

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

Date and Venues:

**Monday 18, Tuesday 19 and Friday 22 October 2021
Council Chamber, Ground Floor, Auckland Town Hall
301-303 Queen Street, Auckland**

**Wednesday 20 and Thursday 21 October 2021
Totara Room, Level 2, Manukau Civic Building
31-33 Manukau Station Road, Auckland**

Start Time: 9.30am

HEARING REPORT

**DRURY ARTERIALS NETWORK NOTICE OF
REQUIREMENTS (D1 – SH 22 UPGRADE)**

VOLUME ONE

WAKA KOTAHI

COMMISSIONERS

Chairperson	Dave Serjeant
Commissioners	Basil Morrison
	Nigel Mark-Brown

Bevan Donovan
KAITOHUTOHU WHAKAWĀTANGA/ HEARINGS ADVISOR

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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

Te Reo Māori and Sign Language Interpretation

Any party intending to give evidence in Māori or NZ sign language should advise the hearings advisor at least ten working days before the hearing so a qualified interpreter can be arranged.

Hearing Schedule

If you would like to appear at the hearing please return the appearance form to the hearings advisor by the date requested. A schedule will be prepared approximately one week before the hearing with speaking slots for those who have returned the appearance form. If changes need to be made to the schedule the hearings advisor will advise you of the changes.

Please note: during the course of the hearing changing circumstances may mean the proposed schedule may run ahead or behind time.

Cross Examination

No cross examination by the applicant or submitters is allowed at the hearing. Only the hearing commissioners are able to ask questions of the applicant or submitters. Attendees may suggest questions to the commissioners and they will decide whether or not to ask them.

The Hearing Procedure

The usual procedure for a hearing is:

- **the chairperson** will introduce the commissioners and will briefly outline the hearing procedure. The Chairperson may then call upon the parties present to introduce themselves. The Chairperson is addressed as Madam Chair or Mr Chairman.
- 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.
- **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 be represented by legal counsel or consultants and may call witnesses on their behalf. The hearing panel may then question each speaker.
 - Late submissions: The council officer's report will identify 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.
 - Should you wish to present written evidence in support of your submission please ensure you provide the number of copies indicated in the notification letter.
- **Council Officers** will then have the opportunity to clarify their position and provide any comments based on what they have heard at the hearing.
- The **requiring authority** or their representative then has the right to summarise the application and reply to matters raised. Hearing panel members may further question the applicant. The applicants reply may be provided in writing after the hearing has adjourned.
- **The chairperson** will outline the next steps in the process and adjourn or close the hearing.
- The hearing panel will make a recommendation to the Requiring Authority. 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 the Requiring Authority's decision, the reasons for it and what your appeal rights are.

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

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The application material has not been reproduced here and can be found on the Auckland Council website

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The application material has not been reproduced here and can be found on the Auckland Council website

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Sanjay Bangs & Nic Lau, Planners

Reporting on five proposed Notice of Requirements to plan and deliver the future road and rail requirements to support expected growth in the Drury-Ōpāheke area over the next 10-30 years being:

- D1 - Alteration to Designation 6707 State Highway 22 Update (Waka Kotahi)
- D2 - Jesmond to Waihoehoe West FTN Upgrade (Auckland Transport)
- D3 - Waihoehoe Road East Upgrade (Auckland Transport)
- D4 - Ōpāheke North-South FTN Arterial (Auckland Transport)
- D5 - Ponga Road and Ōpāheke Road Upgrade (Auckland Transport)

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Notices of requirement under section 181(2) of the RMA by Waka Kotahi NZ Transport Agency for an alteration to Designation 6707 for the Drury Arterial Network.



To: Hearing Commissioners

From: Nicholas Lau and Sanjay Bangs

Senior Policy Planners, Central and South Planning, Plans and Places

Report date: 3 September 2021

Scheduled hearing date: 18 – 22 October

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 notice of requirement.

A decision on the notice of requirement will be made by the requiring authority after it has considered the Hearing Commissioners' recommendations, subsequent to the Hearing Commissioners having considered the notice of requirement and heard the requiring authority and submitters.

This report is intended to be read in conjunction with the hearing report for the 'Notice of requirement under section 168 of the RMA by Auckland Transport for new designations for the Drury Arterial Network (NoRs D2 – D5)'.

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Summary

Requiring authorities	Waka Kotahi New Zealand Transport Agency
Notices of requirement references	Drury Arterial Network NoR D1: Alteration to Designation 6707 – State Highway 22 Upgrade
Resource consent applications	No resource consent applications have been lodged by the requiring authority for this project.
Reporting planners	Nicholas Lau, Senior Policy Planner, Central and South Planning Sanjay Bangs, Senior Policy Planner, Central and South Planning
Site address	Refer to Attachment B to the Form 18 documents. Multiple sites within and adjacent to Designation 6706 State Highway 22
Lodgement date	28 January 2021
Notification date	22 April 2021
Submissions close date	21 May 2021
Number of submissions received	13

Report prepared by:



Nicholas Lau



Sanjay Bangs

Date: 3 September 2021

Reviewed and approved for release by:



Craig Cairncross

Date: 3 September 2021

Abbreviations

AEE	Drury Arterial Network Assessment of Effects on the Environment prepared by Supporting Growth Alliance and dated January 2021
AT	Auckland Transport
WK	Waka Kotahi NZ Transport Agency
SGA	Supporting Growth Alliance
RA	Requiring Authority
AUP	Auckland Unitary Plan (Operative in Part)
NoRs	Notices of Requirement
OPW	Outline plan of works
RMA	Resource Management Act 1991 and all amendments
the council	Auckland Council
Project	The Drury Arterial Network project authorised by this NoR and NoRs D2 – D5
FTN	Frequent Transit Network
BPO	Best Practicable Option
CEMP	Construction Environmental Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CTMP	Construction Traffic Management Plan
HAMP	Heritage and Archaeology Management Plan
NUMP	Network Utilities Management Plan
SCMP	Stakeholder and Communication Management Plan
TMP	Tree Management Plan
ULDMP	Urban Landscape Design Management Plan

1 Introduction

1.1 The notice of requirement

Pursuant to section 181(2) of the RMA, Waka Kotahi NZ Transport Agency as the requiring authority, has lodged a notice of requirement (**NoR**) for an alteration to an existing Designation 6707 State Highway 22 in the Auckland Unitary Plan (Operative in Part) (**AUP**) for the Drury Arterial Network.

