposed employment/industrial area (shown in purple in Figure 5).
- 7.5 A new designation is proposed to allow sufficient land to upgrade and extend Māmari Road from a 20-metre-wide rural corridor to a 30-metre wide four-lane urban arterial to Northside Drive with separated active mode facilities. The indicative cross section is shown in Figure 4 below.
- 7.6 I agree with the description within the AEE of the current zoning adjoining Māmari Road and description of intended land uses identified in the WSP. Under the AUP(OP), the land adjoining this corridor is predominantly FUZ with a small section of Residential-Single House zone to the north. The WSP identifies the majority of the Māmari Road corridor as Business-light industrial land with the northern portion residential and the town centre at the intersection of Māmari Road and Brigham Creek Road.
- 7.7 The general arrangement plans show clear pedestrian and cyclist pathways with berm at the intersection of Māmari /Brigham Creek and Totara Road leading to the existing lights. This indicative design is supported as it ensures safe access between the existing social infrastructure in Whenuapai and the future connection to Westgate Rapid Transport Station. I note that the general arrangement plans do not show specifically which cross sections apply to which part of the road. One indicative cross section shows space for trees whereas the other does not. The incorporation of trees into the overall design of the streetscape design will be important to ensure amenity and shade for pedestrians as well as to mitigate effects of climate change.

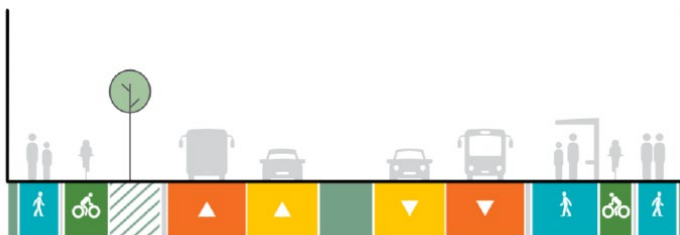


Figure 10-9: NOR W2 Māmari Road upgrade typical cross-section – corridor



Figure 10-10: NOR W2 Māmari Road upgrade typical cross section - bridge

Figure 4: Indicative cross section of Māmari Road

⁵ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume 2 P67

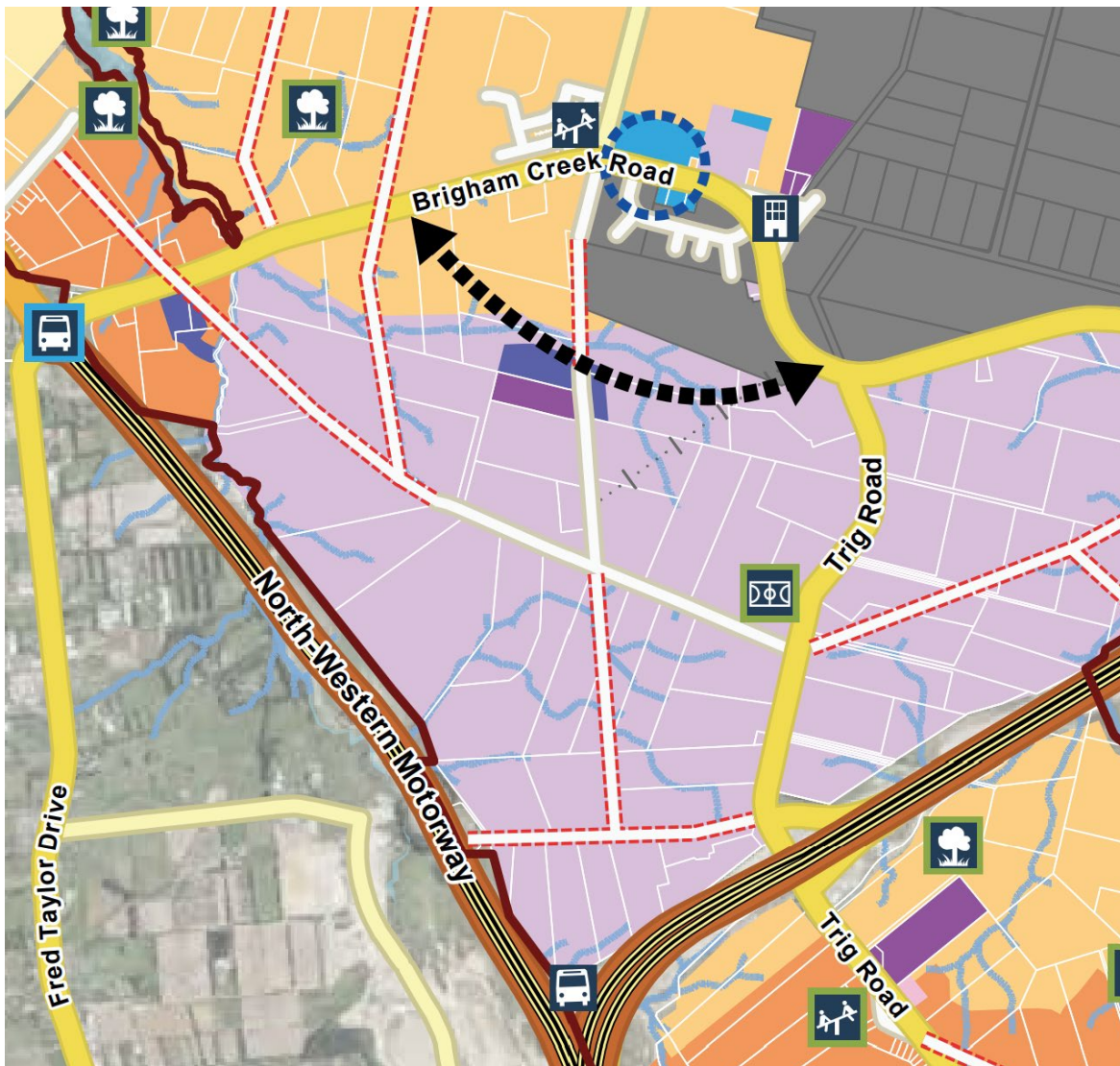


Figure 5: Part of WSP showing location of business – light industry land, south of Sinton Stream and bound by the North Western Motorway and Hobsonville Road

NoR W2 Submissions received

- 7.8 Sixteen submissions were received relating to NoR W2.
- 7.9 Submitter 5, Oyster Capital Limited, opposes the extent of the designation boundary, which extends significantly beyond the anticipated extent of works and request this is reviewed. This submitter also submitted on NoR W1 (refer to section 6.11).
- 7.10 Submitter 10, Woolworths New Zealand Limited, has an interest in land at 45 Brigham Creek Road. The submitter is concerned about the extent of designation which is some 7m into the site beyond the extent of works indicated. The submitter notes there is no obvious reason for the extent of designation, particularly as there are only minimal (cut) batters shown on the general arrangement plan (sheet 1).
- 7.11 Submitter 14, 41-43 Brigham Creek Road JV, owns the property at 41-43 Brigham Creek Road. The Site is subject to PPC86 which has been notified. The PPC seeks to rezone the Site from FUZ to MHU to enable urban development. The submitter seeks consideration and provision for local road connection to the Site in detailed design and implementation. The submitter raises concern around the timing of construction of the NoRs (being 2028-2037 for Brigham Creek Road NoR and 2028-2032 for the Māmari Road NoR). The submitter notes the WSP envisioned the Site would be redeveloped by 2028 and therefore seeks a reduced lapse period. From an urban design perspective, the upgrade of Māmari and Brigham Creek Roads will provide the transport infrastructure necessary from the Site to safely access the town centre and reserve, both of which are on the northern side of Brigham Creek Road.

7.12 Submission 16, Kāinga Ora Homes and Communities, is the same as that outlined in NoR W1, refer to paragraph 6.14.

7.13 Overall, it is recommended that SGA reviews the extent of corridor in relation to the submitters' land and work with submitters to refine the design to ensure access is retained and a suitable interface is provided with existing land uses.

8 NOR W3 Brigham Creek Road

8.1 Brigham Creek Road is an existing arterial road that extends from the intersection with SH16 in the west to the intersection with Hobsonville Road to the east. The proposed upgrade to Brigham Creek Road extends from Totara Creek bridge in the west, to Kauri Road near the existing SH18 Brigham Creek Interchange in the east⁶.

8.2 Brigham Creek Road upgrade will provide an east-west connection for all modes within Whenuapai and access to SH16, SH18 and local destinations including Hobsonville and Kumeū-Huapai. This NoR includes upgrades to the intersections with Totara Road/Māmari Road, Trig Road (North) and Kauri Road. All intersections along Brigham Creek Road are proposed to be signalised, with the exception of Trig Road (North), where a roundabout is proposed.

8.3 This NoR proposes to upgrade Brigham Creek Road from its current width of 20 metres to a 30-metre wide four-lane arterial cross-section with separated active mode facilities on both sides of the corridor. The indicative cross section is shown in Figure 6 below.

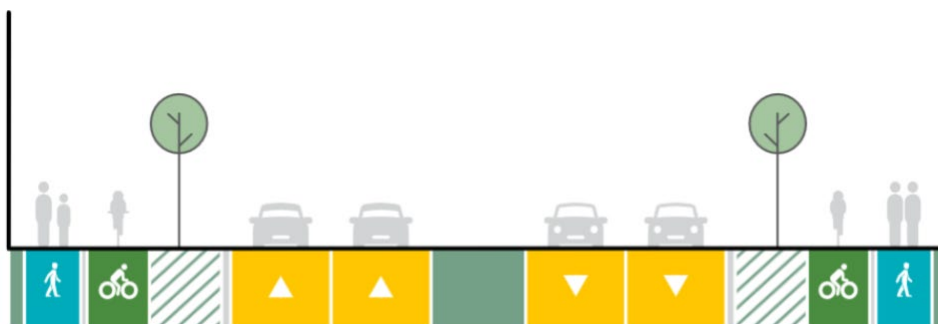


Figure 10-12: NOR W3 Brigham Creek Road upgrade typical cross-section – urban



Figure 10-13: NOR W3 Brigham Creek Road upgrade typical cross section – town centre

Figure 6: Cross section to show indicative design for Brigham Creek Road.

8.4 I agree with the description of the existing environment provided in the AEE⁷. The existing land use is FUZ for much of the area south of Brigham Creek Road with an area of medium density residential near the existing Whenuapai town centre. A lower density area is located on the southern side of Brigham Creek Road, between Māmari Road to the west and Tamatea Avenue to the east. The corridor then runs adjacent to RNZAF base (Whenuapai Airbase). All land between Hobsonville Road and the airbase is zoned FUZ.

⁶ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P73

⁷ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P77-78

- 8.5 I also agree with the likely future environment described in the AEE. Significant growth and change is planned for this area in the future. The WSP outlines the intent of the land use to transition over time to medium density residential in east and west and business on south side of Brigham Creek Road. The Whenuapai Airbase and associated land will remain. It is noted a future RTN station is proposed to be located near Brigham Creek (connecting to the RTN) however no exact location has been identified at this point in time.
- 8.6 The corridor is considered well located in terms of existing social infrastructure. As discussed in NoR W2, Brigham Creek Road is adjacent to Whenuapai Settlement Playground and the town centre. Three education facilities, Whenuapai Primary School, Whenuapai Kindergarten and New Shoots Childcare Centre are located within Whenuapai, all outside of the proposed designation area but walking distance to Brigham Creek Road. I agree that, *“existing open space areas and recreational activities are expected to remain unchanged. Schools in the area are expected to remain and could grow as the population in the area increases. It is likely additional community facilities will be provided as development occurs in the FUZ and the population in the surrounding area grows”*⁸.
- 8.7 It is noted that retaining walls are shown along existing residential blocks within Whenuapai. The interface condition along this part of the corridor is important particularly given the block between Joseph McDonald Drive and Boyes Avenue have front yards with permeable fencing fronting onto Brigham Creek Road. The block between Boyes Avenue and Ripeka Lane have driveways accessed off Brigham Creek Road. Given the design of this block, access cannot be taken from the rear as there are units behind that front Whenuapai Drive. It is noted the conditions of the ULDMP(s) require 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*
- 8.8 Although this condition is supported, inclusion of additional wording for these existing residential environments may be necessary as the detailed design of this interface will be important and high retaining walls in this location would not be appropriate. It is recommended the unnumbered ULDMP condition⁹ be amended to include the underlined.
- (iii) landscape and urban design details – that cover the following:
- a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment
 - b. Roadside elements – such as lighting, fencing, wayfinding and signage
 - c. architectural and landscape treatment of all major structures, including bridges and retaining walls
 - d. Architectural and landscape treatment of noise barriers
 - e. Landscape treatment of permanent stormwater control wetlands and swales
 - f. Integration of passenger transport
 - g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/cycle bridges or underpasses
 - h. Historic heritage places with reference to the HHMP
 - i) Re-instatement of construction and site compound areas, driveways, accessways and fences.
 - j) Any retaining walls that will affect existing residential lots in Whenuapai 1 Precinct that adjoin Brigham Creek Road must be as low as practicable and of a suitable finish to ensure existing residential dwellings have outlook over the street.

NoR W3 Submissions received

- 8.9 Twenty-two submissions were received relating to NoR W3.
- 8.10 Submitter 7, Oyster Capital Limited, also submitted on NoR W1 and W2. As outlined in paragraph 6.11 the submitter is the Applicant of a recently approved PPC (PC69) which relates to Spedding Block Precinct. The submitter seeks the extent of the proposed designation boundary be amended and that the designation be removed once the road is constructed and operational. The submitter notes that a significant portion of the setback distance is required to

⁸ “ P80

⁹ NW Local Appendix B New Designation Proposed Conditions, P9

accommodate the expected batter slopes and that alternative land modification solutions (such as construction of retaining walls) could reduce land take requirements. After viewing general arrangement plan sheet 2 of 6, I agree with the submitters view. It is suggested the SGA Project Team review the extent of the designation and work with the submitter to find suitable land modification solutions.

8.11 Submitter 7 supports proposed Condition 3: Designation Review.

8.12 Submission 9 is incorrectly coded. This relates to NoR W4. This submitter is concerned property access will be affected.

8.13 Submitter 10 is concerned about the road widening in front of the retail block they own. The retail block address is not stated in the submission but it is presumed to be the retail block at 87 Brigham Creek Road, zoned Neighbourhood Centre. The submitter is concerned about the loss of car parking and timeframes provided. The general arrangement plans show a footpath in the location of the existing car parking.

8.14 Submitter 12, Neil Construction Limited, has interest in a number of sites including:

- 155-157 Brigham Creek Road (504m² proposed to be designated);
- 149 (151) Brigham Creek Road (entrance strip only – 2,772m² proposed to be designated);
- 2-10 Kauri Road Allot 481 PSH OF Waipareira (1,342m² proposed to be designated);
- 2-10 Kauri Road Lot 5 DP 64526 (5,275m² proposed to be designated);
- 2-10 Kauri Road Allot 525 PSH OF Waipareira (566m² proposed to be designated);
- 150-152 Brigham Creek Road (3,484m² proposed to be designated); and
- 73 Trig Road (601m² proposed to be designated).

The submitter is concerned with the alignment, extent and levels shown in the general arrangement plans as these are different to those agreed with the SGA Team. The Submitter requests that the extent of the proposed NoR W3 designation along Brigham Creek Road and Kauri Road be amended to coincide with the 5m building line restriction ('BLR') imposed on 2-10 Kauri Road. From an urban design perspective, there is a need to ensure a suitable interface between the proposed corridor and development. It is presumed the lot layout shown has not been submitted for resource consent.

8.15 Submitter 13, Woolworths New Zealand Limited, owns the site at 45 Brigham Creek Road. This submission also relates to NoR W2 and is described in paragraph 7.10 of this memo.

8.16 Submitter 15, owner of 96 Trig Road, is concerned about the extent of property required, including through the middle of the property and loss of access. This site is next to the proposed Brigham Creek Road/Trig Road roundabout. From the general arrangement plans, access appears to be unchanged in this NoR but is shown within the Trig Road NoR (W1) where a batter (cut) will affect access to the existing driveway, see Figure 7. It is recommended the SGA Project Team review NoRs W1 and W3 together to ensure property access to the submitter's site is retained

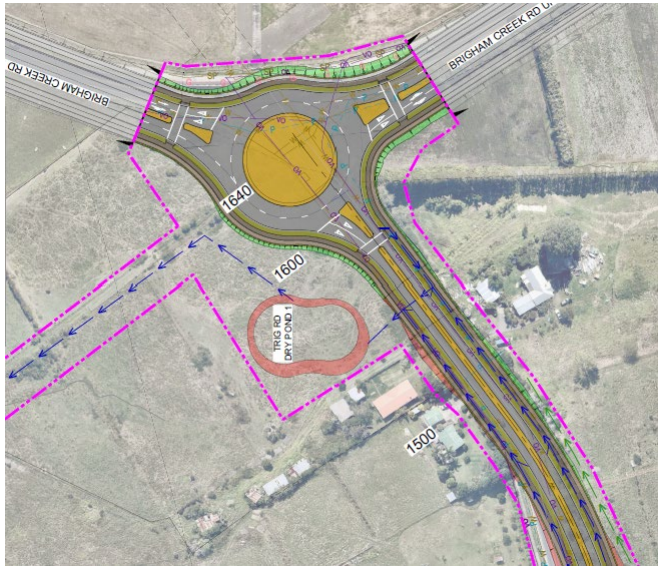


Figure 7: General arrangement plan 3, NoR W1 to show cut batter where existing driveway located for 96 Trig Road

- 8.17 Submitter 20, 41-43 Brigham Creek Road JV, owns the site at 41-43 Brigham Creek Road that is subject to Private Plan Change 86 (“PPC86”). This submission is discussed in paragraph 7.11 in relation to NoR W2.
- 8.18 Submitter 22, Kāinga Ora Homes and Communities, has concern about the extent of the corridor. This is discussed in paragraph 6.14.

9 NOR W4 Spedding Road

- 9.1 Spedding Road is an existing road from Trig Road (North) in the east, intersecting with the southern portion of the existing Māmari Road. Through this NoR Spedding Road is proposed to be extended both east and west through Whenuapai, with a new intersection over SH16 to Fred Taylor Drive and Hailes Road in Redhills, and east from Trig Road (North) via a new section connecting to Hobsonville Road over SH18. I agree with the description of the existing environment provided in the AEE¹⁰.
- 9.2 The AEE describes the project as an “*upgrade and extension (which) will provide a connection between residential land in Redhills North, employment land in Whenuapai and the proposed RTN station (a non- SGA project). This connection will reduce the severance created by the State Highway and provide a crossing that supports local movement, via cars, public transport and active modes.*”¹¹
- 9.3 It is proposed to upgrade the existing 14 m wide corridor and form a new 24 m wide two-lane arterial cross section with separated cycle lanes and footpaths on both sides. The indicative cross section is shown in Figure 8.
- 9.4 The WSP identified business and industrial land uses surrounding the majority of the corridor with a mix of high and medium density residential land use to the south of SH18. There are currently no community or recreational facilities adjacent to the proposed Spedding Road. As noted in the AEE, it is likely additional community facilities will be provided within the FUZ at Redhills and Whenuapai as the area is developed.