The NoR is a component of a package of notices of requirement sought by the Supporting Growth Alliance on behalf of Waka Kotahi NZ Transport Agency and Auckland Transport for the Drury Arterial Network. The NoRs seek to provide for strategic transport corridors to support planned urban growth in Drury and Opāheke. The Drury Arterial Network NoRs (also collectively referred to as '**the Project**') are described in Table 1 below.

Table 1: Description of Drury Arterial Network package of NoRs

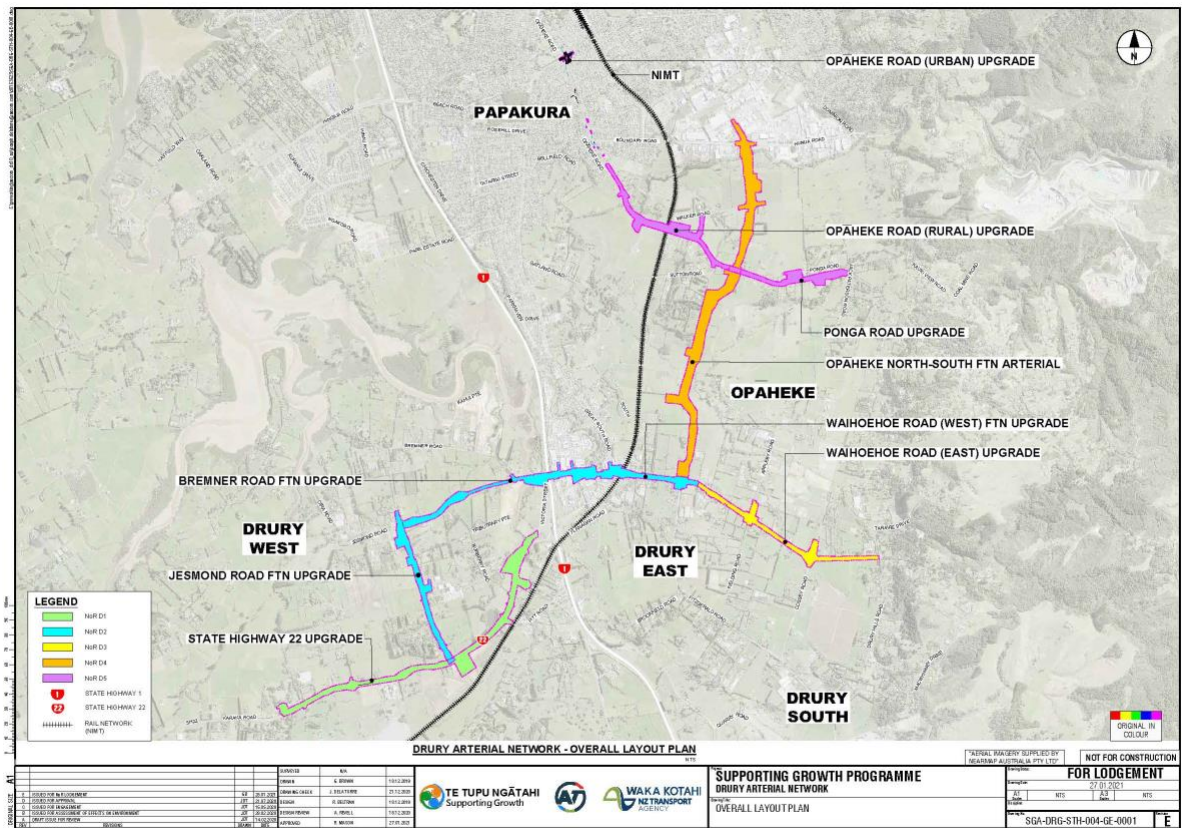
Notice	Project Name	Description	Requiring Authority
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D1	Alteration to Designation 6707 – State Highway 22 Upgrade	<ul style="list-style-type: none"> Widening of existing state highway from the Drury Interchange at State Highway 1 (SH1) to Oira Creek to a four-lane urban arterial with separated active transport facilities. 	Waka Kotahi NZ Transport Agency
D2 ((addressed in a separate report))	Jesmond to Waihoehoe West FTN Upgrade	<ul style="list-style-type: none"> Widening of the existing Jesmond Road from SH22 to near 256 Jesmond Road to a four-lane FTN urban arterial with separated active transport facilities. A four-lane FTN urban arterial with separated active transport facilities from Jesmond Road to Norrie Road. It includes upgrading existing and constructing new transport corridors. Widening of Waihoehoe Road from the Norrie Road/Great South Road intersection to Fitzgerald Road to a four-lane FTN urban arterial with separated active transport facilities. 	Auckland Transport
D3 ((addressed in a separate report))	Waihoehoe Road East Upgrade	<ul style="list-style-type: none"> Widening of Waihoehoe Road east of Fitzgerald Road to Drury Hills Road to a two-lane urban arterial with separated active transport facilities. 	Auckland Transport
D4 ((addressed in a separate report))	Opāheke North-South FTN Arterial	<ul style="list-style-type: none"> A new four-lane FTN urban arterial with separated active transport facilities from Hunua Road in the north to Waihoehoe Road in the south. 	Auckland Transport
D5 ((addressed in a separate report))	Ponga Road and Opāheke Road Upgrade	<ul style="list-style-type: none"> Widening of Ponga Road from Opāheke Road to Jack Paterson Road to a two-lane urban arterial with separated active transport facilities. Widening of Ōpāheke Road from the extent of the FUZ in the north to Ponga Road in the south to a two-lane urban arterial with separated active transport facilities Upgrade of the Opāheke Road / Settlement Road intersection to a roundabout with active transport facilities, including crossing facilities and re-grading of nine driveways. 	Auckland Transport

1.2 Locality plan

The general location of the Drury Arterial Network NoRs are shown on Figure 1 below. The reader is also referred to the indicative design drawings supporting the NoR which outlines the extent of the existing designations and the extent of the NoR. The plan set is contained within Volume 3 – Indicative Design Drawings to the lodged NoRs.