¹⁰ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P104

¹¹ AEE, P85

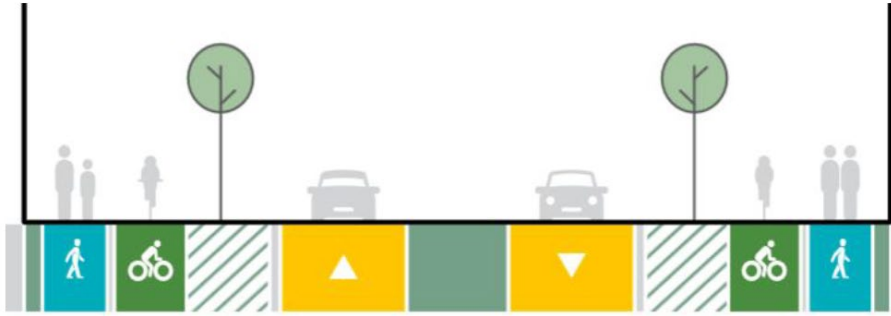


Figure 10-17: NOR W4 Spedding Road typical cross section – corridor and bridge

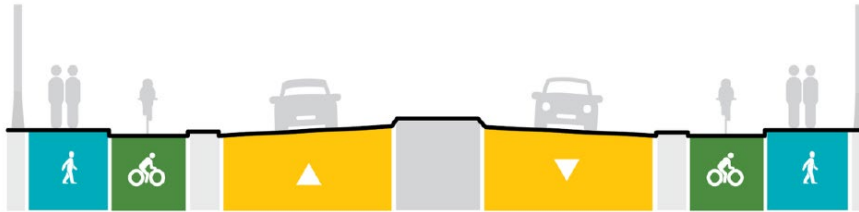


Figure 10-18: NOR W4 Spedding Road typical Cross section – two lane bridge

Figure 8: Indicative cross section of Spedding Road.

NoR W4 Submissions received

- 9.5 Seventeen submissions were received relating to NoR W4. Given the current rural and industrial nature of the land in this location, these submissions do not relate to urban design effects. I make comments on two submissions which relate to the extent of the corridor.
- 9.6 Submitter 3, Oyster Capital Limited, also submitted on NoR W1, W2 and W3. As outlined in paragraph 6.11, the submitter is the Applicant of a recently approved PPC (PC69) which relates to Spedding Block Precinct. The submitter notes that the NoR allows for a large strip of land, which varies in width between 25m-40m, to the south of the proposed physical extent of Spedding Road extension and is unclear what the rationale is for this. The submitter seeks the extent of the proposed designation boundary be amended and that the designation be removed once the road is constructed and operational. The submitter supports the inclusion of the designation condition.
- 9.7 Submitter 17, Kāinga Ora, has concerns about the extent of the corridor. This is discussed in more detail in paragraph 6.14.

10 NOR W5 Hobsonville Road

- 10.1 Hobsonville Road is an existing arterial corridor over 4 km in length. The existing corridor extends from SH16 in the west to Hobsonville Point Road and Buckley Avenue / Squadron Drive in the east. It is proposed to upgrade Hobsonville Road from the intersection with Oriel Avenue in the west to the intersection with Memorial Park Drive in the east. This NoR proposes an alteration to an existing Designation - 1437. The assessment in the AEE is limited to works beyond the extent of the existing designation.
- 10.2 Hobsonville Road provides an important east-west connection from Westgate to Hobsonville and will link into key connections at Trig Road (North), Brigham Creek Road and the extended Spedding Road. The alteration to the existing Hobsonville Road designation is proposed to upgrade Hobsonville Road, between Oriel Avenue and Luckens Road and from between Brigham Creek Road and Hobsonville Point Road to a 30 m wide four-lane arterial. Between Luckens Road to Memorial Park Drive it is proposed to widen this to a 24 m wide two-lane arterial. Active mode facilities will be provided on both sides, along the entire corridor. See Figure 9 for indicative cross sections.



Figure 10-22: NOR W5 Hobsonville Road upgrade typical 30m cross-section



Figure 10-23: NOR W5 Hobsonville Road upgrade typical 24 m cross section

Figure 9: Indicative cross sections of Hobsonville Road

- 10.3 I agree with the description of the existing and planned environment provided in the AEE¹². Of note, the southern side of Hobsonville Road is constrained by residential dwellings and the northern side (from Memorial Park Lane to Westpark Drive) contains commercial and industrial properties. The northern side between SH16 and Trig Road is zoned residential and generally consists of one and two storey residential dwellings, behind the residential zone is rural land use (zoned FUZ). The northern side of the road, between Trig Road and Westpark Road, is also rural, zoned FUZ. The WSP identifies the area to the north of the corridor as business-light industry and the area to the south as residential- medium density.
- 10.4 Hobsonville Road has a number of existing community facilities and amenities. The key locations being Memorial Park, the local centre adjacent to the intersection of Hobsonville Road, Wiseley Road and Clark Road, Hobsonville Secondary School, Hobsonville Primary School and local shops opposite the school (off Dowdens Lane) and the block between Sinton Street and Brigham Creek Road containing the New World supermarket, cafes and restaurants. The proposed corridor will ensure a suitable interface for these existing facilities, subject to detailed landscape plans.
- The block containing the current New World supermarket proposes walking and cycling facilities along the corridor with no identified retaining / batters,
 - Fill batters are shown on the general arrangement plans adjoining Hobsonville Primary School and the local shops opposite the school.
 - Retaining walls are shown adjoining the local centre (Hobson Centre) with a proposed cycleway. I note separated walking and cycling facilities are not shown on the general arrangement plans¹³ but are referenced in the AEE and indicative cross sections.
- 10.5 A ULDMP condition is proposed¹⁴. The wording of this condition is supported, subject to minor amendments to ensure consistency with other NoR ULDMP conditions.

NoR W5 Submissions received

- 10.6 Sixty-two submissions were received relating to NoR W5. These submissions raise concerns around effects on existing business uses, property access and extent of the designation.

Effect on existing businesses

- 10.7 Submitter 3, ACCR Holdings Limited, owns 187 Hobsonville Road. It is used as a commercial premise. The submitter is concerned that the designation extent will result in a loss of car parking and established hedging for privacy and acoustic reasons. From the general

¹² Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P98

¹³ NW Local Arterials – General Arrangement Plan, SGA-DRG-NWE-002-CI-7107 Rev B

¹⁴ NW Local Arterials Appendix B Alteration to Existing Designation Proposed Conditions, Condition 9, P7

arrangement plan (sheet 4 of 7) it appears the extent of corridor could be reduced to lessen the impact on this commercial property.

- 10.8 Submitter 18, Waitakere Licensing Trust, own 118 Hobsonville Road. The submitter is concerned that the Requiring Authority is designating more land than required. The general arrangement plan (sheet 6 of 8) shows a large part of the submitter's property proposed to be designated; however, the proposed physical works requires much less of the submitter's site.
- 10.9 Submitter 19, BW Holdings Limited, owns the property at 193 Hobsonville Road. The submitter's site is a childcare and early education centre. A resource consent and business requirement is that off-street parking be maintained, this is located at the front of the property. The submitter is concerned with any loss of vehicular access and/or carparking. The submitter generally supports condition 9 ULDMP except that in part (d)(ii) vehicular connectivity should also be required. Sheet 4 of 7 of the general arrangement plans show an area of fill batter but no other physical works within this site. I agree with the submitters suggested amendment to condition 9. This would read:

(iii) Provides appropriate walking, cycling and vehicular connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections.

- 10.9 Submitter 21, 393 Ltd and Upper Harbour Medical Centre, is concerned about the extent of the designation and the impact this will have on existing car parking at 393 Hobsonville Road. The submitter's site is a medical centre, zoned Business- Local Centre. The general arrangement plan depicts fill batters where 9 existing car parking spaces are located. The submitter requests a review of the extent of road widening - seeking it revert to the 11.5 metres that had been granted in the resource consent.
- 10.10 Submitter 24, Moors Holdings Limited, own 1 Wisely Road or 407-409 Hobsonville Road. The property contains a commercial building with 31 carparks which are used by tenants, their customers, and clients. The proposed alteration to the existing designation will remove all but two car parking spaces and one vehicular access. The submitter requests retaining walls are considered as an alternative to batter slopes in relation to the submitters' property. The submitter is also concerned about maintaining property access and seeks to establish an egress onto Hobsonville Road and the existing access from Wisley Road remains and adequate off street parking for a minimum of three commercial tenants and customers.
- 10.11 Submitter 33, Viscount Investment Corporation Limited, owns a property at 122 Hobsonville Road. This site is within Hobsonville Corridor sub precinct B with an underlying zone of Business- Local Centre. The submitter obtained resource consent in 2016 for the development of a commercial centre¹⁵. The submitter is concerned that the extent of the corridor would compromise good urban design outcomes as the development has been designed to front Hobsonville Road and Sinton Street and provide a mainstreet through the centre of the site. The development is designed to provide active street frontages as anticipated by the Hobsonville Corridor Precinct. The submitter is also concerned that the central raised median on Hobsonville Road that would prevent vehicles turning right into the Precincts main street.
- 10.12 Where there are existing resource consents, these form part of the environment and need to be taken into account accordingly to ensure that arterial roads are designed to support the new centre. It is recommended that the SGA Project Team review the extent of designation and consider the central median in relation to the submitters resource consent.
- 10.13 Submitter 38, The Saint Johns College Trust Board, owns a property at 124 Hobsonville Road which is managed by Trust Investments Management Limited. This property contains the Hobson Centre. The submitter is concerned about the extent of the corridor shown on Auckland Councils GIS map compared to the extent shown on the general arrangement plans and seeks confirmation that the general arrangement plans are correct and that the existing access and parking in front of the retail buildings off Hobsonville Road will be maintained as shown on the general arrangement plan.
- 10.14 Submitter 40, GR & CC McCullough Trustee Limited, owns land at 403 and 403A Hobsonville Road. The submitter is also the tenant of 403A Hobsonville Road, operates the Hobsonville Veterinary Clinic and is landlord for the residential property at 403 Hobsonville Road. The

¹⁵ RC reference LUC-2015-2167, SUB-2015-2168, REG-2016-1966

submitter is concerned with the extent of the designation which extends right up to the building occupied by the vet clinic. This will remove all customer and staff parking plus signage. It will also affect access to the rear site (403 Hobsonville Road). The general arrangement plans (sheet 6 of 7) show a fill batter along the frontage but no other physical work within the carparking area associated with the vet clinic.

- 10.15 Submitter 42, Corinthian Properties Ltd (“Corinthian”), was the original owner and developer of 102C Hobsonville Road. This site obtained resource consent in 2017¹⁶ for a mixed-use commercial development of three buildings, 101 car parking spaces, signage and landscaping with a series of subsequent s127 variations. The corridor extent will affect the landscaped garden along the site’s frontage to Hobsonville Road, a freestanding sign and one car parking space. The loss of the landscaped garden is of concern from an urban design perspective as this would result in carparking fronting the street rather than the landscape which softens the frontage. The general arrangement plan (sheet 4 of 7) shows fill batter along the frontage. To ensure a suitable level of amenity, as intended by the resource consent, the landscaped garden should be retained. I note the designation boundary shown on the general arrangement plan is less than that shown on the Auckland Council GIS maps therefore it is unclear the extent of the submitter’s site required.
- 10.16 Submitter 56, The National Trading Company of New Zealand Limited, owns property at 120 Hobsonville Road. The submitter’s site comprises the New World Hobsonville supermarket and other shops that front Hobsonville Road. The Submitter is concerned that the extent of the designation will affect the frontage of the street facing shops which act to activate the edges of Hobsonville Road. I agree the SGA project team need to clarify if these street facing shops will be affected as they create a positive street frontage to Hobsonville Road.
- 10.17 It is recommended the SGA project team review the extent of the corridor required and work with the above submitters on the detailed design in relation to the interface with Hobsonville Road. Retaining walls opposed to batters may be more suitable given the existing businesses fronting Hobsonville Road the location of the car parking area associated with these businesses.

Extent of designation

- 10.18 Submitter 23, Oyster Capital Limited, also submitted on NoRs W1, W2, W3 and W4. As outlined in paragraph 6.11 the submitter is the Applicant of a recently approved PPC (PC69) which relates to Spedding Block Precinct. The submitter is concerned about the extent of the designation shown.
- 10.19 Submitter 51, CDC Date Centres New Zealand Limited, is concerned about the extent to which the designation boundary appears to extend significantly wider than would be reasonably expected for the installation of a stormwater pipe and for road upgrades along the frontage. It seeks the designation be removed from the site at 92 and 92D Hobsonville Road.
- 10.20 Submitter 58, Kings Height Group, the owner of 82 Hobsonville Road would like to reduce the NOR land on western edge of the site (triangular shape). I note only a small area of batter is shown in this part of the site.
- 10.21 Submitter 60, Kāinga Ora, also submitted on NoRs W1, W2, W3 and W4, please refer to paragraph 6.14.

REDHILLS AND RIVERHEAD TRANSPORT CORRIDORS

11 NOR RE1: Don Buck Road

- 11.1 As described in the AEE, Don Buck Road is an existing two-lane arterial extending from Fred Taylor Drive in the north to Swanson Road and Universal Drive in the south. The NoR proposes to upgrade a section of this corridor from Royal Road to the intersection with Fred Taylor Drive to a 30m four lane arterial with separated active mode facilities on both sides and bus lanes, see Figure 10 below for the indicative cross section. The intersection at Fred Taylor Drive is proposed to be altered from a roundabout to a signalised junction. This upgraded corridor is intended to provide a key connection to the Westgate metropolitan centre and a multi-modal alternative to the state highway for north-south trips. A Westgate RTN station is planned in the metropolitan area which will link to the strategic public transport network and the CBD. Don Buck Road will form an important link through to this station.

¹⁶ RC reference LUC60069803

11.2 I agree with the description of existing and future environment within the AEE¹⁷. As an urban corridor, a range of existing community and recreational facilities are located along Don Buck Road, including:

- St Pauls Primary School (Special Purpose – School Zone) and Westbridge Residential School (Ministry of Education Designation 4646) on the east side of Don Buck Road
- Massey Leisure Centre and Library located on the corner of Westgate Drive and Don Buck Road, including sporting facilities and bookable spaces
- Open Space - Informal Reserve at Rush Creek Reserve and outdoor fields facilities at Royal Reserve, set back off Beauchamp Drive
- Private community facilities, including Massey Presbyterian Church at 510 Don Buck Road, the Salvation Army store at 532 Don Buck Road (site now owned by Universal Homes). Kingdom Hall of Jehovah’s Witness at 505 Don Buck Road
- Commercial facilities in the form of shops and services close to the intersection with Fred Taylor Drive

11.3 It is likely additional community facilities will be provided as development occurs and the population in the surrounding area increases. The area within the Redhills basin (existing greenfield live zoned land) will introduce new residents and expanded community. The I610 Redhills Precinct plan identifies a new Business – Local Centre and indicative new recreation spaces.

11.4 The proposed designation will ensure a suitable interface with these existing facilities, subject to detailed landscape and earthwork plans.

- The corner of Fred Taylor Drive and Don Buck Road contains an existing commercial area. Batter slopes are proposed on the eastern side of this road with a small area of retaining. It is important existing vehicle access be retained / reinstated to this area.
- The interface with Massey Recreation Centre proposes batter slopes. It is noted the existing access is off Westgate Drive.
- Retaining walls are proposed on part of the corridor where the Salvation Army store is located. The AEE identifies this site is now owned by Universal Homes¹⁸ but Submission 9 states this site remains in ownership of Salvation Army. A key concern for this site is the edge condition to Don Buck Road and vehicle access.
- The access road to St Pauls Primary School is unchanged, the walking and cycling facilities along the corridor will provide improved access for all modes to this school.
- A small area of batter slope is shown adjoining Massey Presbyterian Church. Any earthworks / landscape plan will need to ensure vehicle access to this site is retained as the bund is shown within the driveway.
- The existing Kingdom Hall of Jehovah’s Witness at 505 Don Buck Road currently has access from Don Buck Road. An area of this site is required to have battered slopes. Existing vehicle access will need to be reinstated.

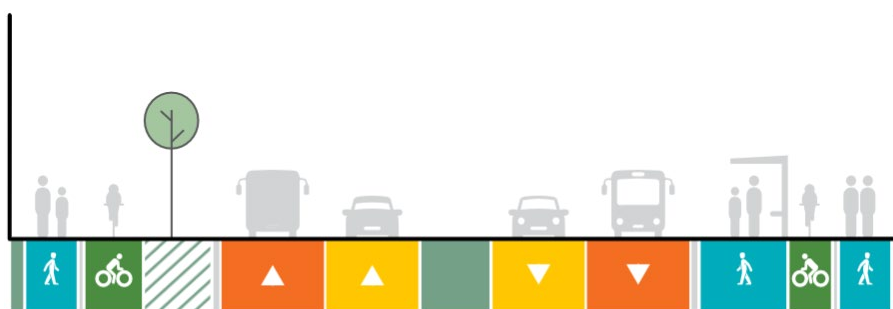


Figure 10: Indicative cross section

NoR RE1 Submissions received

¹⁷ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P131

¹⁸ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P115

- 11.5 Twenty-five submissions were received relating to NoR RE1.
- 11.6 Submitter 3, Waitakere Licensing Trust, is the landowner of the site at 1-3 Cellar Court, Massey. The submitter is concerned at extent of the designation and seeks greater clarity and detail, particularly about the corridor width.
- 11.7 Submitter 6, Restaurant Brands Limited, is the leaseholder of the property at 583-585 Don Buck Road. The site is occupied by a KFC drive-through restaurant and ancillary at-grade customer parking. The submitter is concerned with number of matters but of relevance from an urban design perspective is the loss of landscaping along the street frontage. The conditions of the resource consent require, amongst other things, that the existing landscaping along the site's frontage to Fred Taylor Drive and Don Buck Road be maintained, with any tree or plant that is removed required to be replaced and maintained in the following planting season. This consent requirement will need to be adhered to.
- 11.8 Submitter 9, The Salvation Army New Zealand Trust, owns the site at 532 Don Buck Road. The site contains a community facility used as a retail store and auditorium. The submitter obtained resource consent in March 2023 (LUC60354321-B) to extend the existing building and alter the car parking layout. The existing vehicle access from Don Buck Road will be removed and new vehicle crossings from Kapia Road and Manarini Road are proposed. A timber retaining wall is proposed in the south-eastern corner of the site to form the new car park. The submitter is concerned that the fill batter shown in the general arrangement plans at the south-eastern corner of 532 Don Buck Road extends over a consented carpark and accessway within the site. The submitter requests this is replaced by a retaining wall as per the consented resource consent. From review of the general arrangement plan (sheet 1 of 2) it is noted that a retaining wall is proposed along the rest of this site's frontage therefore the full extent in retaining will provide a suitable streetscape interface to Don Buck Road, subject to detailed design.
- 11.9 Submitter 9 also requests an amendment to the Designation Review Condition in terms of timeframe.
- 11.10 Submitter 15, Universal Homes, is the landowner of the West Hills Development which includes 550 Don Buck Road, Westgate. Universal Homes is one of Mein Urban Design and Planning Limited's clients and I am currently providing urban design advice and assessment for development projects within Stage 6 of West Hills. The land affected by the proposed NoR is distinct from Stage 6 and therefore, while I am reviewing the NoRs on behalf of Auckland Council, I do not consider this to be a conflict. The submitter is concerned that the Requiring Authority is designating more land than is required and has not considered existing ground conditions which have altered through various bulk and earthwork consents. An existing consent has been granted for a walk-up apartment building, which is currently under construction. This includes new retaining walls and associated works within the extent of area identified for the designation.
- 11.11 Submitter 18, Bunnings Ltd ("Bunnings"), has a landholding of 2.7 hectares at 21 Fred Taylor Drive. The submitter is concerned with the extent of the proposed designation boundary. The submitter also notes that the site was developed in accordance with a number of approved resource consents, the most recent of which included a specifically commissioned sculpture/art work designed by a prominent Māori artist. It is not clear from the proposed plans, the extent to which the proposed designation boundary will compromise the sculpture/art work.
- 11.12 Submitter 21, The National Trading Company of New Zealand Limited, owns the properties at 17 – 19 Fred Taylor Drive, Westgate which comprise the Pak 'n' Save Westgate complex (the "Site"). This submission relates to both NoRs RE1 and NoR2b: Redhills East-West Arterial Transport Corridor – Baker Lane. The submitter is concerned that the designation, as shown in the general arrangement plan, includes both vacant land and land containing buildings on the Site. From reviewing the general arrangement plan – Sheet 1 of 2, I agree with this. The submitter seeks confirmation that the NoR does not, and will not, cover parts of the Site where there are existing buildings. The submitter also raises concerns about traffic effects in terms of access to the Site via Te Oranui Way.
- 11.13 Submission 25, Kāinga Ora, also submitted on NoRs W1, W2, W3, W4 and W5, please refer to paragraph 6.14.
- 11.14 Where there are existing resource consents, these form part of the environment and need to be taken into account accordingly to ensure that arterial roads are designed to support new development. It is recommended that the SGA Project Team reviews the extent of designation and physical works in relation to the above submitters' resource consents. It is also recommended that any earthworks and battering that extends beyond existing property

boundaries be designed in consultation with the relevant property owners to minimise any impact to private land.

12 NOR RE2: Fred Taylor Drive

12.1 NoR RE2 is an alteration to an existing designation (1433) for the purposes of upgrading Fred Taylor Drive from a two-lane arterial to a 30 m wide four lane arterial, with separated active mode facilities. See Figure 11 for an indicative corridor cross section. The designation extends from just north of Hailes Road to just north of Te Mara Road to the south. The proposed footprint of the designation is shown in Figure 12. Fred Taylor Drive serves as the spine of the Redhills North area and will provide access to a future rapid transit station and the strategic highway network. The intent of this upgrade is to provide a multimodal link to Westgate metropolitan centre and support active modes and public transport priority¹⁹.

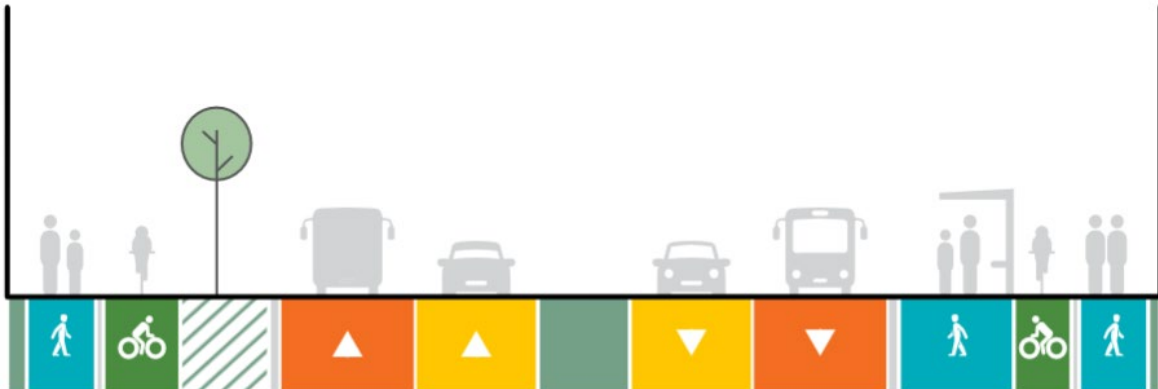


Figure 11: Indicative cross section to show upgraded Fred Taylor Drive corridor



Figure 12: Footprint of proposed designation

12.2 I agree with the description of the existing and planned environment provided in the AEE²⁰. The northern part of the corridor is currently rural in use and zoned FUZ, therefore it is likely to

¹⁹ “ P134

²⁰ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P121

change in the future. The area to the east is zoned Business - Light Industry and area to the west is zoned Residential - THAB. From aerial maps, it is notable that the residential area to the west is currently undergoing earthworks to enable residential development. See Figure 13. There is currently no structure plan for Redhills North FUZ, however the NW Spatial Strategy identifies a Business – Light Industry Zone on the east and a Future Neighbourhood Centre near Fred Taylor Park.

- 12.3 As described in the AEE, there are limited community facilities along Fred Taylor Drive²¹. Given this land is currently in the process of being developed, it is likely new community facilities will be developed within the area in the future.
- 12.4 The general arrangement plans show a suitable interface with existing dwellings along the corridor. It is noted some existing dwellings will have fill batters within their frontage, the detailed design of these will be important to ensure a suitable interface is provided between the existing dwellings and road. A ULDMP condition is proposed which requires details of how the project “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”²². This condition is considered adequate to address the interface with existing dwellings.



Figure 13: Aerial view showing earthworks on the western side of Fred Taylor Drive, within Redhills

NoR RE2 Submissions received

- 12.5 Twenty submissions were received relating to NoR RE2.
- 12.6 Submitter 5, New South Development Limited and Lunar Trustee Services Limited, is the owner and developer of 98 and 100 Fred Taylor Drive. Resource consent has been granted (reference LUC60406259) to enable construction of a fully signalised cross-roads intersection between Fred Taylor Drive, Kakano Road and Henwood Road. The submitter is concerned that the NoR

²¹ Te Tupu Ngātahi – Supporting Growth (2022) North West Local Arterials Assessment of Effects on the Environment Volume, P123

²² NW Local Arterials Appendix B Alteration to Existing Designation Proposed Conditions Condition 9d(i)

plans do not show how the upgraded and widened FTD / Kakano Road intersection will integrate with the already consented and proposed Henwood Road intersection design.

- 12.7 The submitter is currently in the process of preparing a resource consent application to develop the site with two rows of two- and three- storey townhouses. The submitter is concerned about the impact the extent of the corridor into the site's frontage will have on the proposed site layout. Based on the general arrangement plans, most of the area located within the proposed NoR boundary will be used for battering the land and for the construction of the batter slope. The submitter considers there is an opportunity to incorporate the batter into the design of the development of the site, thus enabling the extent of the designation to be reduced.
- 12.8 Submitter 9, Bright Future Group Limited, owns 124 Fred Taylor Drive. The submitter is concerned that the NoR will adversely affect the current resource consent application (BUN60405280) which has been accepted by Auckland Council. This includes the 9 lot super-lot subdivision of the property, for future medium to high density development, and the associated infrastructure and earthworks required to prepare the site for development. The Submitter is also in the process of preparing a land use resource consent for the subject site. I note this is not lodged. The design was based on a 5m setback as per the existing designation. The intent of the site layout proposed is to create an active street frontage along Fred Taylor Drive. In my opinion this would create positive outcomes from an urban design perspective in terms of active fronts and passive surveillance over Fred Taylor Drive, and aligns with the intent of the THAB zone. I note the extent of the corridor shown in the general arrangement plan is greater than the area showing physical work therefore it is recommended the SGA Project team review the extent of the corridor on the subject site and consider alternatives to battering.
- 12.9 Submitter 9 also raises concern that the current proposed arrangement plan for the NoR does not appear to consider the precinct plan and the intended range of arterial and collector roads which have been loosely planned in order to ensure connectivity to a range of land uses occurring either side of and between arterial roads throughout the Redhills Precinct. I support the alignment of the corridor as proposed and note the roads shown with the Redhills Precinct Plan are indicative only.
- 12.10 Submitter 12, Amazon Data Services New Zealand Limited, owns 73 and 75 Fred Taylor Drive. The submitter is in the process of preparing an application for Resource Consent (Main Works Resource Consent) to develop the site and is concerned with the extent of land proposed to be taken through the NoR. Stage 1 of the development, being the Enabling Works, was consented by Auckland Council in February 2023 (Reference: BUN60409375) and works commenced on site in early March.
- 12.11 Submitter 16, Redhills Green Limited (RGL) has made a submission that relates to several NoRs – including three within the HIF being Redhills North-South Arterial (NoR1), Redhills East-West Arterial Transport Corridor – Dunlop Road (NoR 2a), Redhills East-West Arterial Transport Corridor – Nixon Road Connection (NoR 2c) and North West Local Network: Alteration to designation 1433 Fred Taylor Drive (NoR RE2).
- 12.12 The submitter owns approximately 260 hectares of land affected by these NoRs. The submitter has undertaken masterplanning of their landholdings within Redhills Precinct, referred to as 'Redhills Green' to inform subdivision and development in accordance with the Redhills Precinct. RGL has also obtained earthworks and subdivision consents to develop the first area of their landholding, which comprises a 45ha block at 1 Dunlop Rd and 76-78 Fred Taylor Drive and adjoins Fred Taylor Drive and Dunlop Road - reference (BUN60376072), which comprises the creation of mega lots with a key roading network.
- 12.13 RGL opposes the proposed designation boundaries in a number of locations, on the basis there are several areas which do not lead to optimal urban design outcomes, do not accord with the Redhills Precinct Plan and/or would not enable cost-efficient or environmentally responsible development of adjacent land in the Redhills area. The Submitter requests that the NoRs reflect the road layout and intersections approved under subdivision consent BUN60376072. They also seek confirmation in the designation that intersections will be accepted along the arterial network in principle, including in locations shown on the Redhills Precinct Plan.
- 12.14 The submitter supports the inclusion of an ULDM condition however it is noted that this is required prior to the start of construction rather than at the time of detailed design/outline plan/resource consent for the works. There is also no requirement for consultation with stakeholders in relation to the preparation of this plan. It is submitted that condition 9 should be amended to address these concerns and ensure that key urban design and landscape

outcomes for the adjacent development are provided for. The submitter suggested the following amendment to Condition 9 for NoRs RE2, 1, 2a, 2b or 2c:

- a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work. The ULDMP for each stage of works must be prepared in consultation with the landowner.
- b) ...
- c) The ULDMP shall be prepared in general accordance with:
...
vi. The Design Guides and Urban Design and Landscape framework prepared for Redhills Green.

- 12.15 The submitter supports the inclusion of a Designation Review condition for all NoRs that requires the review of the need for the designation following completion of construction, and, if no longer required, removal of the designation. However, RGL seeks that this timeframe is reduced from 6 months to 3 months to minimise the length of time the designation unnecessarily impacts on use of the subject land.
- 12.16 Submitter 20, Kāinga Ora, also submitted on NoRs W1, W2, W3, W4, W5, RE1, please refer to paragraph 6.14.

13 NORR1: Coatesville Riverhead Highway

- 13.1 Coatesville-Riverhead Highway is an existing north-south corridor that starts at SH16 in the south, continues through Riverhead and terminates at the intersection with Dairy Flat Highway in the north.
- 13.2 A new designation is proposed to upgrade Coatesville-Riverhead Highway from its current width of approximately 20m to a 24m urban cross section and a 33m rural cross section, see Figure 14 and Figure 15 for indicative cross sections. The proposed designation extent is limited to the section between the existing Riverhead settlement (at Riverhead Road) and SH16. The designation includes a shared path in the rural section and separated active mode facilities on both sides in the urban section, as well as intersection upgrades at Riverhead Road, Old Railway Road.



Figure 14: Indicative urban section

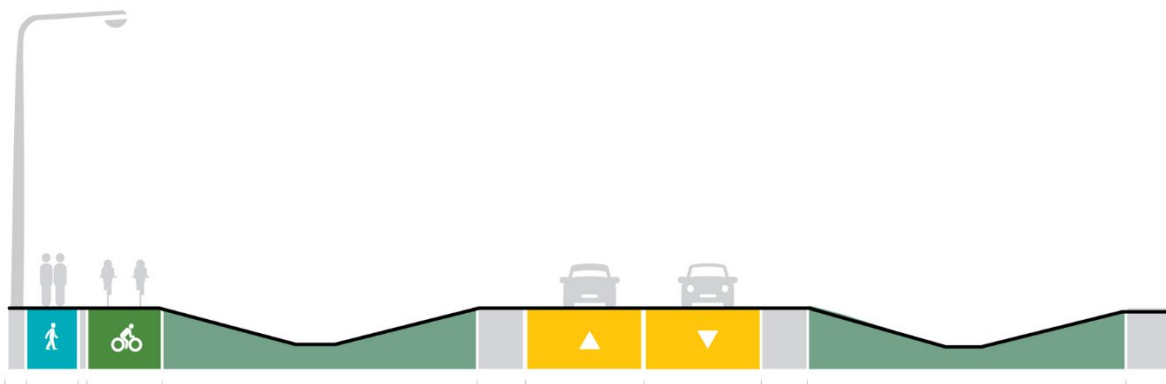


Figure 15: Indicative rural section

- 13.3 I agree with the description of the existing and planned environment provided in the AEE. The southern section is rural in use and the northern section (from Short Road north) is existing residential development with FUZ land to the west. The rural area is unlikely to change significantly, as it is outside of the Rural Urban Boundary (RUB). Within the RUB, the western FUZ side of Coatesville-Riverhead Highway will urbanise, and a new neighbourhood centre and expanded existing town centre have been identified in the Spatial Strategy.
- 13.4 A range of existing community and recreational facilities are located along Coatesville-Riverhead Highway. The proposed interface of the corridor is acceptable given the nature of these existing facilities.
- 13.5 I support the detail shown in the general arrangement plans. However, it is unclear why the area outside Boric Food Market starts as a separated active mode path and then becomes a shared path. From an urban design perspective either shared path or separated modes are acceptable in this location but should be one or the other, see Figure 16 for detail of this area.

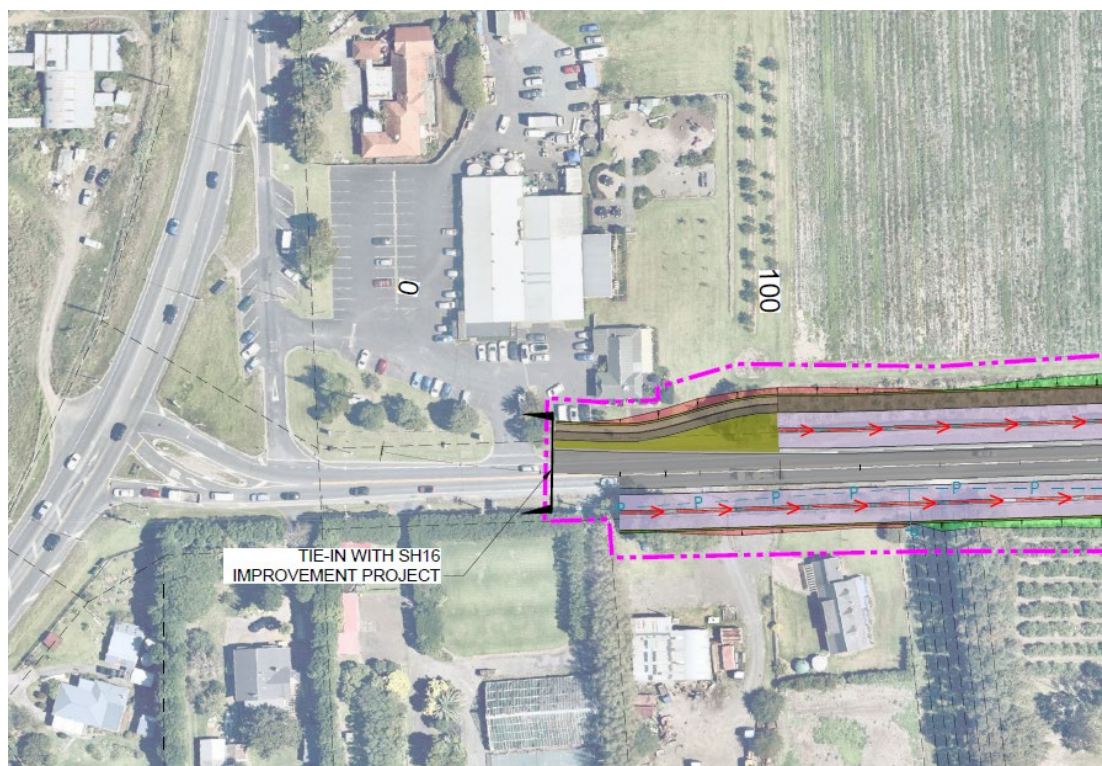


Figure 16: Separated walking/ cycling pathway outside Boric

NoR R1 Submissions received

Twenty-nine submissions were received relating to NoR R1. None of these relate to urban design effects. I do note submission 29 is from Kāinga Ora, which is discussed in paragraph 6.14 of this memo.

Urban Design Assessment of individual NoRs: Housing Infrastructure Plans

14 Redhills

- 14.1 AT is proposing to construct two arterial transport corridors in Redhills over the next 15 years. These two arterial transport corridors form the Redhills Arterial Transport Network (RATN), under the Te Tupu Ngātahi Supporting Growth Programme.
- 14.2 NoR 2a, 2b and 2c seek designations for the construction, operation and maintenance of the Redhills East-West arterial transport corridor. NoR 1 seeks designation for the construction, operation and maintenance of the Redhills North-South arterial transport corridor.
- 14.3 From an urban design perspective, I generally support the routes proposed. Combined comments on these NoRs are provided below. A map showing the location of each NoR within the RATN is shown in Figure 17.