Figure 1: Location of Drury Arterial Network NoRs



1.3 Notice of requirement documents

The lodged NoR consists of the following documents:

Volume 1 – Forms

- Form 18: NoRs D1

Volume 2 – Assessment of Effects on the Environment and appendices

- SGA-004-AEE-RPT-Assessment of Effects on the Environment
- SGA-004-AEE-RPT-Appendix A-Assessment of Alternatives
- SGA-004-AEE-RPT-Appendix B-Relevant Statutory and Strategic Planning Documents

Volume 3 – Indicative Design Drawings

- NoR D1 TO NoR D5_OVERALL LAYOUT PLAN_27.01.2021

- NoR D1 STATE HIGHWAY 22 UPGRADE_27.01.2021

Volume 4 – Supporting Technical Reports

- SGA-004-AEE-RPT-Assessment of Arboricultural Effects
- SGA-004-AEE-RPT-Assessment of Construction Noise and Vibration Effects
- SGA-004-AEE-RPT-Assessment of Ecological Effects
- SGA-004-AEE-RPT-Assessment of Effects on Historic Heritage
- SGA-004-AEE-RPT-Assessment of Flooding Effects
- SGA-004-AEE-RPT-Assessment of Landscape and Visual Effects
- SGA-004-AEE-RPT-Assessment of Traffic Noise and Vibration Effects
- SGA-004-AEE-RPT-Assessment of Transport Effects
- SGA-004-AEE-RPT-Ngati Tamaoho Historic Summary Drury NoR
- SGA-004-AEE-RPT-Urban Design Framework and Evaluation

Given the large quantum of information supporting the NoRs, they have not been attached to this report. Instead, these can be on the Auckland Council website: Notices of requirement to designate land web page:

<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/auckland-unitary-plan-modifications/notices-of-requirement-to-designate-land/Pages/default.aspx>

1.4 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 on the dates in the following table.

Section 92 request	Date of section 92 response
First request for notification assessment made on 22 March 2021	First section 92 response on 7 April 2021
Informal request made in relation to matters raised in submissions on 25 June 2021	Draft section 92 response on 6 July 2021.

The council's section 92 requests and the requiring authority's responses are provided in Appendix 2 to this report.

1.5 Specialist reviews

The assessment in this report takes into account reviews and advice from the following technical specialists engaged by the council:

Specialist	Specialty
Terry Church, Senior Associate, and Mat Collins, Associate, Flow Transportation Consultants Limited	Transport effects
Rebecca Skidmore, R A Skidmore Urban Design Ltd	Urban design and landscape and visual effects
Carl Tutt, Ecologist, Auckland Council	Ecology effects
Gavin Donaldson, Senior Arborist, Auckland Council	Arboricultural effects
Robert Brassey, Principal Specialist Cultural Heritage, Auckland Council	Cultural heritage effects
Cara Francesco, Principal Specialist Built Heritage, Auckland Council	Built heritage effects
Rhys Hegley, Partner, Hegley Acoustic Consultants	Noise and vibration effects
James Hendra, Consultant Parks Planner, Hendra Planning	Open space effects
Trent Sunich, Consultant Stormwater Technical Specialist, 4Sight Consulting	Stormwater and flooding effects
Danny Curtis, Principal – Catchment Planning, Healthy Waters, Auckland Council	
Paul Crimmins, Senior Specialist, Auckland Council	Air quality effects
Gavin Donaldson, Senior Arborist, Auckland Council	Arboricultural Effects
Terry Church, Senior Associate, and Mat Collins, Associate, Flow Transportation Consultants Limited	Transport Effects
Rebecca Skidmore, R A Skidmore Urban Design Ltd	Urban Design and Landscape and Visual Effects
Carl Tutt, Ecologist, Auckland Council	Ecology Effects

These specialist reviews are provided in Appendix 1 to this report..

2 Notice of requirement description

2.1 Background

2.1.1 Context

The background and context to the NoR is outlined in Section 2 of the AEE prepared by Supporting Growth Alliance, and summarised in the hearing report for NoRs D2 – D5.

2.1.2 Lapse dates

The SGA reports that no lapse date is proposed for NoR D1 as the Designation 6707 has already been given effect to. This is discussed in section 4.4.11 of this report.

2.1.3 Future resource consents

The SGA advise in Section 3.7 of the AEE that in the future prior to construction the Project will require NES approvals and resource consents for a number of activities to enable the proposed works. The SGA note that “these resource consents are not sought at this time, but will be sought when detailed design for each of the Projects is completed”.

2.1.4 Other matters

Other relevant contextual information outlined in the SGA’s AEE is:

- The proposed designation extent includes land for both temporary (construction) and permanent occupation. As such, once construction is completed, AT and Waka Kotahi will remove the parts of the designations no longer required under section 182 of the RMA
- Under section 176(1)(b) of the RMA, requiring authorities must provide written consent for works within the designation boundaries. As the proposed designations cover rural land zoned for future urban development, AT and Waka Kotahi will where necessary work with landowners and developers under section 176(1)(b) to provide written consent for works, provided that these works will not prevent or hinder the works authorised by the designation.

2.2 Proposal

The proposal for NoR D1 is described in Section 6, Part D (p. 63) of the AEE, and summarised below.

The SH22 Upgrade consists of widening the existing SH22 alignment to a four-lane arterial with separated active transport facilities on each side of the road corridor. The Project extends approximately 3km from the SH1 Drury Interchange in the east, and the extent of the FUZ between Woodlyn Drive and Oira Road in the west.