Notice of requirement
NoR1: Redhills North- South Arterial Transport Corridor Blue line
NoR2a: Redhills East-West Arterial Transport Corridor – Dunlop Road Orange line
NoR2b: Redhills East-West Arterial Transport Corridor – Baker Lane Yellow line
NoR2c: Redhills East-West Arterial Transport Corridor – Nixon Road Connection Navy line

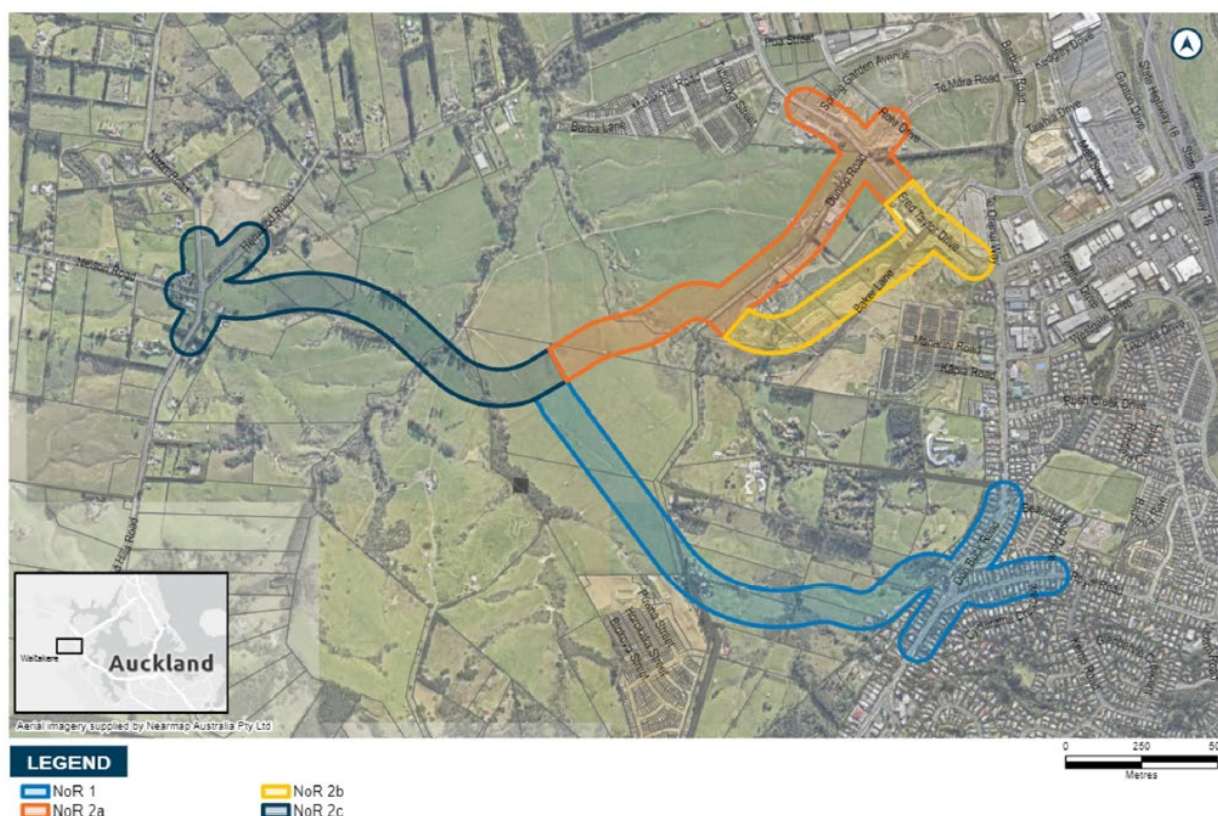


Figure 17: Map to show Redhills NoRs

- 14.4 The RATN consists of an East-West and a North-South arterial transport corridor (referred to as the E-W Project and the N-S Project respectively), each with capacity for a two-lane arterial standard carriageway and new footpaths and dedicated cycleways on both sides of the road. The indicative cross section is shown in Figure 18. To safely connect into the existing road network, the RATN also includes the upgrade of existing intersections where the new corridors will connect.

- 14.5 The existing environment and key features surrounding and within the RATN are described within section 3.2 of the Urban Design Evaluation²³. I agree with the description provided. This outlines that the Redhills area is predominantly rural in character. The lower northern portion of the Redhills area bordering Fred Taylor Drive is currently transitioning from rural to more urban/suburban as the greenfields land is developed.
- 14.6 The wider Redhills area is zoned for a range of residential and business land uses under the AUP:OP and this development is set to continue on the balance of land in general accordance with the Redhills Precinct Plan. Figure 19 shows the proposed new roads with zoning plan. Land use along the eastern extent (along Don Buck Road and Royal Road) is generally more suburban, characterised by predominantly low-density, single detached residential development.
- 14.7 I agree with the urban design evaluation that the RATN corridor alignments and function deliver a *“positive contribution to the sense of belonging and participation, as well as community resilience by supporting direct access to the location of the proposed Redhills local centre as shown on the Redhills Structure Plan”*²⁴
- 14.8 The urban design evaluation states that the E-W Project alignment accommodates a direct public transport connection along Dunlop Road between the Redhills local centre and Westgate town centre. This corridor will provide a connection for bus services from Redhills to Westgate, connecting the proposed local centre in Redhills to Fred Taylor Drive, which enables a connection with the Westgate Metropolitan Centre and the proposed public transit hub adjacent to SH16.
- 14.9 The N-S Project facilitates a direct public transport connection (as part of a local bus route loop) between the Redhills local centre and the public transport interchange potentially located at Royal Road / SH16.
- 14.10 The urban design evaluation discusses universal design for both the Redhills NoRs. I note the urban design evaluation states

*“the proposed E-W Project facilities, configuration and alignment accommodates the universal design approach and accessibility to all parts of user journeys”*²⁵ but that an issue has been raised for the N-S project. The evaluation states *“the existing topography and longitudinal grading of the proposed N-S Project require a maximum of 8% gradient on the approach to Don Buck Road. This physical environment will potentially pose a barrier to some users with disabilities or other physical ability limitations (for example, children, the elderly). Future design stages should include the demonstration of an access alternatives strategy that addresses universal access needs for the N-S Project”*²⁶.” I support this recommendation.

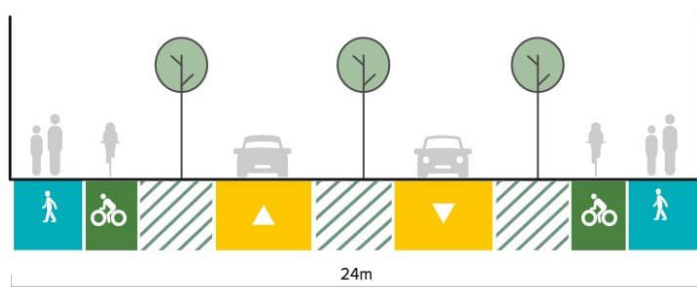


Figure 18: Indicative cross section for E-W Project and N-S Project

²³ Te Tupu Ngātahi Supporting Growth (2022) Redhills Arterial Transport Network Urban Design Evaluation P6-8

²⁴ Te Tupu Ngātahi Supporting Growth (2022) Redhills Arterial Transport Network Urban Design Evaluation, P11

²⁵ “ P12

²⁶ “ P12

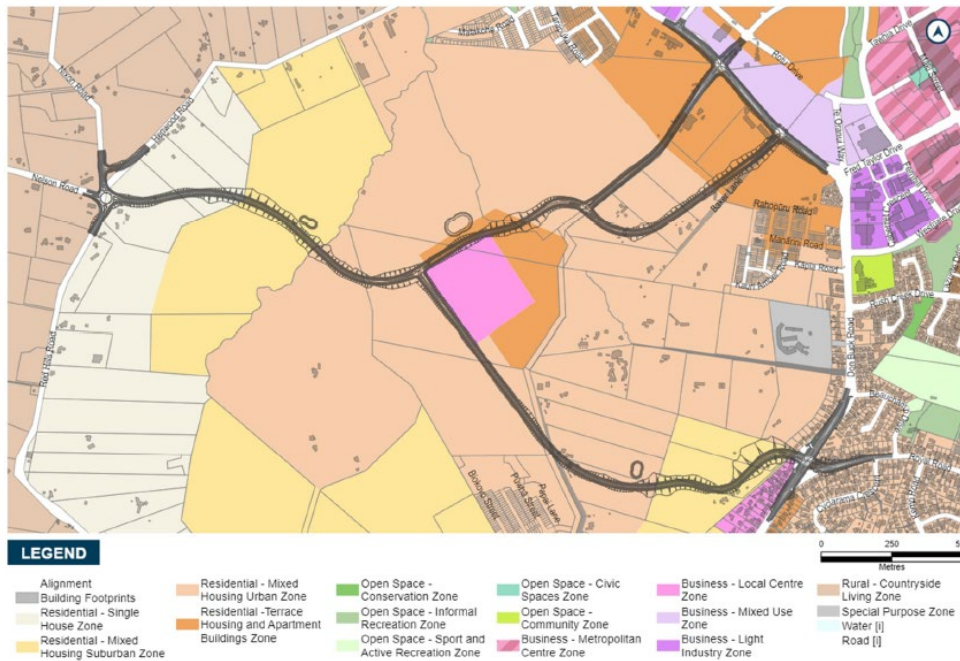


Figure 19: Redhills Precinct Plan zoning showing proposed Redhills Roding network

Submissions received on the Redhills Arterial NoRs

- 14.11 Sixty-eight submissions were received in relation to NoR1²⁷, NoR2a²⁸, NoR2b²⁹ and NoR2c³⁰. A number of submitters provided a single submission that cover all the Redhills Arterial Network. The key urban design matters raised relate to the extent of the corridor, effect of a change in road alignment to that shown in the Redhills Precinct Plan and consideration of existing resource consents.
- 14.12 Acanthus Limited (submitter 9 NoR 1), is concerned about the effect on Stages 5 and 6 of the Cardinal West development at 33 Red Hills Road due to the extent of the corridor required. Cardinal West is a 470-lot greenfield development located in Red Hills, Myland Partners (owner of Acanthus Limited) is the developer of Cardinal West. Stage 5 had a subdivision application underway at the time the NoR was lodged, and Stage 6 has resource consents in place. I agree with the submitter that the extent of corridor must take into account any existing resource consents. In terms of Stage 5, it is suggested SGA work with the submitter to reduce the extent of the corridor and consider options such as retaining walls.
- 14.13 Redhills Green Limited³¹ also submitted on NoR RE2, refer to paragraph 12.11. The concerns raised in the submission relate primarily to the proposed alignment of the corridor. The alignment of roads within NoR1 is of relevance from an urban design perspective given the location by land zoned local centre. The submitter seeks the proposed corridor is adjusted adjacent to/within the local centre zone. The NoRs propose to locate the arterial roads along the outer edges of the Local Centre zone, which differs from the alignment shown on the Redhills Precinct Plan. The submitter also notes that specific design of the arterial road is required in this location due to adjacent high-intensity development with strong pedestrian desire lines to cross the road. It is my opinion that this is adequately managed through condition 9 (d) of the ULDM which requires details of how the NoR 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. Subsection 11 requires

²⁷ Twenty-nine submissions were received in relation to NoR1

²⁸ Twelve submissions were received in relation to NoR 2a

²⁹ Fifteen submissions were received in relation to NoR 2b

³⁰ Twelve submissions were received in relation to NoR 2c

³¹ Submitter 14 NoR 1, Submitter 3, NoR 2a, Submitter 11 NoR2b, Submitter 8 NoR2c, Submitter 16 NoR RE2

walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections.

14.14 Stride Property Limited³² is a commercial property ownership company. The submitter owns and operates the NorthWest Shopping Centre on the parcel of land bounded by Maki Street, Rua Road and Gunton Drive, as well as NorthWest 2, the retail and commercial development on the opposite side of Maki Street which frames the town square. A single submission has been made for all of the HIF Redhills Network NoRs. Similar to Redhills Green Limited, discussed above, the Submitter is concerned that the proposed NoR corridor does not align with that shown in Redhills Precinct Plan and seeks amendments to ensure that the Redhills NoRs are aligned with the Redhills Precinct. Figure 20 below show the Redhills Precinct Plan in comparison to the NoRs proposed alignment. From an urban design perspective, the alignment of the corridor to the north and west of the local centre is positive as this will allow a finer grain road network to be developed that is accessed off the main arterial roads. Although I agree with the submitter that there are clear differences in the road alignment, I note that the roads shown in the Precinct Plan are indicative.

Figure 2 – Redhills Precinct – Precinct Plan 1 with zones

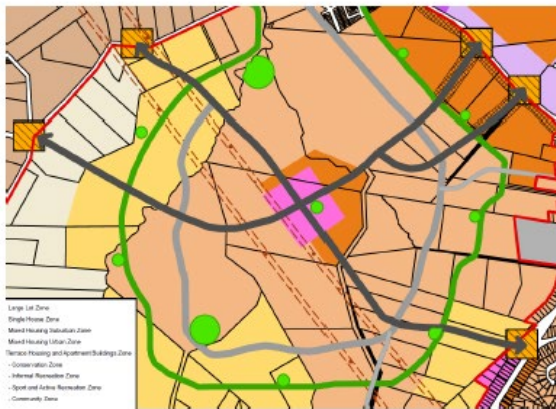


Figure 3 – Redhills Notices of Requirement with zones

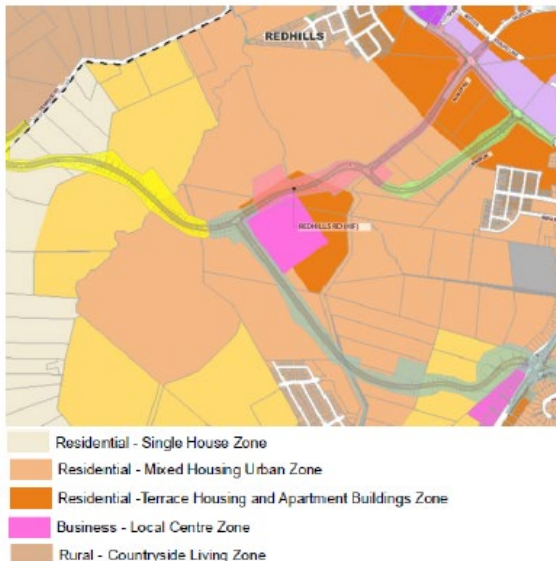


Figure 20: Proposed SGA road layout in relation to Redhills Precinct Plan source: submission 16, P5 of 8

14.15 Kāinga Ora³³ has concern about the extent of the corridor. This is discussed in paragraph 6.14.

³² Submitter 16 NoR 1, Submitter 10 NoR 2a, Submitter 12 NoR2b, Submitter 9 NoR 2c

³³ Submitter 19 NoR1, Submitter 12 NoR 2a, Submitter 15 NoR 2b, Submitter 12, NoR 2c

- 14.16 New South Development Limited and Lunar Trustee Services Limited³⁴. As outlined in paragraph 12.7, the Submitter is concerned that the NoR plans do not show how the upgraded and widened FTD / Kakano Road intersection will integrate with the already consented and proposed Henwood Road intersection design.
- 14.17 Submitter 7 Universal Homes Ltd³⁵, is the landowner of the West Hills Development site which includes 60-66 Fred Taylor Drive, Westgate. This site is within NoR 2a. The submitter is concerned that the Requiring Authority is designating more land than is required to construct Dunlop Road and for the intersection with NoR 2B (Baker Lane). Parts of 60-66 Fred Taylor Drive are proposed to be designated. The submitter is also concerned the proposed corridor has not taken account of existing ground conditions which have altered through various bulk earthworks consent that the UHL has given effect to across this part of the site. Universal Homes Ltd also submitted on NoR RE1, for further detail please refer to paragraph 11.10.
- 14.18 Submitter 7 also owns 60-68 Fred Taylor Drive and 550 Westgate Drive which would be directly affected by NoR 2b. The submitter is concerned that the Requiring Authority is designating more land than is required to construct Baker Lane and for the intersections with Dunlop Road and Fred Taylor Drive. The submitter is also concerned the proposed corridor has not taken account of existing ground conditions which have altered through various bulk earthworks consent that the UHL has given effect to across this part of the site nor the existing resource consents UHL has along this road corridor in terms of a new park, intersection with Rahopuru Road and riparian planting.
- 14.19 The Submitter seeks the extent of the designation is reduced to take account of the existing resource consents and master planning work undertake by UHL including contours, intersection alignment, riparian planting, stormwater assets, new parks and development blocks.
- 14.20 Submitter 9, Bunnings Ltd³⁶ also submitted on NoR 2b and NoR RE1, for further details please refer to para 11.11.
- 14.21 Submitter 13, The National Trading Company, also made a submission on RE1, for further details please refer to paragraph 11.12.

15 Trig Road Corridor Upgrade Project

- 15.1 The purpose of the proposed designation is for the construction, operation and maintenance of a transport corridor. Discretionary resource consent is also being sought to enable those activities which are not otherwise enabled by the proposed designation.
- 15.2 The Project consists of an upgrade of Trig Road to form an urbanised arterial corridor to support the anticipated extent of development in Whenuapai. To achieve a logical transport connection into the existing road network, it also includes the upgrade of approximately 500 metres of Hobsonville Road at the southern extent of the Project area. This includes signalisation of the existing intersections of Hobsonville Road with Trig Road and Luckens Road. It is proposed to widen and upgrade the existing Trig Road transport corridor from a 20m wide, two-lane rural road to a 24m wide, two-lane arterial standard transport corridor between the SH18 off-ramps and Hobsonville Road. See Figure 21 for an indicative cross section of Trig Road.

³⁴ Submitter 4, NoR2a, Submitter 4 NoR 2b

³⁵ Submitter 7 NoR 2a and 2b

³⁶ NoR 2b Submitter 9

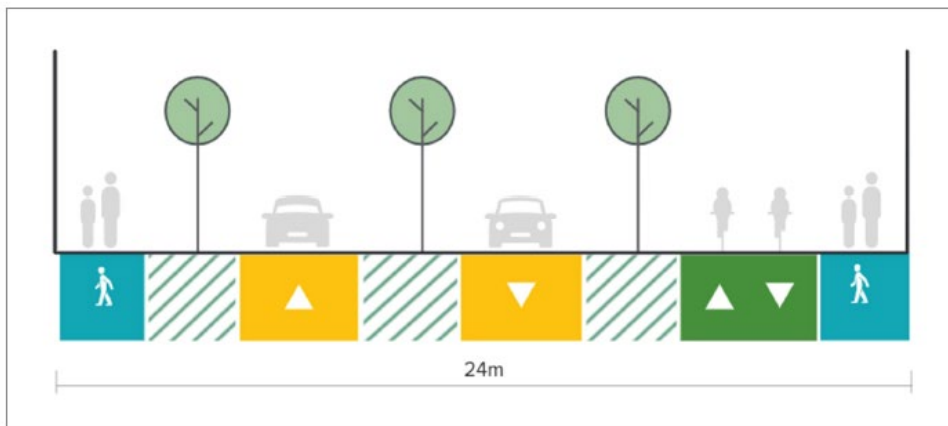


Figure 21: Indicative cross section for Trig Road

- 15.3 Trig Road is currently a rural road corridor with limited pedestrian, cycling or public transport facilities. The majority of land immediately adjacent to the corridor is currently zoned FUZ with a small area of residential fronting Hobsonville Road. It is characterised by a combination of residential, lifestyle block and rural properties with agricultural activities and groupings of plant nurseries.
- 15.4 Section 5.1.6 of the AEE³⁷ outlines the existing community and recreation facilities, I agree with what is identified. It is also noted that the property at 15 Trig Road is designated for Primary School and Early Childhood Education Centre. Two of the existing community facilities identified, Hilda Griffin Reserve (opposite the intersection of Trig Road and Hobsonville Road) and Hobsonville Kindergarten are within the designated area. All the other facilities identified are outside this area.
- No pedestrian or cycle connection is shown back to Hilda Griffin Reserve. It is recommended the proposed pedestrian and cycle paths link back into the reserve as this provides a connection to the residential area of West Harbour.
 - The frontage of Hobsonville Kindergarten, on Ryans Road is shown adjoining the designated area but no changes are proposed to the frontage of the kindergarten or the parking area on Ryans Road.
- 15.5 The WSP shows that land on Trig Road, north of Hobsonville Road is intended to be rezoned to Business - Light Industry in the long term. The WSP also indicates that Trig Road and Hobsonville Road will form part of the cycling network for Whenuapai and notes that this would include the provision of dedicated cycle facilities.
- 15.6 I agree with the urban design input section of the AEE³⁸ and support the route proposed subject to a pedestrian link being provided back to Hilda Griffin Reserve. This pedestrian link is required as it is part of a green link that runs from Hobsonville Road to Louise Place, Mona Vale and Midgley Road, connecting the cul de sacs within West Harbour back to Hobsonville Road. This is illustrated on Figure 22 and the photos in Figure 23 below.
- 15.7 It is recommended the ULDMP condition³⁹ be amended to include the text underlined:
- (d) To achieve the objective, the ULDMP(s) shall provide details of how the project:
- (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones;
 - (ii) Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections, including Hilda Griffin Reserve.

³⁷ Te Tupu Ngātahi – Supporting Growth (2022) *North West Assessment of Effects on the Environment – Trig Road Corridor Upgrade, Volume 2*, P45

³⁸ “ P57

³⁹ Appendix E Proposed Designation Conditions (Trig Road), Condition 9 P5



Figure 22: Aerial map to show green link from Hobsonville Road to Midgley Road



Figure 23: Photos to show pedestrian pathway through Hilda Griffin Reserve. Photo on the left shows the pathway looking south toward West Harbour. Photo on the right shows the access point from the end of Louise Place.

Submissions on Trig Road Corridor NoR

- 15.8 Sixteen submissions were received in relation to the Trig Road upgrade. The key issues raised of relevance from an urban design perspective relate to property access and the extent of the corridor.
- 15.9 Submitter 1, owner of 93 Hobsonville Road is concerned with access to their property.
- 15.10 Submitter 7, CDL Land New Zealand Limited, has extensive landholdings in the block bound by State Highway 16 to the west, State Highway 18 to the north, Trig Road to the east and Hobsonville Road to the south. The CDL land is approximately 14ha in area and has access to both Hobsonville Road and Trig Road (south), the latter being the subject of this NoR. CDL's landholdings forms a contiguous block that could be developed comprehensively. The submitter's land has frontage to Trig Road from 22A Trig Road. The submitter seeks assurances that the proposed works within the enlarged designation corridor will not prevent future access arrangements into its identified landholdings.
- 15.11 Submitter 9 is concerned with access to their property at 67 Trig Road to a public road to address the future implementation of the intended future intensification of use of the property as provided for by the Future Urban Zone.
- 15.12 Submitter 3, Ministry of Education, have a site designated for a new school and early childcare centre at 13-15 Trig Road, Whenuapai. The proposed designation overlaps with the Trig Road School designation by approximately 30 metres. The existing Trig Road corridor is 20 metres wide and the proposed corridor is 24 metres therefore, it is unlikely that the final road layout will encroach into the Ministry's designation substantially. The Submitter supports the inclusion of proposed condition 3, which requires the Requiring Authority to review its designation and pull it back after construction.
- 15.13 Submitter 6, West Harbour Cattery, is concerned that the designation extent will result in the loss of the existing car park and the effect this will have on their business.
- 15.14 Submitter 16 is from Kāinga Ora, also submitted on NoRs W1, W2, W3, W4, W5, RE1, please refer to paragraph 6.14.
- 15.15 It is recommended that the SGA Project Team reviews the extent of the designation in relation to the submitters properties, ensure suitable access can be retained. It is also recommended that any earthworks and battering that extends beyond existing property boundaries be designed in consultation with the relevant property owners to minimise any impact to private land.

16 Conclusions and recommendations

- 16.1 As previously stated in this memo, I support the approach and methodology undertaken in the UDE for these NoRs. While this is relatively high level and conceptual at this stage, in my opinion the urban design assessments have appropriately identified the opportunities and outcomes for each NoR that need to be incorporated as the project develops through the design stages. This will ensure appropriate outcomes for safe and attractive urban environments along the full length of the corridor.
- 16.2 Overall, the full length of the route proposed is supported as the most appropriate route from an urban design perspective to safeguard for public transport and active modes. However, I do agree with many of the submitters that further refinements are required to identify the extent of land proposed for widening and/or construction and ongoing operation, maintenance or mitigation of effects of the corridor to ensure that only the land area actually needed is taken.
- 16.3 I also agree with the submitters that the proposed designations need to take into account existing resource consents and consider existing ground conditions where these have been altered through consented earthworks. To achieve this, it is suggested the SGA project team work with submitters to identify relevant condition consents and review the approach to earthworks, as required.
- 16.4 I agree with submitters that maintaining property access is an important consideration. It is my opinion this is managed through consent conditions. It is recommended the SGA project team work with submitters concerned about property access to ensure a practical access can be provided in both the short and long term.
- 16.5 A number of submitters raised concern around the loss of existing carparking, especially in relation to existing businesses. To address this issue, it is recommended the SGA project team review the extent of the designation and where possible retain existing carparking for these businesses. From an urban design perspective, it is important to retain existing amenity planting where possible as planting provides an important buffer between buildings, car parking areas, pedestrian space and vehicle movement areas.

17 Conditions

- 17.1 I have reviewed the proposed conditions that will apply to the NoRs and make the following recommendations based on the above (underlined for additions and strikethrough for deletions):

Whenuapai Local Arterials, Redhills and Riverhead Local Arterials NoRs

- 17.2 An ULDMP condition is proposed for NoRs W1, W2, W4, W5, RE1, RE2 and R1.
- 17.3 It is recommended W3 – Brigham Creek Road upgrade, also uses this condition as the draft ULDMP condition for W3 is very similar.
- 17.4 It is recommended RE2 Fred Taylor Drive and W5 Hobsonville Road should use condition 9 opposed to this condition, as those NoRs relates to an existing designation.
- 17.5 The following changes are recommended (underlined):
- ULDMP Condition
- (a) A ULDMP shall be prepared in consultation with key stakeholders prior to the Start of Construction for a Stage of Work
- (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with Condition (Cultural Advisory Report] (c) may be reflected in the ULDMP. The objective of the ULDMP(s) is to:
- (i) enable integration of the Project's permanent works into the surrounding landscape, sense of place and urban context; and
 - (ii) ensure that the Project integrates with the existing and proposed active mode network;
 - (iii) ensure that the Project provides for high levels of connectivity, accessibility and safety for all users;
 - (iv) ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to the experience of a quality urban environment for people and communities.

- (c) The ULDM 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
 - (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version.
 - (vi) Waka Kotahi Aotearoa Urban Street Guide (2023);
 - (vii) Waka Kotahi Integrated Public Transport and Urban Form Guide (tbc);
 - (viii) Auckland Council's Auckland Design Manual; and
 - (ix) Auckland Council's Transport Emissions Reduction Pathway
- (d) To achieve the objective, the ULDM(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 (including Whenuapai Settlement Playground).
 - (ii) provides high quality and safe walking, cycling and micro-mobility connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections to the immediate neighbourhoods and wider community.
 - (iii) Promotes inclusive access (~~where appropriate~~)
 - (iv) Promotes a sense of personal and public safety by aligning with best practice guidelines, such as:
 - a. Crime Prevention Through Environmental Design (CPTED) principles;
 - b. Safety in Design (SID) requirements; and
 - c. Maintenance in Design (MID) requirements and anti-vandalism / anti-graffiti measures.
- (e) The ULDM(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
 - iii. landscape and urban design details – that cover the following:
 - a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment
 - b. Roadside elements – such as lighting, fencing, wayfinding and signage
 - c. architectural and landscape treatment of all major structures, including bridges and retaining walls
 - d. Architectural and landscape treatment of noise barriers
 - e. Landscape treatment of permanent stormwater control wetlands and swales
 - f. Integration of passenger transport
 - g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses
 - h. Historic heritage places with reference to the HHMP
 - i. Re-instatement of construction and site compound areas, driveways, accessways and fences.
 - j. Any retaining walls that affect existing residential lots in Whenuapai 1 Precinct that adjoin Brigham Creek Road must be as low as practicable and of a suitable finish to ensure existing residential dwellings have outlook over the street.

Alteration to existing designation conditions: W5 and RE2

17.6A ULDMP condition is proposed. I support this condition and suggest it uses the same wording as the ULDMP condition outlined above, with the addition of wording shown in italics underlined:

- (a) A ULDMP shall be prepared in consultation with key stakeholders prior to the Start of Construction for a Stage of Work
- (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with Condition (Cultural Advisory Report] (c) may be reflected in the ULDMP. The objective of the ULDMP(s) is to:
 - (i) enable integration of the Project's permanent works into the surrounding landscape, sense of place and urban context; and
 - (ii) ensure that the Project integrates with the existing and proposed active mode network;
 - (iii) ensure that the Project provides for high levels of connectivity, accessibility and safety for all users;
 - (iv) ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to the experience of a quality urban environment for people and communities.
- (c) The ULDMP shall be prepared in general accordance with:
 - i. Auckland Transport's Urban Roads and Streets Design Guide
 - ii. Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version
 - iii. Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version
 - iv. Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version
 - v. Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version.
 - vi. Waka Kotahi Aotearoa Urban Street Guide (2023);
 - vii. Waka Kotahi Integrated Public Transport and Urban Form Guide (tbc);
 - viii. Auckland Council's Auckland Design Manual; and
 - ix. Auckland Council's Transport Emissions Reduction Pathway
- (d) To achieve the objective, the ULDMP(s) shall provide details of how the project:
 - i. Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones
 - ii. provides high quality and safe walking, cycling, vehicular and micro-mobility connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections to the immediate neighbourhoods and wider community.
 - iii. Promotes inclusive access (~~where appropriate~~)
 - iv. Promotes a sense of personal and public safety by aligning with best practice guidelines, such as:
 - a. Crime Prevention Through Environmental Design (CPTED) principles;
 - b. Safety in Design (SID) requirements; and
 - c. Maintenance in Design (MID) requirements and anti-vandalism / anti-graffiti measures.
- (e) The ULDMP(s) shall include:

- iv. a concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals
- v. developed design concepts, including principles for walking and cycling facilities and public transport
- vi. landscape and urban design details – that cover the following:
 - a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment
 - k. Roadside elements – such as lighting, fencing, wayfinding and signage
 - l. architectural and landscape treatment of all major structures, including bridges and retaining walls
 - m. Architectural and landscape treatment of noise barriers
 - n. Landscape treatment of permanent stormwater control wetlands and swales
 - o. Integration of passenger transport
 - p. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses
 - q. Historic heritage places with reference to the HHMP
 - r. Re-instatement of construction and site compound areas, driveways, accessways and fences.
 - s. The design guides and urban design and landscape framework prepared for Redhills Green shall be considered.

Redhills Arterial Transport Network HIF NoRs

17.7 Condition 9 proposes a ULDMP Condition. I support the use of consistent wording across the local arterials and HIF NoRs for the ULDMP condition. The suggested wording for this condition is as follows:

- (a) A ULDMP shall be prepared in consultation with key stakeholders prior to the Start of Construction for a Stage of Work
- (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with Condition (Cultural Advisory Report] (c) may be reflected in the ULDMP. The objective of the ULDMP(s) is to:
 - i. enable integration of the Project's permanent works into the surrounding landscape, sense of place and urban context; and
 - ii. ensure that the Project integrates with the existing and proposed active mode network;
 - iii. ensure that the Project provides for high levels of connectivity, accessibility and safety for all users;
- iv. ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to the experience of a quality urban environment for people and communities.
- c) The ULDMP shall be prepared in general accordance with:
 - (i) Auckland Transport's Urban Roads and Streets Design Guide
 - (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version
 - (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version

- (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version
 - (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version.
 - (vi) Waka Kotahi Aotearoa Urban Street Guide (2023);
 - (vii) Waka Kotahi Integrated Public Transport and Urban Form Guide (tbc);
 - (viii) Auckland Council's Auckland Design Manual; and
 - (ix) Auckland Council's Transport Emissions Reduction Pathway
- d. To achieve the objective, the ULDMP(s) shall provide details of how the project:
- v. 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 (including Whenuapai Settlement Playground)
 - vi. provides high quality and safe walking, cycling, *vehicular* and micro-mobility connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections to the immediate neighbourhoods and wider community.
 - vii. Promotes inclusive access (~~where appropriate~~)
 - viii. Promotes a sense of personal and public safety by aligning with best practice guidelines, such as:
 - a. Crime Prevention Through Environmental Design (CPTED) principles;
 - b. Safety in Design (SID) requirements; and
 - c. Maintenance in Design (MID) requirements and anti-vandalism / anti-graffiti measures.
- (e) The ULDMP(s) shall include:
- i. a concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals
 - ii. developed design concepts, including principles for walking and cycling facilities and public transport
 - iii. landscape and urban design details – that cover the following:
 - a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment
 - b. Roadside elements – such as lighting, fencing, wayfinding and signage
 - c. architectural and landscape treatment of all major structures, including bridges and retaining walls
 - d. Architectural and landscape treatment of noise barriers
 - e. Landscape treatment of permanent stormwater control wetlands and swales
 - f. Integration of passenger transport
 - g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses
 - h. Historic heritage places with reference to the HHMP
 - i. Re-instatement of construction and site compound areas, driveways, accessways and fences.
 - j. The design guides and urban design and landscape framework prepared for Redhills Green shall be considered.
 - k. Access strategy in relation to the N-S Project to addresses universal access needs

Trig Road NoRs

17.8 Condition 9 proposes a ULDMP Condition. This condition is supported with the amendments to wording, for purposes of consistency in wording across conditions for local arterials and HIF NoRs.

- (a) A ULDMP shall be prepared in consultation with key stakeholders prior to the Start of Construction for a Stage of Work
- (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with Condition (Cultural Advisory Report] (c) may be reflected in the ULDMP. The objective of the ULDMP(s) is to:
- i. enable integration of the Project's permanent works into the surrounding landscape, sense of place and urban context; and
 - ii. ensure that the Project integrates with the existing and proposed active mode network;
 - iii. ensure that the Project provides for high levels of connectivity, accessibility and safety for all users;
 - iv. ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to the experience of a quality urban environment for people and communities.
- c) The ULDMP shall be prepared in general accordance with:
- (a) Auckland Transport's Urban Roads and Streets Design Guide
 - (b) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version
 - (c) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version
 - (d) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version
 - (e) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version.
 - (f) Waka Kotahi Aotearoa Urban Street Guide (2023);
 - (g) Waka Kotahi Integrated Public Transport and Urban Form Guide (tbc);
 - (h) Auckland Council's Auckland Design Manual; and
 - (i) Auckland Council's Transport Emissions Reduction Pathway
- d. To achieve the objective, the ULDMP(s) shall provide details of how the project:
- i. Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones (including Hilda Griffin Reserve)
 - ii. provides high quality and safe walking, cycling, vehicular and micro-mobility connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections to the immediate neighbourhoods and wider community,
 - iii. Promotes inclusive access (~~where appropriate~~)
 - iv. Promotes a sense of personal and public safety by aligning with best practice guidelines, such as:
 - a. Crime Prevention Through Environmental Design (CPTED) principles;
 - b. Safety in Design (SID) requirements; and
 - c. Maintenance in Design (MID) requirements and anti-vandalism / anti-graffiti measures.
- (e) The ULDMP(s) shall include:
- i. a concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals
 - ii. developed design concepts, including principles for walking and cycling facilities and public transport
 - iii. landscape and urban design details – that cover the following:

- a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment
- b. Roadside elements – such as lighting, fencing, wayfinding and signage
- c. architectural and landscape treatment of all major structures, including bridges and retaining walls
- d. Architectural and landscape treatment of noise barriers
- e. Landscape treatment of permanent stormwater control wetlands and swales
- f. Integration of passenger transport
- g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses
- h. Historic heritage places with reference to the HHMP
- i. Re-instatement of construction and site compound areas, driveways, accessways and fences.

All NoRs

17.9 The following designation review condition should apply to all the NoRs.

(a) The Requiring Authority shall within ~~6 months of Completion of Construction or as soon as otherwise practicable~~ 12 months of lodgement of the outline plan of works:

(i) in conjunction with the landowner(s), review the extent of the designation required for construction purposes and identify any areas that are no longer required for the on-going operation, maintenance or mitigation of effects of the Project

(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.

Jennifer Esterman

MUrbDes, BPlan, Int. NZPI

ATTACHMENT 4
SUMMARY OF SUBMISSIONS

Attachment 4

Summary of Submissions

TRHIF

Trig Road Corridor Upgrade (West Harbour)

Notice of Requirement - Trig Road Corridor Upgrade (NoR HIFTR) Auckland Transport

Summary of Submissions

Sub #	Submitter Name	Oppose/Support	Relief Sought
1.1	Marvin Rey Garcia	Oppose	Consider alternative options as detailed in submission, including a bypass road or roundabout to avoid the need for traffic lights at the intersection of Hobsonville Road and Trig Road.
2.1	Hsiu Ho Lin c/- Joe Liu	Support	Appropriate compensation for loss of property, clear information around timing and scheduling of projects, disruption to property owners is mitigated.
3.1	Ministry of Education	Neutral	The Ministry support proposed Condition 3: The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable following Completion of Construction the Requiring Authority shall: (a) 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 (b) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.
3.2	Ministry of Education	Neutral	The Ministry seeks the following relief for Condition 12: (a) A SCEMP shall be prepared prior to the start of Construction for a Stage of Work. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged communicated with throughout the Construction Works. To achieve the objective, the SCEMP shall include: (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s); (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works; (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua; (iv) <u>methods for engaging with Trig Road School. The School must be contacted ten working days prior to the start of any construction within 100m of the school boundary. Contact details of the construction manager must be shared with Trig Road School (should the school have any safety concerns during construction).</u> (v) a list of stakeholders, organisations (such as community facilities) and businesses and persons who will be engaged <u>and communicated</u> with; (vi) Identification of the properties whose owners will be engaged with; (vii) methods to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above; and surrounding businesses and residential communities; (viii) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant. (b) 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.
3.3	Ministry of Education	Neutral	The Ministry seeks the following relief for Condition 15: (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work. (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects. To achieve this objective, the CTMP shall include: (i) ... (ii) <u>How heavy vehicles will avoid travelling along Trig Road, between SH16 and Hobsonville Road, during school pick-up and drop-off times (between 8.15am - 9.10am and 3.00pm - 3.30pm) during term time. Engagement should be undertaken with the school prior to construction to confirm the restricted times still reflect the school's peak pick up and drop off times. It is noted that new schools could establish around the project area before construction commences. Any new school on an identified construction route must be engaged. Heavy vehicle movements must also avoid these schools at their peak pick up and drop off time.</u> (iii) <u>Details of consultation (including outcomes agreed) with the applicant and Trig Road School with regard to maintaining the safety of school students during construction. Details of all safety measures and interventions will be documented in the Construction Traffic Management Plan.</u> (iv) <u>Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving the school, and to look out for school children and reversing vehicles at all times.</u> (c) Any CTMP 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.
4.1	Alex Robin Nieuwenhuis	Oppose	Decline the Notice of Requirement and invest more money and time into motorway access (specifically near Hobsonville Industrial Area).
4.2	Alex Robin Nieuwenhuis	Oppose	Look closer into the intersection of Trig Road and Luckens Road [Option C].
5.1	Peixia Feng	Oppose	Adopt Option C, as opposed to the option that has been proposed.