The key features of the proposed upgrade include:

- Widening of SH22 road corridor from its current general width of 20m to enable a 30m wide four-lane road with separated active transport facilities;
- Localised widening around the existing intersections to accommodate for vehicle queuing and tie-ins and active transport facilities/crossings;
- Demolition and reconstruction of the existing Ngakoroa Stream Bridge;
- New and extended culverts;
- Three stormwater wetlands;
- Batter slopes and retaining to enable widening of the corridor, and associated cut and fill activities (noting the indicative design of these are based on the existing land form and urban development adjoining these areas may change the work requirements);
- Vegetation removal along the existing road corridor; and
- Areas for construction related activities including site compounds, construction laydown, bridge works area, the re-grade of driveways and construction traffic manoeuvring.

Figure 2: NoR D1 Project Map (p. 65 AEE)



The Project is anticipated to take 2 to 2.5 years to construct, and will be implemented by approximately 2028.

2.3 Affected land

Land requirement plans provided as Attachment B to the NoR D1 Form 18 together with the schedule provided as Attachment C to the NoR D1 Form 18 describes the land that will be directly affected and required for the project and associated works.

2.4 Site, locality, catchment and environment description

This report relies on the site and environment descriptions provided by the requiring authority as set out in Section 7 of the AEE supporting the NoR.

Section 4.1 of the AEE sets out the SGA's approach to defining the environment. In essence, the NoRs are to route protect necessary strategic transport corridors in urban environments and primarily in rural environments, that are planned to be urbanised within the next 30 years.

2.5 Other designations and notices of requirement

The land within or adjoining the NoR is not subject to existing designations or notices of requirement.

3 Notification and submissions

3.1 Notification

The NoR was publicly notified on 22 April 2021.

The closing date for submissions was 21 May 2021.

3.2 Submissions

13 submissions were received on the NoR from:

- KiwiRail
- Fire and Emergency New Zealand
- Kiwi Property No. 2 Limited
- Oyster Capital
- Drury South Limited
- Lynette Erceg
- Lomai Properties Ltd
- Fletcher Residential Limited
- Jenny Joyce
- Firstgas Ltd
- Karaka and Drury Limited
- Kāinga Ora Homes and Communities

- Heritage New Zealand

4 Consideration of the notice of requirement

4.1 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 procedures have been followed.

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

- (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.*

Section 171(1)(a) is addressed in sections 4.6 – 4.8 below. Section 171(1)(b) is addressed in section 4.9 below. Section 171(1)(c) is addressed in section 4.10 below. Section 171(1)(d) is addressed in section 4.11 below.

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.¹

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:*
 - (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 6 below for our recommendation.

4.2 Effects on the environment

The SGA's approach to the environment is set out in Section 4.1 of the AEE. In essence, the NoRs will not be constructed and operational until urbanisation of Drury-Opāheke is confirmed or under development. Therefore, the SGA consider an assessment of effects against the existing environment will not provide an accurate reflection of the future environment in which effects of the NoRs will be experienced. Table 4-1 in the AEE sets out what are termed the existing and likely future environments and highlights the likelihood of change in the environment based on zoning and policy direction.

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 171(1)(a) to (d) of the RMA.

4.3 Positive effects

Positive effects are discussed in Section 9.1 of the AEE, and are summarised in the Section 4.3.4 of the hearing report for NoRs D2 – D5. In addition to these, positive effects specific to NoR D1 are identified as being:

- Predicted traffic noise level changes during operation of the Project (together with the implementation of other proposed roading transport projects) are generally expected to reduce compared to a future scenario where the Project is not implemented.
- The upgraded bridge over Ngākoroa Stream will increase the freeboard which provides a significant increase to the resilience of the bridge to flooding and increases conveyance of flood water under the bridge.

¹ See Estate of P.A. Moran and Others v Transit NZ (W55/99)

4.4 Adverse effects

Effects on the environment are addressed in section 9 of the AEE. The following discussion addresses effects in the same order they are addressed in the AEE with additional matters at the end. The relevant specialists reports are referred to and are provided in Appendix 1 to this report. Submissions have also been considered and are referred to where relevant.

Assessments of effects that relate to the Project as a whole have been discussed in full in the hearing report for NoRs D2 – D5, and cross-referenced in the below sections.

4.4.1 Transport

Application

Transport effects are addressed in Section 9.2 of the AEE, and in the Assessment of Transport Effects ('ATE') prepared by Siân Spear and Werner Pretorius, AECOM, and Connell Pham and Subha Nair, AT. The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In relation to adverse transport effects for NoR D1, the ATE notes the following:

'There are no predicted adverse effects on the operation of the transport system that require mitigation arising from the Project. Some existing properties will face a minor diversion impact on the main network given that limited direct property access (left-in and left-out only) but the significant safety benefits will offset effects.'

In terms of construction effects, there are several potential adverse effects mainly linked to temporary traffic management (construction traffic routes, partial or full road closure, construction traffic, speed limit, vulnerable road users, driveways and property access). It is recommended the impact of any construction traffic effects is reassessed when a greater level of detail is available regarding the specific construction methodology and traffic environment at the time of construction.

To remedy or mitigate potential adverse construction effects, it is proposed to manage these through conditions relating to Construction Traffic Management Plans and what should be included to remedy or mitigate potential adverse effects.'

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 once the detailed design of network is known. The SGA propose that the CTMP is submitted to Council for information ten working days prior to the start of works, which will outline methods to address matters including road safety for all users, scale/intensity of traffic movements and timing of movements, site access route for heavy vehicles, maintaining vehicle access to property and/or private roads, and communication of traffic management measures to affected road users.

Submissions

Submissions have been received in relation to the following matters:

- Fire and Emergency New Zealand ('FENZ') seek direct access to SH22 to/from the site at 67 Mercer Street, Drury;

- Use of multi-lane roundabouts at intersections, with submitters seeking signalised intersections;
- Sufficiency of SH22 upgrades to accommodate future traffic demands;
- Provide for ongoing engagement with landowners throughout the development of the Project including providing consultation on relevant management plans; and
- Pedestrian and cycling connectivity/access across the NoR.