6.1	West Harbour Cattery	Oppose	Adopt Option C, as opposed to the option that has been proposed.
7.1	CDL Land New Zealand Limited		The Submitter seeks that NoR Trig be accepted provided conditions are inserted to address the following: a) That the designation be amended and conditions imposed on it to ensure that: i. Future access from Trig Road into the CDL land is protected, including the possibility of access via a collector road from Trig Road and a new intersection north of Ryans Road ii. Trig Road is classified as a local arterial road, rather than a limited access road under section 346C of the Local Government Act 1974.
7.2	CDL Land New Zealand Limited		b) That conditions are imposed on the designation to ensure that: i. Prior to the commencement of construction in the vicinity of the CDL land, a site-specific construction management plan applying to the area in the immediate vicinity of the CDL land is: • Prepared by the requiring authority in consultation with the Submitter; • Provided to Council, along with details of the Submitter's observations and comments on the plan, if any; and • Approved by the Council. ii. The extent of the designation is reduced as soon as possible once construction in the immediate vicinity of the CDL land is completed, so that the residual designation includes only those areas necessary for the permanent operation and maintenance of the proposed work, or mitigation of effects generated by it.
8.1	Corban Revell Lawyers	Oppose	Decline the Notice of Requirement and conduct further research into whether the widening of Hobsonville Road is necessary to make room for more traffic and conduct further research into the effects on the current environment, visually, ecologically, and economically.
8.2	Corban Revell Lawyers	Oppose	Consider alternative options. Planning should be revisited and reassessed for alternative ways in how the road can be widened.
8.3	Corban Revell Lawyers	Oppose	Re-assess noise and vibration effects of the project and shorten construction times if NoR is approved.
9.1	Peng Li	Oppose	Amend the Notice of Requirement to provide the affected property with legal access to a public road to enable future subdivision and intensification of the property.
10.1	Aimee Kuei Ling Lin	Neutral	Provision of civil infrastructure (particularly improvements to the stormwater and wastewater system) for future development and rezoning
11.1	Davenports West Lawyers	Oppose	Decline the Notice of Requirement and conduct further research into whether the widening of Hobsonville Road is necessary to make room for more traffic and conduct further research into the effects on the current environment, visually, ecologically, and economically.
11.2	Davenports West Lawyers	Oppose	Consider alternative options. Planning should be revisited and reassessed for alternative ways in how the road can be widened.
11.3	Davenports West Lawyers	Oppose	Re-assess noise and vibration effects of the project and shorten construction times if NoR is approved.
12.1	Watercare Services Limited	Neutral	Amendments to the NoRs, including conditions or other consequential amendments, to ensure any adverse effects on Watercare's assets and operations are avoided, remedied or mitigated

13.1	Telecommunications Submitters	Oppose	<p>Add new condition: Network Utility Management Plan (NUMP)</p> <p><u>(a) A NUMP shall be prepared prior to the Start of Construction for a Stage of Work.</u></p> <p><u>(b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:</u></p> <p><u>(i) provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;</u></p> <p><u>(ii) manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; and (iii) demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical Hazards on Metallic Pipelines; and AS/NZS 2885 Pipelines – Gas and Liquid Petroleum.</u></p> <p><u>(c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s).</u></p> <p><u>(d) The development of the NUMP shall consider opportunities to coordinate future work programmes with other Network Utility Operator(s) where practicable.</u></p> <p><u>(e) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.</u></p> <p><u>(f) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.</u></p> <p><u>(g) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.</u></p> <p><u>Advice Note:</u></p> <p><u>For the purposes of this condition, relevant telecommunications network utility operators include companies operating both fixed line and wireless services. As at the date of designation these include Aotearoa Towers Group, Chorus New Zealand Limited, Connexa Limited, One New Zealand Limited, Spark New Zealand Trading Limited and Two Degrees Mobile Limited (and any subsequent entity for these network utility operators).</u></p>
13.2	Telecommunications Submitters	Oppose	<p>Add a new condition to each notice of requirement as follows:</p> <p><u>XX: The Requiring Authority shall consult with Network Utility Operators during the detailed design phase to identify opportunities to enable, or not preclude, the development of new network utility facilities including access to power and ducting within the Project, where practicable to do so. The consultation undertaken, opportunities considered, and whether or not they have been incorporated into the detailed design, shall be summarised in the Outline Plan or Plans prepared for the Project.</u></p>
14.1	NZRPG	Support	<p>These proposals should not proceed until the outstanding list of infrastructure projects at Westgate have been completed. We would like further information on how these proposals interconnect with those incomplete roads, including but not limited to, the incomplete northside drive (east and overbridge), the northside drive motorway ramps, the Westgate bus interchange, the incomplete conversion of Fred Taylor Drive between SH16 and Don Buck Road roundabout a road appropriate to travel through a Metropolitan Centre.</p>
15.1	Lakshman Vadhiparthi	Oppose	<p>Detailed information around how property is affected.</p>
16.1	Kāinga Ora Homes and Communities	Support in part	<p>(a) The provision of a condition which requires that, where property access that exists at the time of submitting the OPW is altered by the Project, that the Requiring Authority shall consult with the directly affected land owner regarding the changes requires and the OPW should demonstrate how safe alternative access will be provided.</p>
16.2	Kāinga Ora Homes and Communities	Support in part	<p>(b) That flooding condition is amended to require the Requiring Authority to ensure that the Project does not worsen any flooding effects onto neighbouring properties and appropriately avoids, remediates and/or mitigates the effects of their construction activities.</p>
16.3	Kāinga Ora Homes and Communities	Support in part	<p>(c) The provision of a condition requiring operational noise levels to not exceed 55dBA beyond the boundaries of the designation and, where exceeded at a sensitive receiver, mitigation to then be provided by the Requiring Authority.</p> <p>(d) That where the operational noise effects require mitigation that the offer for mitigation is retained in perpetuity, until an offer is taken up.</p> <p>(e) That low noise road surface condition is amended to require this to be on all roads within the designation.</p>
16.4	Kāinga Ora Homes and Communities	Support in part	<p>(f) That the Designation Review condition should be amended to:</p> <p>(i) add a clause requiring the Requiring Authority to, once the land is relinquished from the designation, leave the subject land in a suitable condition in agreement with the property owner/s; and</p> <p>(ii) add a clause requiring the Requiring Authority to assess in conjunction with the land owner, every 12 months following the lodgement of OPW(s), whether any areas of the designation that have been identified as required for construction purposes are still required, and identify any areas that are no longer required, and give notice to the Council in accordance with section 182 for the removal of those parts no longer required.</p> <p>(g) Such further or other relief, or other consequential or other amendments, as are considered appropriate and necessary to address the concerns set out herein.</p>

ATTACHMENT 5

PROPOSED NOTICE OF REQUIREMENT CONDITIONS

Attachment 5

Proposed Notice of Requirement Conditions

TRHIF

Trig Road Corridor Upgrade (West Harbour)

TRHIF – Trig Road Corridor Upgrade

Designation Number	XXXX
Requiring Authority	Auckland Transport
Location	XXX
Lapse Date	<u>In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within 10 years from the date on which it is included in the AUP.</u>

Purpose

Construction, operation and maintenance of an arterial transport corridor

Conditions

Abbreviations and definitions

Activity sensitive to noise	Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centre, lecture theatre in a tertiary education facility, classroom in an education facility and healthcare facility with an overnight stay facility.
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
AUP	Auckland Unitary Plan
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
Certification	Confirmation from the Manager that a material change to a <u>plan or</u> CNVMP Schedule has been prepared in accordance with the condition to which it relates. A material change to a management plan or CNVMP Schedule shall be deemed certified: (a) where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified (b) ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received (c) five working days from the submission of the material change to a CNVMP Schedule where no written confirmation of certification has been received.
CNVMP	Construction Noise and Vibration Management Plan
CNVMP Schedule or Schedule	A schedule to the CNVMP

Completion of Construction	When construction of the Project (or part of the Project) is complete and it is available for use.
Confirmed Biodiversity Areas	Areas recorded in the Identified Biodiversity Area Schedule where the ecological values and effects have been confirmed through the ecological survey under Condition 21.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CTMP	Construction Traffic Management Plan
EMP	Ecological Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018 <u>or any updated version</u> .
Enabling works	Includes, but is not limited to, the following and similar activities: <ul style="list-style-type: none"> • geotechnical investigations (including trial embankments) • archaeological site investigations • formation of access for geotechnical investigations • establishment of site yards, site entrances and fencing • constructing and sealing site access roads • demolition or removal of buildings and structures • relocation of services • establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting).
Existing authorised habitable floor	The floor level of any room (floor) in a residential building which is authorised by building consent and exists at the time the outline plan is submitted, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
HHMP	Historic Heritage Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Identified Biodiversity Area	Means an area or areas of ecological value where the Project ecologist has identified that the project will potentially have a moderate or greater level of ecological effect, prior to implementation of impact management measures, as determined in accordance with the EIANZ guidelines.
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.
Mana Whenua	Mana Whenua as referred to in the conditions is considered to be (as a minimum but not limited to) the following (in no particular order), who at the time of Notice of Requirement expressed a desire to be involved in the Project: <ul style="list-style-type: none"> • Ngāti Whātua o Kaipara • Te Kawerau a Maki • Ngāti Whanaunga • Te Ākitai Waiohua

Maximum Probable Development	Design case for consideration of future flows allowing for development within a catchment that takes into account the maximum impervious surface limits of the current zone or, if the land is zoned Future Urban in the Auckland Unitary Plan, the probable level of development arising from zone changes.
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
NOR	Notice of Requirement
NZAA	New Zealand Archaeological Association
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Pre-Project development	Existing site condition prior to the Project (including existing buildings and roadways).
Post-Project development	Site condition after the Project has been completed (including existing and new buildings and roadways).
Project Liaison Person	The person or persons appointed for the duration of the Project's Construction Works to be the main point of contact for persons wanting information about the Project or affected by the Construction Works.
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: Acoustics – Road-traffic noise – New and altered roads.
Requiring Authority	Has the same meaning as section 166 of the RMA and, for this Designation is Auckland Transport.
RMA	Resource Management Act (1991)
SCEMP	Stakeholder Communication and Engagement Management Plan
Stage of Work	Any physical works that require the development of an Outline Plan.
Start of Construction	The time when Construction Works (excluding Enabling Works) start.
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability, experience and competence in the relevant field of expertise.
ULDMP	Urban and Landscape Design Management Plan
Urban Zoning	Land zoned residential or business, together with adjoining special purpose and open space zones.

1. Activity in General Accordance with Plans and Information

- (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in schedule 1:
- (b) Where there is inconsistency between:
 - (i) the documents listed in condition 1(a) above Project description and concept plan in Schedule 1 and the requirements of the following conditions, the conditions shall prevail;
 - (ii) the document listed in condition 1(a) above Project description and concept plan in Schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.

2. Project Information

- (a) A project website, or equivalent virtual information source, shall be established within 12 months of the date on which this designation is included in the AUP. All directly affected owners and occupiers shall be notified in writing once the website or equivalent information source has been established. The project website or virtual information source shall include these conditions and shall provide information on:
 - (i) the status of the Project
 - (ii) anticipated construction timeframes; and
 - (iii) contact details for enquiries.
 - (iv) a subscription service to enable receipt of project updates by email; and
 - (v) how to apply for consent for works in the designation under s176(1)(b) of the RMA.
 - (vi) the implications of the designation for landowners, occupiers and business owners and operators within the designation.
- (b) At the start of detailed design for a Stage of Work, the project website or virtual information source shall be updated to provide information on the likely date for Start of Construction, and any staging of works.

3. Designation Review

- (a) The Requiring Authority shall within 6 months of Completion of Construction or as soon as otherwise practicable:
 - (i) In conjunction with landowner(s) review the extent of the designation required for construction purposes to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and
 - (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.

4. Lapse

- (a) In accordance with section 184(1)(c) of the RMA, this designation shall lapse if not given effect to within ~~45~~ 10 years from the date on which it is included in the AUP.

5. Network Utility Operators (Section 176 Approval)

- (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities:
 - (i) operation, maintenance and urgent repair works
 - (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations
 - (iii) minor works such as new service connections
 - (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility.
- (b) To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.

6. Outline Plan

- (a) An Outline Plan (or Plans) shall be prepared in accordance with section 176A of the RMA.
- (b) Outline Plans (or Plan) may be submitted in parts or in stages to address particular activities (e.g. design or construction aspects), or a Stage of Work of the Project
- (c) Outline Plans shall include any management plan or plans that are relevant to the management of effects of those activities or Stage of Work, which may include:
 - (i) Construction Environmental Management Plan
 - (ii) Construction Traffic Management Plan
 - (iii) Construction Noise and Vibration Management Plan
 - (iv) Urban and Landscape Design Management Plan
 - (v) Ecological Management Plan
 - (vi) Tree Management Plan.

7. Management Plans

- (a) Any management plan shall:
 - (i) Be prepared and implemented in accordance with the relevant management plan condition;
 - (ii) Be prepared by a Suitably Qualified Person(s);
 - (iii) Include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates.
 - (iv) Summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have:
 - a. Been incorporated; and
 - b. Where not incorporated, the reasons why.
 - (v) Be submitted to Council for certification as part of an Outline Plan pursuant to s176A of the RMA, with the exception of SCEMPs and CNVMP Schedules
 - (vi) Once finalised certified, uploaded to the Project website or equivalent virtual information source.
- (b) Any management plan developed in accordance with Condition 7 may:
 - (i) Be submitted in parts or in stages to address particular activities (e.g. design or construction aspects) a Stage of Work of the Project, or to address specific activities authorised by the designation
 - (ii) Except for material changes, be amended to reflect any changes in design, construction methods or management of effects without further process.
 - (iii) If there is a material change required to a management plan which has been submitted with an Outline Plan, the revised part of the plan shall be submitted to the Council as an update to the Outline Plan or for Certification as soon as practicable following identification of the need for a revision;
- (c) Any material changes to the SCEMPs, CEMPS or CTMPS are to be submitted to the Council for information certification.

Advice Note:

Certification of the Management Plans, listed above in Condition 6(c), by the council relates only to those aspects of the management plan that are relevant under the Resource Management Act 1991. The certification does not amount to an approval or acceptance of suitability by the council of any elements of the management plan that relate to other legislation, for example, but not limited to, the Building Act 2004, the Heritage New Zealand Pouhere Taonga Act 2014, or the Health and Safety in Employment Act 1992.

8. Cultural Advisory Report

- (a) At least six (6) months prior to the start of detailed design for a Stage of Work, Mana Whenua shall be invited to prepare a Cultural Advisory Report for the Project
- (b) The objective of the Cultural Advisory Report is to assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the Project, to inform their management and protection. To achieve the objective, the Requiring Authority shall invite Mana Whenua to prepare a Cultural Advisory Report that:
 - (i) Identifies the cultural sites, landscapes and values that have the potential to be affected by the construction and operation of the Project
 - (ii) Sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values
 - (iii) Identifies traditional cultural practices within the area that may be impacted by the Project
 - (iv) Identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area
 - (v) Taking into account the outcomes of (i) to (iv) above, identify cultural matters and principles that should be considered in the development of the Urban and Landscape Design Management Plan and Historic Heritage Management Plan, and the Cultural Monitoring Plan referred to in Condition 14.
 - (vi) Identifies and (if possible) nominates traditional names along the Project alignment. Noting there may be formal statutory processes outside the project required in any decision-making.
- (c) The desired outcomes for management of potential effects on cultural sites, landscapes and values identified in the Cultural Advisory Report shall be discussed with Mana Whenua and those outcomes reflected in the relevant management plans where practicable.
- (d) Conditions 8(b) and (c) above will cease to apply if:
 - (i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and
 - (ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.

9. Urban and Landscape Design Management Plan (ULDMP)

- (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work in consultation with key stakeholders (including Auckland Council) and submitted to the Manager for certification.
- (b) Mana Whenua shall be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including how desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed in accordance with Condition 8(c) may be reflected in the ULDMP. The objective of the ULDMP(s) is to:
 - (i) Enable integration of the Project's permanent works into the surrounding landscape, sense of place, and urban context; and
 - (ii) Ensure that the Project manages potential adverse landscape and visual effects as far as practicable and contributes to the experience of a quality urban environment for people and communities;
 - (iii) Ensure that the Project integrates with the existing and proposed active mode network;
 - (iv) Ensure that the Project provides for high levels of connectivity, accessibility and safety for all users;
- (c) The ULDMP shall be prepared in general accordance with:
 - (i) Auckland Transport's Urban Roads and Streets Design Guide
 - (ii) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version;
 - (iii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version
 - (iv) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version;
 - (v) Auckland's Urban Ngahere (Forest) Strategy or any subsequent updated version;
 - (vi) Waka Kotahi Aotearoa Urban Street Guide (2023);
 - (vii) Waka Kotahi Integrated Public Transport and Urban Form Guide (tbc);

- (viii) Auckland Council's Auckland Design Manual; and
 - (ix) Auckland Council's Transport Emissions Reduction Pathway.
- (d) To achieve the objective, the ULDMP(s) shall provide details of how the project:
- (i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones
 - (ii) Provides ~~appropriate~~ high quality and safe walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking, ~~and cycling, vehicular, and micro-mobility connections to the immediate neighbourhoods and wider community, including Hilda Griffin Reserve;~~
 - (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
 - c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures.
- (e) The ULDMP(s) shall include:
- (i) a concept plan – which depicts the overall landscape and urban design concept, and explain the rationale for the landscape and urban design proposals
 - (ii) developed design concepts, including principles for walking and cycling facilities and public transport
 - (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 fillbatters and the interface with adjacent land uses, benching, spoil disposal sites, median width and treatment, roadside width and treatment;
 - b. Roadside elements – such as lighting, fencing, wayfinding and signage;
 - c. architectural and landscape treatment of all major structures, including bridges and retaining walls
 - d. Architectural and landscape treatment of noise barriers;
 - e. Landscape treatment of permanent stormwater control wetlands and swales;
 - f. Integration of passenger transport;
 - g. Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses;
 - h. Re-instatement of construction and site compound areas, driveways, accessways and fences.
- (f) The ULDMP shall also include the following planting details and maintenance requirements:
- (i) planting design details including:
 - a. identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan and Ecological Management Plan. Where practicable, mature trees and native vegetation should be retained;
 - b. street trees, shrubs and ground cover suitable for berms;
 - c. treatment of fill slopes to integrate with adjacent land use, streams, riparian margins and open space zones;
 - d. planting of stormwater wetlands;
 - e. identification of vegetation to be retained and any planting requirements under Conditions 22 and 23;
 - f. integration of any planting requirements required by conditions of any resource consents for the project;
 - g. re-instatement planting of construction and site compound areas as appropriate.
 - (ii) a planting programme including the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each Stage of Work; and
 - (iii) detailed specifications relating to the following:
 - a. weed control and clearance
 - b. pest animal management (to support plant establishment)
 - c. ground preparation (top soiling and decompaction)
 - d. mulching

- e. plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species.