Submission D1.2 from FENZ seeks direct access to SH22 to/from the site at 67 Mercer Street, Drury. FENZ advise that they seek to establish a fire station and regional headquarter on this site in the future in response to the anticipated population growth in Drury. The submitter notes that 'it is of the utmost importance for FENZ to have direct access to the State Highway 22 for the future fire station, in order to minimise response time'.

Submissions D1.3 from Kiwi Property No. 2 Limited, D1.4 from Oyster Capital and D1.8 from Fletcher Residential Limited oppose the use of multi-lane roundabouts. Kiwi considers that a signalised intersection results in better outcomes for road safety, adjusting to uneven traffic flows, and more efficient use of land. Oyster and Fletcher consider that multi-lane roundabouts struggle to achieve safe system speeds and lose the simplicity of a single circulatory land, thus undermining the key safety features of roundabouts. They also consider that roundabouts do not provide for bus priority, are unable to adjust to unequal traffic flows, and require significant land takes, resulting significant costs and a reduction of land available for housing and other uses.

Submissions D1.3 from Kiwi Property No. 2 Limited, D1.4 from Oyster Capital, D1.8 from Fletcher Residential Limited and D1.12 from Kāinga Ora Homes and Communities oppose the extent of the designation boundary. Kiwi, Oyster and Fletcher acknowledge that an extended boundary is needed to accommodate the road widening and associated areas for construction works. However, they note that in some locations the designation boundary extends 10 – 26m beyond the area identified in the NoR D1 documentation for road widening and associated works, without reasoning provided in the AEE. Lastly, Kiwi, Oyster and Fletcher consider that the extent will unduly restrict subdivision/development as such works are prevented under s176 RMA without the written consent of the RA. Similarly, Kāinga Ora are concerned that urban development may commence adjacent to the proposed alteration, and would be restricted where located in the designated land.

Submission D1.7 from Lomai Properties Ltd supports the NoR and proposed upgrade of SH22, but seek that Waka Kotahi continue to engage with landowners throughout development of the Project. In particular, Lomai requests that they be consulted on the development of any OPW and in the preparation of construction management plans specifically in terms of traffic, noise and vibration.

Submission D1.12 from Kāinga Ora Homes and Communities seeks that pedestrian and/or cyclist access across the proposed routes be reviewed and included to avoid severance effects between land on either side of SH22. Kainga Ora are concerned that the indicative designs do not provide for frequent crossing points for pedestrians and cyclists across each arterial, and could potentially create severance effects, which would negatively impact on future development of adjoining sites.

Specialist assessment

Transport effects have been reviewed by Mr Mat Collins, Associate, Flow Transport Consultants Limited in a memo dated 30 August 2021, which is provided in Appendix 1 to this report. Mr Collins' assessment on Project-wide matters is set out in the hearing report for NoR D2 – D5. In essence, Mr Collins' primary concerns are as follows:

- There is insufficient detail to in the NoRs to enable the council to understand the access, safety and efficiency effects during construction, nor does the proposed CTMP condition provide the council with the opportunity to consider these effects at a future stage. Mr Collins seeks that the conditions require the CTMP to be submitted to the council for certification.
- The Project is likely to restrict existing vehicle access to properties. As this is yet to be confirmed/specified through detailed design, Mr Collins supports conditions requiring the RA to consult with affected landowners, and as far as practicable, identify how affected areas will be relocated or reinstated to achieve compliance with relevant AUP standards.
- To this effect, Mr Collins supports changes to the Stakeholder Communication Management Plan conditions to ensure consultation occurs with affected landowners during construction works to manage localised traffic effects.
- Whilst the deferral of funding for the Mill Road corridor through the NZUP was an initial concern for Mr Collins, based on the SGA's further information on this matter he is now satisfied that it will not have a significant impact on the Project. His concerns on Mill Road now relate only to localised design matters for NoR D3.

Mr Collins does not raise any specific areas of concern in relation to the ATE's assessment of NoR D1.

In relation to submissions on NoR D1:

- In relation to D1.2 (FENZ), Mr Collins notes that the Mercer Street intersection with Karaka Road is located outside of the NoR footprint. Mr Collins recommends that Waka Kotahi engages further with FENZ.
- In relation to the intersection form (D1.3 (Kiwi), D1.4 (Oyster Capital) and D1.8 (Fletcher)), Mr Collins considers that a multi-lane roundabout at Oira Road / Karaka Road is appropriate and consistent with applicable standards and guidelines, but also notes that a signalised intersection may also be an appropriate design. Mr Collins considers that the NoR extent does not preclude a signalised intersection being constructed.
- In relation to the spatial extent of the designation (D1.3 (Kiwi), D1.4 (Oyster Capital), D1.8 (Fletcher) and D1.12 Kāinga Ora), Mr Collins considers that the designation footprint is a matter for the RA to determine as it relates to the constructability of the designation.

- In relation to whether the Project is sufficient to accommodate traffic flows in the event that Mill Road corridor is not constructed (D1.7 (Lomai), Mr Collins has addressed this as described in the hearing report for NoR D2 – D5. In essence, the SGA have noted² that Mill Road remains part of the Supporting Growth South Indicative Network, alongside other unfunded projects such as the Pukekohe Expressway. Mr Collins is satisfied that the funding status of Mill Road will not have a significant effect on the form and function of the Project.
- In relation to ongoing engagement with landowners (D1.11 (Karakā and Drury Limited), Mr Collins supports changes to the Stakeholder and Communication Management Plan ('**SCMP**') conditions requiring ongoing consultation with affected landowners, rather than the SCMP being simply for information purposes. This is discussed above.
- In relation to pedestrian and cycling access/connectivity (D1.12 Kāinga Ora), Mr Collins agrees that the indicative design lacks pedestrian/cyclist crossing points, but notes that specifying these requires an understanding of surrounding land uses, which are yet to be determined. Mr Collins considers that the proposed ULDMP condition included for each NoR is sufficient to ensure that pedestrian and cycle facilities will be considered and provided at the OPW stage.

Planning assessment

Based on Mr Collins' advice, we support amendments to the proposed conditions, as outlined in Appendix 1 to this report. In addition, we refer the readers to the assessment set out in the hearing report for NoR D2 – D5 where this relates to Project-wide matters.

In relation to the specific matters raised for NoR D1, based on Mr Collins' advice:

- We agree that the FENZ concerns should be addressed through ongoing consultation between Waka Kotahi and the submitter. As outlined in section 4.4.11 of this report we recommend amendments to the conditions to strengthen the requirements for ongoing consultation and engagement with directly affected parties.
- In relation to intersection form and design, for the reasons outlined in section 4.4.1 in the hearing report for NoR D2 – D5 we do not consider that the NoR spatial extent or conditions preclude signalised intersections. However, as set out in section 4.4.3 of this report, we support intersection form being a more explicit consideration in the preparation of the Urban Landscape Design and Management Plan ('**ULDMP**') conditions.
- In relation to the spatial extent of the designation, this is explored in more detail in section 4.4.3 of the hearing report for NoR D2 – D5 in relation to urban design effects.
- We consider that the funding status of Mill Road does not require any amendments to the NoR or the supporting documentation;

² In their Initial Response to Draft s92 – JUNE 2021

- In relation to ongoing engagement with landowners, we agree with Karaka and Drury Ltd, and consider that amendments to the SCMP conditions are required to strengthen ongoing consultation and engagement requirements. This is discussed in section 4.4.11 of this report.
- In relation to pedestrian and cycling access/connectivity, we agree with Kāinga Ora that potential severance effects of the arterial should be addressed by the NoR. However, we note that these effects can be managed through the proposed ULDMP conditions, which have the objective of enabling 'integration of the Project's permanent works into the surrounding landscape and urban context'³ and require details 'on pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/cycle bridges or underpasses'⁴. This in our view provides an appropriate framework for the detailed design to respond to, to ensure that pedestrian and cycling access/connectivity is provided across SH22.

Based on the advice provided by Mr Collins, the reporting planners consider that the adverse transport effects avoided, remedied or mitigated, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report.

4.4.2 Noise and vibration

Application

Construction noise and vibration

Construction noise and vibration effects are addressed in sections 9.9 of the AEE and in the Assessment of Construction Noise and Vibration Effects ('**CNVE**'), prepared by Sharon Yung, Tonkin & Taylor, and dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In essence, the CNVE has assessed the construction noise and vibration effects on existing receivers based on works occurring at the designation boundaries, in order to determine the worst-case scenario for noise and vibration effects. The CNVE advises that construction noise and vibration will need to be reassessed at the time of construction to account for the specific detailed design, equipment to be used, and newly established receivers. The CNVE and AEE propose conditions:

- Specifying noise and vibration standards for the Project (NoR D1 Condition 19);
- Requiring a Construction Noise and Vibration Management Plan ('**CNVMP**') to set out how 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 (NoR D1 Condition 20); and

³ Condition 9(b)(i), as notified

⁴ Condition 10(a)(iii)(G), as notified

- Requiring a Schedule to the CNVMP to be prepared where construction noise or vibration is anticipated to exceed the proposed noise and vibration standards.

In relation to NoR D1, Table 1 below provides a summary of the noise levels and affected receivers for both noise and vibration.

Table 6: Summary of noise and vibration levels and affected receivers from CNVE

NoR	Highest unmitigated noise level	Mitigation measures (indicative)	Properties where noise criteria (NZS 6803) exceeded		Properties where vibration criteria (DIN) exceeded	Mitigation measures
			Unmitigated	Mitigated		
D1	85 – 90 dB LAeq	1.8m high barriers	25	22	5	To be determined through future CNVMP

Operational noise and vibration

Operational traffic noise and vibration effects are addressed in Section 9.9 of the AEE and in the Assessment of Traffic Noise and Vibration Effects ('TNVE'), prepared by Sharon Yung, Tonkin & Taylor, and dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In essence, the TNVE has undertaken a two-fold assessment of effects, by predicting road noise using the methods recommended in New Zealand Standard ('NZS') 6806, and then comparing the difference in noise levels under scenarios with and without the Project. Sensitive receivers have then been categorised into Category A, B and C, with A being the most stringent external noise criteria (and therefore the preferred category) and Category C the least. Mitigations have then been considered based on the category of the receiver. The SGA proposes that operational traffic noise be reassessed at the detailed design stage, to determine the most appropriate BPO at that stage.

In relation to NoR D1, the results of this assessment are outlined in Table 7 below. As the TNVE predicts that no receivers are predicted to receive noise greater than the Category A threshold, no mitigation measures are required.

Table 7: Summary of operational noise receivers and mitigation measures

NoR	Receivers experiencing noise decrease (-9dB)	Receivers outside NZS 6806 Category A after mitigation	Mitigation measures
D2	1	0	-

Submissions

Submissions have been received in relation to the following matters:

- Provide for ongoing engagement with landowners throughout the development of the Project including providing consultation on relevant management plans; and

- Amend conditions to require re-assessment of construction noise and vibration effects on future receivers arising from development occurring between lodgement and implementation of the NoR.

Submissions D1.9 from Jenny Joyce and D1.11 from Karaka and Drury Limited express concerns with the construction noise and vibration assessment being restricted to the current receiving environment.

Submission D1.9 relates to land at 15 Burberry Road, Drury, subject to Plan Change 51 Drury 2 Precinct (Auranga B2). The submitter considers that 'there is no certainty in the conditions that construction noise (and vibration) and future road noise will be measured for any development on the submitter's landholdings which may occur between the lodgement of the NoR and the implementation of the designation'. The submitter considers it is inappropriate to exclude the future potential environment from assessment given 'the extensive potential lapse period for the NoR and the fact that the land is earmarked for growth'.

Submission D1.11 relates to land within the Drury 1 Precinct (Auranga), of which the submitter is the primary landowner/developer. The submitter seeks that the conditions for D1 ensure that the construction noise/vibration and operational noise limits from the SH22 works are appropriate for an urban environment.