Advice Note: *This designation is for the purpose of construction, operation and maintenance of an arterial transport corridor and it is not for the specific purpose of “road widening”. Therefore, it is not intended that the front yard definition in the Auckland Unitary Plan which applies a set back from a designation for road widening purposes applies to this designation. A set back is not required to manage effects between the designation boundary and any proposed adjacent sites or lots.*

10. Flood Hazard

- (a) The Project shall be designed to achieve the following flood risk outcomes:
 - (i) no increase in flood levels in a 1% AEP event for existing authorised habitable floors that are already subject to flooding or have a freeboard less than 150mm;
 - (ii) no more than a 10% reduction in freeboard in a 1% AEP event for existing authorised habitable floors with a freeboard of over 150mm;
 - (iii) no increase in 1% AEP flood levels for existing authorised community, commercial and industrial building floors that are already subject to flooding;
 - (iv) no more than a 10% reduction in freeboard in a 1% AEP event for existing authorised community, commercial and industrial building floors;
 - (v) no increase of more than 50mm in flood level in a 1% AEP event on land zoned for urban or future urban development where there is no existing dwelling;
 - (vi) no increase in flood levels in a 1% AEP event for infrastructure;
 - (vii) no loss in overland flow path capacity, unless provided by other means;
 - (viii) no new flood prone areas; and
 - (ix) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted. The assessment should be undertaken for the 50%, 20%, 10% and 1% AEP rainfall events.
- (b) Compliance with (a) and this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project ~~400-year ARI~~ 10% and 1% AEP flood levels (for Maximum Probable Development land use and including climate change effects). The flood modelling details shall be reviewed and agreed with Auckland Council Healthy Waters (or its equivalent) during the preparation of the Outline Plan.
- (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths or varied through agreement with the relevant landowner, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work or alternative outcome.

Advice Note:

It is recommended the flood modelling details be reviewed and agreed with Auckland Council Healthy Waters (or its equivalent) during the preparation of the Outline Plan.

11. Construction Environmental Management Plan (CEMP)

- (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work and shall be submitted to the Manager for certification.
- (b) The CEMP development must include input from an experienced suitably qualified and experienced person and have regard to the effects of temporary works, earthworks, storage materials and temporary diversion and drainage on flow paths, flow level and velocity, and details of the construction and upgrades of culverts, culvert crossings, drains, stormwater wetlands and dry ponds, and bridges.

Including:

- (i) siting construction yards and stockpiles outside the flood plain
- (ii) diverting overland flow paths away from area of work

- (iii) minimising the physical obstruction to flood flows at the road sag points
 - (iv) staging and programming to provide new drainage prior to raising road design levels and carry out work when there is less risk of high flow events
 - (v) methods to reduce the conveyance of materials and plant that is considered necessary to be stored or sited within the flood plain (e.g. actions to take in response to the warning of heavy rainfall events)
- (c) ~~(b)~~ The objective of the CEMP is to set out the management procedures and construction methods to be undertaken to, avoid, remedy or mitigate any adverse effects associated with Construction Works as far as practicable. To achieve the objective, the CEMP shall include:
- (i) the roles and responsibilities of staff and contractors;
 - (ii) details of the site or project manager and the Project Liaison Person, including their contact details (phone and email address);
 - (iii) the Construction Works programmes and the staging approach, and the proposed hours of work;
 - (iv) details of the proposed construction yards including temporary screening when adjacent to residential areas, locations of refuelling activities and construction lighting;
 - (v) methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places;
 - (vi) methods for providing for the health and safety of the general public;
 - (vii) procedures for incident management;
 - (viii) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses;
 - (ix) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up;
 - (x) procedures for responding to complaints about Construction Works; and
 - (xi) methods for amending and updating the CEMP as required.
 - (xii) methods to manage flood risk during construction, including methods to respond to warnings of heavy rain.

12. Stakeholder and Communication and Engagement Management Plan(SCEMP)

- (a) A SCEMP shall be prepared prior to the Start of Construction for a Stage of Work and submitted to the Manager for certification. The objective of the SCEMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged communicated with throughout the Construction Works.

The objectives of the SCEMP are to:

- (i) identify how the public, community and stakeholders (including directly affected businesses, community organisations, landowners and occupiers) will be proactively engaged with during the planning stage, and throughout the construction phase.
 - (ii) develop and maintain relationships over the time period from planning to completion of construction with the community and the diverse range of stakeholders.
 - (iii) provide a framework to identify, record and respond to concerns raised by the public, community and stakeholders during the planning and construction phase.
 - (iv) Ensure that current and new stakeholders are provided the opportunity to obtain information, and engage with the project, and clearly understand the implications of the designation and the construction works.
- (b) To achieve the objective, the SCEMP shall include:
- (i) a description of the approach to achieve the objectives of the SCEMP;
 - (ii) 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);
 - (iii) 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
 - (iv) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua;
 - (v) methods for engaging with Trig Road School. The School must be contacted ten working days prior to the start of any construction within 100m of the school boundary. Contact

details of the construction manager must be shared with Trig Road School (should the school have any safety concerns during construction).

- (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 to communicate key project milestones and the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to the parties identified in (iv) and (v) above
 - (ix) linkages and cross-references to communication and engagement methods set out in other conditions and management plans where relevant.
- (c) The initial SCEMP for the planning phase shall be prepared within six months of confirmation of the NoR and submitted to Council for certification.
- (d) ~~(b)~~ Any subsequent SCEMP prepared for a Stage of Work shall be submitted to Council for information certification ten working days prior to the Start of Construction for a Stage of Work.

13. Complaints Register

- (a) At all times during Construction Works, a record of any complaints received about the Construction Works shall be maintained. The record shall include:
- (i) The date, time and nature of the complaint
 - (ii) The name, phone number and address of the complainant (unless the complainant wishes to remain anonymous)
 - (iii) Measures taken to respond to the complaint (including a record of the response provided to the complainant) or confirmation of no action if deemed appropriate
 - (iv) The outcome of the investigation into the complaint
 - (v) Any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-project construction, fires, traffic accidents or unusually dusty conditions generally.
- (b) A copy of the Complaints Register required by this condition shall be made available to the Manager upon request as soon as practicable after the request is made.

14. Cultural Monitoring Plan

- (a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person(s) identified in collaboration with Mana Whenua
- (b) The objective of the Cultural Monitoring Plan is to identify methods for undertaking cultural monitoring to assist with management of any cultural effects during Construction works
- (c) The Cultural Monitoring Plan shall include:
- (i) Requirements for formal dedication or cultural interpretation to be undertaken prior to start of Construction Works in areas identified as having significance to Mana Whenua
 - (ii) Requirements and protocols for cultural inductions for contractors and subcontractors
 - (iii) Identification of activities, sites and areas where cultural monitoring is required during particular Construction Works
 - (iv) Identification of personnel to undertake cultural monitoring, including any geographic definition of their responsibilities
 - (v) Details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of the Accidental Discovery Protocol
- (d) If Enabling Works involving soil disturbance are undertaken prior to the start of Construction Works, an Enabling Works Cultural Monitoring Plan shall be prepared by a Suitably Qualified Person identified in collaboration with Mana Whenua. This plan may be prepared as a standalone Enabling Works Cultural Monitoring Plan or be included in the main Construction Works Cultural Monitoring Plan.

Advice Note: *Where appropriate, the Cultural Monitoring Plan shall align with the requirements of other conditions of the designation and resource consents for the Project which require monitoring during Construction Works.*

15. Construction Traffic Management Plan (CTMP)

- (a) A CTMP shall be prepared prior to the Start of Construction for a Stage of Work and submitted to the Manager for certification.
- (b) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects. To achieve this objective, the CTMP shall include:
 - (i) methods to manage the effects of temporary traffic management activities on traffic;
 - (ii) measures to ensure the safety of all transport users;
 - (iii) the estimated numbers, frequencies, routes and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools, or to manage traffic congestion, including;
 - a. How heavy vehicles will avoid travelling along Trig Road, between SH16 and Hobsonville Road, during pick-up and drop-off times (between 8.15am – 9.10am and 3.00pm – 3.30pm) during term time. Engagement should be undertaken with the school prior to construction to confirm the restricted times still reflect the school's peak pick up and drop off times. It is noted that new schools could establish around the project area before construction commences. Any new school on an identified construction route must be engaged. Heavy vehicle movements must also avoid these schools at their peak pick up and drop off time.
 - b. Details of how truck drivers will be briefed on the importance of slowing down and adhering to established speed limits when driving past both schools, and to look out for school children and reversing vehicles at all times.
 - c. Details of consultation (including outcomes agreed) with the applicant and Trig Road School with regard to maintaining the safety of school students during construction. Details of all safety measures and interventions will be documented in the Construction Traffic Management Plan.
 - d. Ensuring that safe routes to schools for pedestrians and cyclists are maintained, or equivalent alternative routes are provided.
 - (iv) site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors;
 - (v) identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads;
 - (vi) methods to maintain ~~vehicle~~ access to property and / or private roads for all transport modes where practicable, or to provide alternative access arrangements when it will not be;
 - (vii) the management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads; and
 - (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents / public / stakeholders / emergency services).
 - (ix) Auditing, monitoring, and reporting requirements relating to traffic management activities shall be undertaken in accordance with the Waka Kotahi Code of Practice for Temporary Traffic Management.
 - (x) Members of the public and stakeholders directly affected by any Construction Traffic Management Plan and adjacent owners and occupiers of land shall be engaged in the preparation of that Plan.
 - (xi) Should any of the NoRs not be approved in their entirety, and should any individual NoR not be approved, further analysis must be done on the possible need to increase

transport capacity to maintain an adequate level of performance of the remaining NoR projects, and the ability of that additional capacity to be provided within the proposed NoR designations.

- (c) Any subsequent CTMP prepared for a Stage of Work shall be submitted to Council for ~~information~~ certification ten working days prior to the Start of Construction for a Stage of Work.

16. Construction Noise Standards

- (a) Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise and shall comply with the noise standards set out in the following table as far as practicable:

Table 17.1: Construction noise standards

Day of week	Time period	L _{Aeq} (15 min)	L _A F _{max}
Occupied activity sensitive to noise			
Weekday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	65 dB	80 dB
	2000h - 0630h	45 dB	75 dB
Saturday	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sunday and Public Holidays	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Other occupied buildings			
All	0730h – 1800h	70 dB	
	1800h – 0730h	75 dB	

- (b) Where compliance with the noise standards set out in Table [above] is not practicable, ~~and unless otherwise provided for in the CNVMP as required by Condition 18c)(x),~~ then the methodology in Condition 19 shall apply.

Activities Sensitive to Noise are defined in Chapter J of the AUP.

17. Construction Vibration Standards

- (a) Construction vibration shall be measured in accordance with ISO 4866:2010 Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures and shall comply with the vibration standards set out in the following table as far as practicable.

Table CNV2 Construction vibration criteria standards

Receiver	Details	Category A	Category B
Occupied Activities sensitive to noise	Night-time 2000h - 0630h	0.3mm/s ppv	2mm/s ppv
	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times	Tables 1 and 3 of DIN4150-3:2016/1999	

*Category A criteria adopted from Rule E25.6.30.1 of the AUP

**Category B criteria based on DIN 4150-3:1999 building damage criteria for daytime

- ~~(b) Where compliance with the vibration standards set out in Table [above] is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 18(c)(x), then the methodology in Condition 19 shall apply. If measured or predicted vibration from construction activities exceeds the Category A standards, the Requiring Authority shall consult with the affected receivers to:~~
- ~~(ii) Discuss the nature of the work and the anticipated days and hours when the exceedances are likely to occur; and~~
 - ~~(iii) Determine whether the exceedances could be timed or managed to reduce the effects on the receiver.~~
- (c) The Requiring Authority shall maintain a record of these discussions and make them available to the Council on its request.
- (d) If measured or predicted vibration from construction activities exceed the Category B standards, those activities may only proceed subject to a Certified Schedule to the CNVMP following the process set out in Condition 19

18. Construction Noise and Vibration Management Plan (CNVMP)

- (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work and submitted to the Manager for certification.
- (b) A CNVMP shall be implemented during the Stage of Work to which it relates
- (c) The objectives of the CNVMP are to:
- (xii) Identify and implement the Best Practicable Option (BPO) for the management of all construction noise and vibration effects;
 - (xiii) Define the procedures to be followed where the noise and vibration standards are not met (following the implementation of the BPO);
 - (xiv) Set out the methods for scheduling works to minimize disruption; and
 - (xv) Ensure engagement with affected receivers and timely management of complaints
- (d) ~~The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions 16 and 17 to the extent practicable. To achieve this the objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 'Acoustics – Construction Noise' (NZS6803:1999) and shall as a minimum, address the following:~~
- (i) Description of the works and anticipated equipment/processes

- (ii) Hours of operation, including times and days when construction activities would occur
- (iii) The construction noise and vibration standards for the project
- (iv) Identification of receivers where noise and vibration standards apply
- (v) A hierarchy of management and mitigation options, including any requirements to limit night works and works during other sensitive times, including Sundays and public holidays as far practicable
- (vi) Methods and frequency for effective monitoring and reporting on construction noise and vibration
- (vii) Procedures for effective communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints
- (viii) Contact details of the Project Liaison Person
- (ix) Procedures for the regular and effective training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers
- (x) Identification of areas where compliance with the noise (Condition 16) and/or vibration standards (Condition 17 Category A or Category B) will not be practicable and the specific management controls to be implemented and consultation requirements with owners and occupiers of affected sites
- (xi) Procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise (Condition 16) and/or vibration standards (Condition 17 Category B) will not be practicable and where Schedules may be required ~~sufficient information is not available at the time of the CNVMP to determine the area specific management controls Condition 18(c)(x).~~
- (xii) Procedures for:
 - a. communicating with affected receivers, where measured or predicted vibration from construction activities exceeds the vibration standards ~~criteria~~ of Condition 17
 - b. assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category A vibration criteria of Condition 17, including the requirement to undertake building condition surveys before and after works to determine whether any damage has occurred as a result of construction vibration
- (xiii) Requirements for review and update of the CNVMP.

19. Schedule to a CNVMP

- (a) ~~Unless otherwise provided for in a CNVMP, a~~ A Schedule to the CNVMP (Schedule) shall be prepared prior to the start of the construction to which it relates by a Suitably Qualified Person, in consultation with the owners and occupiers of sites subject to the Schedule, when:
 - (i) Construction noise is either predicted or measured to exceed the noise standards in Condition 16, except where the exceedance of the LAeq criteria is no greater than 5 decibels and does not exceed:
 - a. 0630 – 2000: 2 period of up to 2 consecutive weeks in any 2 months, or
 - b. 2000 - 0630: 1 period of up to 2 consecutive nights in any 10 days.
 - (ii) Construction vibration is either predicted or measured to exceed the Category B standards ~~at the receivers~~ in Condition 17.
- (b) The objective of the Schedule is to set out the Best Practicable Option measures to manage noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as:
 - (i) Construction activity location, start and finish dates;
 - (ii) The nearest neighbours to the construction activity;
 - (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards and predicted duration of the exceedance;
 - (iv) The proposed mitigation options that have been selected, and the options that have been discounted as being impracticable and the reasons why;
 - (v) The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account; and proposed communications with neighbours;
 - (vi) Location, times and types of monitoring.
- (c) The Schedule shall be submitted to the Manager for information certification ~~at least 5 working~~

days (except in unforeseen circumstances) in advance of Construction Works that are covered by the scope of the Schedule and shall form part of the CNVMP.

- (d) Where material changes are made to a Schedule required by this condition, the Requiring Authority shall consult the owners and/or occupiers of sites subject to the Schedule prior to submitting the amended Schedule to the Manager for certification in accordance with (c) above. The amended Schedule shall document the consultation undertaken with those owners and occupiers, and how consultation outcomes have and have not been taken into account.

Accidental Discoveries

Advice Note: *The Requiring Authority is advised of the requirements of Rule E11.6.1 of the AUP for "Accidental Discovery" as they relate to both contaminated soils and heritage items. The requirements for accidental discoveries of heritage items are set out in Rule E11.6.1 of the AUP [and in the Waka Kotahi Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version].*

20. Tree Management Plan

- (a) Prior to the Start of Construction for a Stage of Work, a Tree Management Plan shall be prepared and submitted to Council for certification.
- (b) The objective of the Tree Management Plan is to avoid, remedy or mitigate effects of construction activities on trees identified as protected or notable in the Auckland Unitary Plan.
- (c) The Tree Management Plan shall:
- (i) confirm the trees that will be affected by the project work and are identified as protected or notable in the Auckland Unitary Plan
 - (ii) demonstrate how the design and location of project works has avoided, remedied or mitigated any effects on any tree identified in (i) above. This may include:
 - a. planting to replace trees that require removal (with reference to the ULDMP planting design details in Condition 9)
 - b. tree protection zones and tree protection measures such as protective fencing, ground protection and physical protection of roots, trunks and branches
 - c. methods for work within the rootzone of trees that are to be retained in line with accepted arboricultural standards.
 - (iii) demonstrate how the tree management measures (outlined in A – C above) are consistent with conditions of any resource consents granted for the project in relation to managing construction effects on trees.

21. Low Noise Road Surface

- (a) A low-noise Asphaltic concrete surfacing (or equivalent or better low noise road surface) shall be implemented within 12 months of Completion of Construction of the project.
- ~~(b) Any future resurfacing works of the Project shall be undertaken in accordance with the Auckland Transport Reseal Guidelines, Asset Management and Systems 2013 or any updated version and asphaltic concrete surfacing (or equivalent low noise road surface) shall be implemented where:~~
- ~~(i) The volume of traffic exceeds 10,000 vehicles per day; or~~
 - ~~(ii) The road is subject to high wear and tear (such as cul de sac heads, roundabouts and main road intersections); or~~
 - ~~(iii) It is in an industrial or commercial area where there is a high concentration of truck traffic; or~~
 - ~~(iv) It is subject to high usage by pedestrians, such as town centres, hospitals, shopping centres and schools.~~
- (c) Prior to commencing any future resurfacing works, the Requiring Authority shall advise the Manager if ~~any of the triggers in Condition 23(b)(i) – (iv) are not met by the road or a section of it and therefore where~~ the application of the low-noise asphaltic concrete surfacing (or equivalent or better low noise road surface) is no longer practicable or no longer required on the road or a section of it for noise reduction purposes. Such advice shall also dictate when any resealing is to occur.

22. Traffic Noise

For the purposes of Conditions 23 to 35:

- (a) Building-Modification Mitigation – has the same meaning as in NZS 6806;
- (b) Design year has the same meaning as in NZS 6806;
- (c) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed;
- (d) Habitable Space – has the same meaning as in NZS 6806;
- (e) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in *Schedule 3: Identified PPFs Noise Criteria Categories*;
- (f) Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads;
- (g) Noise Criteria Categories – means the groups of preference for sound levels established in accordance with NZS 6806 when determining the Best Practicable Option for noise mitigation (i.e. Categories A, B and C);
- (h) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads;
- (i) Protected Premises and Facilities (PPFs) – means
 - (ii) ~~Only~~ The premises and facilities identified in green, orange or red in *Schedule 3: PPFs Noise Criteria Categories*;
 - (iii) Any activity sensitive to noise (as defined in Chapter J of the AUP) that has been constructed or has Building Consent to be constructed in the same or similar location as any PPF in (i); and
 - (iii) Any land within 200m of the final alignment where the establishment of one or more activities sensitive to noise is anticipated by a Residential zoning in the AUP.
- (j) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; and
- (k) Structural Mitigation – has the same meaning as NZS 6806

23. The Noise Criteria Categories identified in Schedule 3: PPFs Noise Criteria Categories at each of the PPFs shall be achieved where practicable and subject to Conditions 25 to 37 (all traffic noise conditions).

Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in a design year at least 10 years after the programmed opening of the Project.

24. As part of the detailed design of the Project, a Suitably Qualified Person shall determine the Selected Mitigation Options for the PPFs identified on Schedule 3 PPFs Noise Criteria Categories.
25. Prior to construction of the Project, a Suitably Qualified Person shall develop the Detailed Mitigation Options for ~~the all PPFs identified in Schedule 3 PPFs Noise Criteria Categories, taking into account the Selected Mitigation Options.~~ following the process set out in 6806, unless that process is varied by these conditions.
26. ~~The process for determining the BPO for noise barriers that might be part of any Structural Mitigation in section 8.2 of 6806 shall be applied where the performance of any barrier is assessed at the ground floor of any multi-storey building. If the Detailed Mitigation Options would result in the Identified Noise Criteria Category changing to a less stringent Category, e.g. from Category A to B or Category B to C, at any relevant PPF, a Suitably Qualified Person shall provide confirmation to the Manager that the Detailed Mitigation Option would be consistent with adopting the Best Practicable Option in accordance with NZS 6806 prior to implementation.~~
27. The Detailed Mitigation Options shall be implemented prior to completion of construction of the Project, with the exception of any low-noise road surfaces, which shall be implemented within twelve months of completion of construction.
28. Prior to the Start of Construction, a Suitably Qualified Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB LAeq(24h) inside Habitable Spaces ('Category C Buildings').
29. Prior to the Start of Construction in the vicinity of each Category C Building, the Requiring Authority shall write to the owner of the Category C Building requesting entry to assess the noise reduction performance of the existing building envelope. If the building owner agrees to entry within three months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified Person to visit the

building and assess the noise reduction performance of the existing building envelope.

30. For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition 32 above if:
- (a) The Requiring Authority's Suitably Qualified Person has visited the building and assessed the noise reduction performance of the building envelope; or
 - (b) The building owner agreed to entry, but the Requiring Authority could not gain entry for some reason (such as entry denied by a tenant); or
 - (c) The building owner did not agree to entry within three of the date of the Requiring Authority's letter sent in accordance with Condition 32 above (including where the owner did not respond within that period); or
 - (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.

31. Subject to Condition 30 above, within six months of the assessment undertaken in accordance with Conditions 29 and 30, the Requiring Authority shall write to the owner of each Category C Building advising:
- (a) If Building-Modification Mitigation is required to achieve 40 dB LAeq (24h) inside habitable spaces
 - (b) The options available for Building-Modification Mitigation to the building, if required
 - (c) That the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
32. Once an agreement on Building-Modification Mitigation is reached between the Requiring Authority and the owner of a Category C Building, the mitigation shall be implemented, including any third party authorisations required, in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.
33. Subject to Condition 29, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition 33 if:
- (a) The Requiring Authority has completed Building Modification Mitigation to the building; or
 - (b) An alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or
 - (c) The building owner did not accept the Requiring Authority's offer to implement Building-Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition 33 (including where the owner did not respond within that period); or
 - (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
34. The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance as far as practicable
35. ~~The requirements of conditions 23 to 36 Noise Criteria Categories at the PPFs identified in Schedule 3: Identified PPFs Noise Criteria Categories~~ do not need to be complied with where:
- (a) ~~the Any PPF identified in Schedule 3: PPFs Noise Criteria Categories~~ no longer exists; or
 - (b) agreement of the landowner has been obtained confirming that the Noise Criteria Category level does not need to be met.
36. The final design shall ensure that the location of the 55dB LAeq(24hr) contour across any land zoned FUZ or Residential is approximately consistent (within 2dB LAeq(24hr)) with the location of the 55dB LAeq(24hr) contour that was provided with the NoR application.

37. Network Utility Management Plan (NUMP)

- (a) A NUMP shall be prepared after consultation with Network Utility Operator(s) including during the detailed design phase, and prior to the lodgement of an Outline Plan of Works for a stage of construction works.
- (b) The objective of the NUMP is to set out a framework for protecting, relocating and working in proximity to existing network utilities. The NUMP shall include methods to:

- (i) provide access for maintenance at all reasonable times, or emergency works at all times during construction activities;
- (ii) manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear to overhead transmission lines in the Project area; and
- (iii) demonstrate compliance with relevant standards and Codes of Practice including, where relevant, the NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; AS/NZS 4853:2012 Electrical Hazards on Metallic Pipelines; and AS/NZS 2885 Pipelines – Gas and Liquid Petroleum.
- (c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s).
- (d) The development the NUMP shall consider opportunities to coordinate future work programmes and projects, including access to power and ducting within the Project, with other Network Utility Operator(s) where practicable.
- (e) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed including whether or not the opportunities identified in (d) have been incorporated into the final detailed design.
- (f) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.
- (g) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.
- (h) The Requiring Authority shall consult with Network Utility Operators during the detailed design phase to identify opportunities to enable, or not preclude, the development of new network utility facilities including access to power and ducting within the Project, where practicable to do so. The consultation undertaken, opportunities considered, and whether or not they have been incorporated into the detailed design, shall be summarised in the Outline Plan or Plans prepared for the Project.

Advice Note:

For the purposes of this condition, relevant telecommunications network utility operators include companies operating both fixed line and wireless services. As at the date of designation these include Aotearoa Towers Group, Chorus New Zealand Limited, Connexa Limited, One New Zealand Limited, Spark New Zealand Trading Limited and Two Degrees Mobile Limited (and any subsequent entity for these network utility operators).

38. Post 1900 archaeological sites

- (a) The following protocol will apply should any post-1900 subsurface features associated with early 20th century settlement activity be exposed during works associated with the RATN and TRCU designations:
 - (i) The consented works will be halted while an archaeologist is called in to assess the features.
 - (ii) The features will be recorded and analysed in accordance with current archaeological practice.
 - (iii) A report on any features exposed will be provided by the project archaeologist to Auckland Council's Heritage Unit for inclusion in the Auckland Council Cultural Heritage Inventory.

39. Including unrecorded Archaeological Sites within the Cultural Heritage Inventory

- (a) In the event that any unrecorded archaeological sites are exposed as a result of consented work on the RATN and TRCU designations, then these sites shall be recorded by the requiring authority for inclusion within the Auckland Council Cultural Heritage Inventory. The requiring authority shall prepare documentation suitable for inclusion in the Cultural Heritage Inventory and forward the information to the Team Leader: Monitoring (for the Manager: Heritage Unit, heritageconsents@aucklandcouncil.govt.nz) within one calendar month of the completion of work on the site.

Advice Notes:

Accidental Discovery Rule

Should the consented work result in the identification of any previously unknown sensitive materials (i.e. archaeological sites), the requirements of land disturbance - District Accidental Discovery rule [E12.6.1] set out in the Auckland Unitary Plan Operative in part (updated 20 February 2023)) shall be complied with.

Heritage New Zealand Pouhere Taonga Act 2014

The Heritage New Zealand Pouhere Taonga Act 2014 (hereafter referred to as the Act) provides for the identification, protection, preservation and conservation of the historic and cultural heritage of New Zealand. All archaeological sites are protected by the provisions of the Act (section 42). It is unlawful to modify, damage or destroy an archaeological site without prior authority from Heritage New Zealand Pouhere Taonga. An Authority is required whether or not the land on which an archaeological site may be present is designated, a resource or building consent has been granted, or the activity is permitted under Unitary, District or Regional Plans.

According to the Act (section 6) archaeological site means, subject to section 42(3) – any place in New Zealand, including any building or structure (or part of a building or structure), that –

1. was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 19; and
2. provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and
3. includes a site for which a declaration is made under section 43(1).

It is the responsibility of the consent holder to consult with Heritage New Zealand Pouhere Taonga about the requirements of the Act and to obtain the necessary Authorities under the Act should these become necessary, as a result of any activity associated with the consented proposals.

For information please contact the Heritage New Zealand Pouhere Taonga Archaeologist – 09 307 0413 / archaeologistMN@historic.org.nz.

Protected Objects Act 1975

Māori artefacts such as carvings, stone adzes, and greenstone objects are considered to be tāonga (treasures). These are taonga tūturu within the meaning of the Protected Objects Act 1975 (hereafter referred to as the Act).

According to the Act (section 2) taonga tūturu means an object that –

- (b) relates to Māori culture, history, or society; and
- (c) was, or appears to have been –
 - (i) manufactured or modified in New Zealand by Māori; or
 - (ii) brought into New Zealand by Māori; or
 - (iii) used by Māori; and
- (d) is more than 50 years old.

The Act is administered by the Ministry of Culture and Heritage. Tāonga may be discovered in isolated contexts, but are generally found within archaeological sites. The provisions of the Heritage New Zealand Pouhere Taonga Act 2014 in relation to the modification of an archaeological site should to be considered by the consent holder if tāonga are found within an archaeological site, as defined by the Heritage New Zealand Pouhere Taonga Act 2014.

It is the responsibility of the consent holder to notify either the chief executive of the Ministry of Culture and Heritage or the nearest public museum, which shall notify the chief executive, of the finding of the taonga tūturu, within 28 days of finding the taonga tūturu; alternatively provided that in the case of any taonga tūturu found during the course of any archaeological investigation authorised by Heritage New Zealand Pouhere Taonga under section 48 of the Heritage New Zealand Pouhere Taonga Act 2014, the notification shall be made within 28 days of the completion of the field work undertaken in connection with the investigation.

Under section 11 of the Act, newly found taonga tūturu are in the first instance Crown owned until a determination on ownership is made by the Māori Land Court. For information please contact the Ministry of Culture and Heritage - 04 499 4229 / protected-objects@mch.govt.nz.

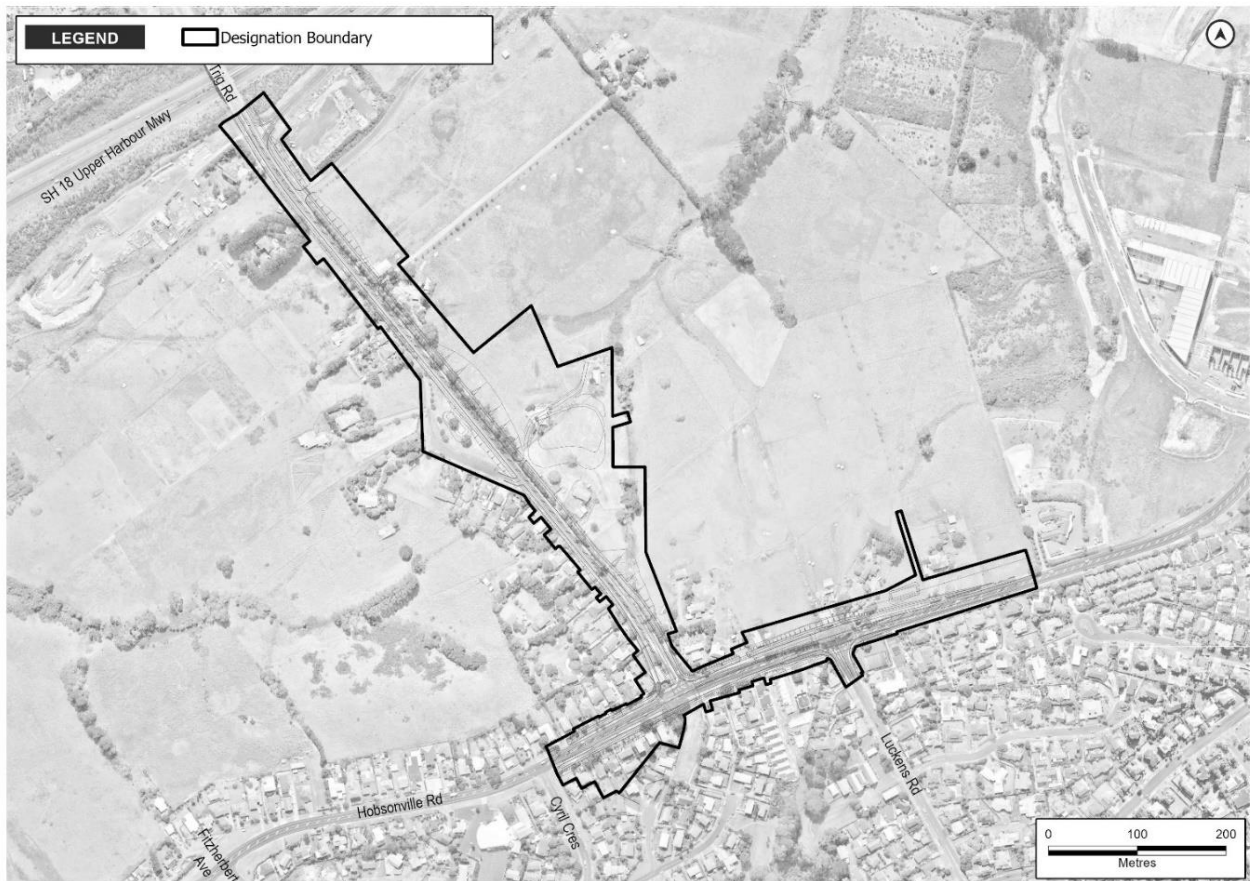
Schedule 1: General Accordance Plans and Information

Project Description – Trig Road Corridor Upgrade

The proposed work is the construction, operation, and maintenance of a transport corridor on Trig Road in Whenuapai between State Highway 18 and Hobsonville Road, including active transport facilities and associated infrastructure. The proposed work is shown in the following Concept Plan and includes:

- (a) An upgraded and new transport corridor, including public transport and active transport facilities;
- (b) Associated works including intersections, bridges, embankments, retaining, culverts, stormwater management systems;
- (c) Changes to local roads, where the proposed work intersects with local roads; and
- (d) Construction activities, including vegetation removal, construction compounds, laydown areas, bridge works area, construction traffic management and the re-grade of driveways.

Concept Plan



Attachments

No attachments

Schedule 2: Identified PPFs Noise Criteria Categories

Address	New or Altered Road	Noise Criteria Category
72 Hobsonville Road	Altered	Category C
26 Trig Road	Altered	Category C
64 Hobsonville Road	Altered	Category C
66 Hobsonville Road	Altered	Category C
40 Trig Road	Altered	Category C
1/93, 2/93, 2/14, 3/93, 3/14, 4/14, 1/14 Hobsonville Road	Altered	Category B
16 Trig Road	Altered	Category B
97 Hobsonville Road	Altered	Category B
6 Trig Road	Altered	Category B
22 Trig Road	Altered	Category B
62 Hobsonville Road	Altered	Category B
18, 2 Luckens Road	Altered	Category B
72B Hobsonville Road	Altered	Category B
16 Luckens Road	Altered	Category B
8 Trig Road	Altered	Category A
12 Trig Road	Altered	Category A
60 Hobsonville Road	Altered	Category A
119 Hobsonville Road	Altered	Category A
10 Luckens Road	Altered	Category A
1B Luckens Road	Altered	Category A
28 Trig Road	Altered	Category A
70 Hobsonville Road	Altered	Category A
24 Belleaire Court	Altered	Category A
30 Trig Road	Altered	Category A
7 Trig Road	Altered	Category A
75 Hobsonville Road	Altered	Category A
32 Trig Road	Altered	Category A
56 Hobsonville Road	Altered	Category A
76 Hobsonville Road	Altered	Category A
1/111, 2/111 Hobsonville Road	Altered	Category A
133 Hobsonville Road	Altered	Category A
1/93, 2/93, 2/14, 3/93, 3/14, 4/14, 1/14 Hobsonville Road	Altered	Category A
72A Hobsonville Road	Altered	Category A
8 Luckens Road	Altered	Category A
52 Hobsonville Road	Altered	Category A
127 Hobsonville Road	Altered	Category A
5 Luckens Road	Altered	Category A
34 Trig Road	Altered	Category A
50 Hobsonville Road	Altered	Category A
46 Trig Road	Altered	Category A

54 Hobsonville Road	Altered	Category A
26 Belleaire Court	Altered	Category A
48 Hobsonville Road	Altered	Category A
1/93, 2/93, 2/14, 3/93, 3/14, 4/14, 1/14 Hobsonville Road	Altered	Category A
107 Hobsonville Road	Altered	Category A
79A Hobsonville Road	Altered	Category A
68 Hobsonville Road	Altered	Category A
58 Hobsonville Road	Altered	Category A
19 Luckens Road	Altered	Category A
1/93, 2/93, 2/14, 3/93, 3/14, 4/14, 1/14 Hobsonville Road	Altered	Category A
80 Hobsonville Road	Altered	Category A
5 Louise Place	Altered	Category A
22A Trig Road	Altered	Category A
1/93, 2/93, 2/14, 3/93, 3/14, 4/14, 1/14 Hobsonville Road	Altered	Category A
2/12, 1/12 Mona Vale	Altered	Category A
34A Trig Road	Altered	Category A
8A, 10, 8 Louise Place	Altered	Category A
8A, 10, 8 Louise Place	Altered	Category A
3A Louise Place	Altered	Category A
18 Trig Road	Altered	Category A
6 Louise Place	Altered	Category A
10 Mona Vale	Altered	Category A
78 Hobsonville Road	Altered	Category A
1/93, 2/93, 2/14, 3/93, 3/14, 4/14, 1/14 Hobsonville Road	Altered	Category A
33 Cyril Crescent	Altered	Category A
70A Hobsonville Road	Altered	Category A
97 Hobsonville Road	Altered	Category A
10 Trig Road	Altered	Category A
22 Cyril Crescent	Altered	Category A
99 Hobsonville Road	Altered	Category A
147F Hobsonville Road	Altered	Category A
29 Cyril Crescent	Altered	Category A
8A, 10, 8 Louise Place	Altered	Category A
1A Luckens Road	Altered	Category A
1/93, 2/93, 2/14, 3/93, 3/14, 4/14, 1/14 Hobsonville Road	Altered	Category A
3A Louise Place	Altered	Category A
131 Hobsonville Road	Altered	Category A
31 Cyril Crescent	Altered	Category A
145A Hobsonville Road	Altered	Category A
8 Bernleigh Terrace	Altered	Category A
4 Louise Place	Altered	Category A

127A Hobsonville Road	Altered	Category A
14 Luckens Road	Altered	Category A
121 Hobsonville Road	Altered	Category A
145B Hobsonville Road	Altered	Category A
2/95, 1/95, 95 Hobsonville Road	Altered	Category A
12 Luckens Road	Altered	Category A
123 Hobsonville Road	Altered	Category A
20 Belleaire Court	Altered	Category A
20A Belleaire Court	Altered	Category A
3A Luckens Road	Altered	Category A
3B Luckens Road	Altered	Category A
133A Hobsonville Road	Altered	Category A
131A Hobsonville Road	Altered	Category A
129 Hobsonville Road	Altered	Category A
129C Hobsonville Road	Altered	Category A
129B Hobsonville Road	Altered	Category A
22 Belleaire Court	Altered	Category A
121B Hobsonville Road	Altered	Category A
18 Belleaire Court	Altered	Category A
4 Bernleigh Terrace	Altered	Category A
133A Hobsonville Road	Altered	Category A
2/95, 1/95, 95 Hobsonville Road	Altered	Category A
121A Hobsonville Road	Altered	Category A
123A Hobsonville Road	Altered	Category A
123B Hobsonville Road	Altered	Category A
19 Belleaire Court	Altered	Category A

PPF Location Plans