Specialist assessment

Noise and vibration effects have been assessed by Mr Rhys Hegley, Consultant Acoustic Specialist, Hegley Acoustic Consultants in a memo dated July 2021, which is provided in Appendix 1 to this report.

Mr Hegley's assessment is set out in the hearing report for NoR D2 – D5. In essence, Mr Hegley's fundamental concerns are:

- The CNVE does not report on night time works nor does it assess effects of noise levels associated with such works. Mr Hegley recommends a condition requiring night time works to be limited to activities where it can be demonstrated that, for traffic safety reasons, cannot be undertaken during the daytime.
- The CNVE and AEE contain very little detail in how the Project will be constructed, and therefore very little information on the resultant adverse effects. Mr Hegley considers that generic assessment needs to be supported by well-defined conditions. In this regard, Mr Hegley is concerned that the proposed conditions do not require CNVMP is to be certified by the council, nor do they the CNVMP to be submitted to the council as part of the OPW. Mr Hegley recommends that the CNVMP needs to be subject to a robust review process by the council.

- Whether the NZS6806 approach (employed by the SGA) to assessing operational noise on only existing established receivers, rather than future receivers, is appropriate. Mr Hegley considers operational noise on future receivers could be managed by controlling road noise at the source (through low noise road surfaces and acoustic barriers), façade mitigation, and through ventilation standards where windows must be closed in order to achieve appropriate indoor noise levels. Mr Hegley supports the structural mitigations set out in NZS6806 (low noise road surfaces and acoustic barriers) applying to roads that meet the definitions of ‘New Road’ and ‘Altered Road’⁵ under NZS6806. However, Mr Hegley recommends that these structural mitigations also be applied to all other road sections across the Project in order to achieve what he considered to be the BPO.

Mr Hegley proposes amendments to conditions to the conditions for all NoRs. These are outlined in the hearing report for NoR D2 – D5. Mr Hegley makes no specific recommendations for NoR D1 that are not otherwise captured in his overall assessment.

Planning assessment

Based on Mr Hegley’s advice, we support amendments to the proposed conditions, as outlined in Appendix 1 to this report. In addition, we refer the readers to the assessment set out in the hearing report for NoR D2 – D5.

In relation to the specific matters raised for NoR D1, based on Mr Hegley’s advice:

- We agree with submitters who seek ongoing engagement with landowners throughout the development of the Project. As discussed in section 4.4.11 of this report, we support changes to the SCMP to strengthen the conditions framework to provide for ongoing consultation and engagement with affected parties.
- We agree with submitters who seek to apply the construction and operational traffic noise and vibration conditions to receivers arising from future development occurring prior to implementation of the NoR. As outlined in the hearing report for NoR D2 – D5, we support the application of structural mitigation measures (low noise road surfaces and acoustic barriers) in NZS6806 to all roads within the Project. This includes NoR D1, which is not considered under NZS6806 to be a ‘New Road’ or ‘Altered Road’. This in our view provides an appropriate framework for mitigating road noise, particularly for sensitive receivers that may establish prior to the SH22 upgrade being implemented.

Based on the advice provided by Mr Hegley, the reporting planners consider that the adverse noise and vibration effects can be avoided, remedied or mitigated, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report.

⁵ Applying to sections of NoR D2, NoR D4 and sections of NoR D5

4.4.3 Urban design effects

Application

Urban design effects are addressed in section 9.3 of the AEE and in the Urban Design Framework and Evaluation report ('**UDFE**'), prepared by Elaine Chen, Beca, and dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In relation to NoR D1 the UDFE identifies a number of recommended outcomes for the corridor, including:

- Permeability for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to destinations such as centres, transport interchanges, open spaces and community facilities.
- Legibility, modal priority for active modes and connectivity demands are addressed at intersections. For example, the Jesmond Road and SH22 intersection will require future definition to ensure connectivity between the proposed Drury West Station to SH22 ;
- An urban interface that: provides an appropriate interface to the proposed Western Centre and local centre; response to the spatial character of the proposed centre environments and supports quality public realm and pedestrian amenity; recognises the transition in the adjacent environment; and supports the integration of the proposed Drury West rail station and surrounding land uses;
- Identification of urban and landscape design drivers for the Ngakoroa Stream, Ngakoroa Reserve and Drury Sports Complex;
- Mana Whenua input into the detail design stages, particularly into cultural landscape and design matters;
- A landscape plan that considers recommendations from the landscape and visual, arboricultural and ecological assessments including street tree and stormwater wetland planting, construction compound and private property reinstatement and treatment of batter slopes
- Integration of stormwater wetlands with adjacent land uses, specifically where wetlands are proposed in areas planned for high density; and
- Measures to demonstrate that the project has adapted to climate change effects such reducing urban heat island effects, supporting modal shift and accounting for flood hazard risks.

The UDFE recommends that an Urban and Landscape Design Management Plan ('**ULDMP**') be prepared in future delivery stages of the Project, demonstrating how the corridor will provide for these outcomes. The requirement for a ULDMP and the relevant matters to address are set out in proposed Conditions 9, 10 and 11 of NoR D1.

Submissions

Submissions have been received in relation to the following matters:

- Spatial extent of the designation and timely removal
- Amenity of the future interface between SH22 and surrounding land
- Gradient of land and batter slopes adjoining the road corridors;

Submissions D1.3 from Kiwi Property No. 2 Limited, D1.4 from Oyster Capital, D1.8 from Fletcher Residential Limited and D1.12 from Kāinga Ora Homes and Communities seek that the designation extent/boundary is reviewed and reduced/refined.

Submissions D1.7 from Lomai Properties, D1.9 from Anthony and Jennifer Joyce and D1.11 from Karaka and Drury Limited relate to the future interface between SH22 and surrounding land.

Submission D1.7 is from the landowner/developer of 56ha of land in Drury West subject to PC52 (Waipupuke). The submission seeks to “ensure a high-quality interface between its site frontage and State Highway 22 is achieved, in order to ensure a positive urban design outcome.”

Submission D1.9 relates to land at 15 Burberry Road, Drury and raises concerns that Conditions 9 – 11, requiring the detailed design to be submitted with the OPW, does not require WK to “engage with and make changes to reflect any concerns raised by the adjoining landowners”.

Submission D1.11 is from the primary landowner/developer of land within the Drury 1 Precinct (Auranga), and seeks that the permanent works of the SH22 upgrade visually integrate with the urban development that will adjacent to it. The submitter notes that the Drury-Opāheke Structure Plan anticipates land use and transport integration, as well as a high quality pedestrian environment.

Specialist assessment

Urban design effects have been assessed by Ms Rebecca Skidmore, Consultant Urban Design and Landscape Specialist, RA Skidmore Urban Design Limited, in a memo dated 30 August 2021, which is provided in Appendix 1 to this report.

Ms Skidmore’s assessment of Project-wide effects and considerations is set out in the hearing report for NoR D2 – D5. In essence, Ms Skidmore’s primary concerns are:

- The proposed footprint of the designation extends beyond the finished road corridor, which could present challenges to integrating with adjacent land uses in a manner that promotes a compact urban form. In particular, Ms Skidmore foresees challenges where urbanisation precedes construction of the NoRs. This, in Ms Skidmore’s view, is likely to lead to development disconnected from the street.
- The preference for roundabouts rather than signalled intersections is likely to have an adverse effect pedestrian amenity and connectivity across the corridors. Ms Skidmore notes that roundabouts result in expansive intersections with angled or curved property boundaries, that diminish the opportunity for development to engage with and create enclosure to the street environment. This, in Ms Skidmore’s view, leads to poor outcomes for pedestrian amenity.

- The generic nature of the ULDMP conditions are generic across the five NoRs, rather than incorporating the detailed recommendations of the UDFE for each NoR. However, upon further consideration, Ms Skidmore acknowledges that the ULDMP conditions do indeed enable the UDFE recommendations to be implemented, whilst providing appropriate flexibility required for a long-term route-protection project.

In relation to submissions received:

- Ms Skidmore agrees with submitters on the spatial extent of the designation, though her concerns lie with the ultimate urban interface achieved, rather than the imposition of the NoRs on the development of private property;
- Similarly, Ms Skidmore agrees with submitters seeking to ensure that the Project provides a high quality urban interface between the corridor and adjacent properties.

Planning assessment

Based on Ms Skidmore's advice, we support amendments to the proposed conditions, as outlined in Appendix 5 to this report. In addition, we refer the readers to the assessment set out in the hearing report for NoR D2 – D5.

In relation to the specific matters raised for NoR D1, based on Ms Skidmore's advice:

- In relation to the spatial extent of the designation, we consider that the s176 approval process provides appropriate opportunity for developers seeking to undertake works prior to construction of Project to work with Waka Kotahi to achieve an appropriate development response to the finished SH22 corridor.
- In relation to achieving a high quality interface, we consider that the ULDMP conditions, as proposed to be amended by the reporting planners, provide an appropriate framework to achieve a positive interface between SH22 and adjacent land and a high quality pedestrian environment. In relation to submission D1.11 which also seeks greater land use and transport integration, we have recommended a change to Project-wide conditions requiring the ULDMP to outline how the Project will integrate with public transport infrastructure.

Based on the advice provided by Ms Skidmore, the reporting planners consider that the adverse urban design effects can be avoided, remedied or mitigated, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report.

4.4.4 Landscape and visual effects

Application

Landscape and visual effects are addressed in Section 9.5 of the AEE, and in the Assessment of Landscape and Visual Effects ('ALVE') prepared by Kathryn Holyoake, KHLA, and dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In essence, the ALVE and AEE note that the landscape will undergo significant change from rural to urban land uses over the next 30 years. The localised landscape and visual effects are expected to be similar across the Project, and include impacts on the physical landscape from construction effects; potential impacts on private properties including removal and reinstatement of boundary fences, garden plantings and driveway regrades; potential adverse natural character effects from earthworks and vegetation removal during construction, and potential adverse landscape effects from the permanent elements of the Project. Consistent with the UDFE, the ALVE recommends that such a ULDMP be prepared to demonstrate how these effects will be remedied.

In relation to NoR D1, the ALVE anticipates potential effects on the landscape and natural character of the Ngākoroa Stream as a result of bridge construction within stream environment. In particular, effects may arise from the location of construction laydown areas, vegetation clearance, and scale and location of proposed earthworks.

Submissions

No submissions have been received in relation to landscape and visual effects.

Specialist assessment

Landscape and visual effects have been assessed by Ms Rebecca Skidmore, Consultant Urban Design and Landscape Specialist, RA Skidmore Urban Design Limited, in a memo dated 30 August 2021, which is provided in Appendix 1 to this report.

Ms Skidmore's assessment of Project-wide effects and considerations is set out in the hearing report for NoR D2 – D5. In essence, Ms Skidmore supports with methodology employed by the ALVE and its subsequent analysis. Mr Skidmore supports the proposed ULDMP condition from a landscape and visual effects perspective, but seeks that Condition 10(a)(iii) for each NoR includes a requirement for details of any visual screening of temporary construction and site compound areas adjacent to residential properties. Ms Skidmore also supports the proposed reference to Waka Kotahi's design guidance documents in Condition 9, and seeks that these references be applied to NoR D2 – D5.

Planning assessment

Based on Ms Skidmore's advice, we support amendments to the proposed conditions, as outlined in Appendix 5 to this report. In addition, we refer the readers to the Project-wide assessment set out in the hearing report for NoR D2 – D5. There are no specific submissions or matters that relate to NoR D1

4.4.5 Flooding and stormwater effects

Application

Flooding and stormwater effects are addressed in Section 9.6 of the AEE and in the Assessment of Flooding Effects ('AFE') prepared by Loudene Marais, AECOM, and dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In essence, the AFE assesses the primary potential flooding effects of the Project as being the flood freeboard to habitable buildings, overland flow paths, the ability to access property by residents and emergency vehicles, the depth of flooding to roads and flooding arising from the blockage of stormwater drainage. The AFE anticipates that flooding effects during construction of the NoRs (i.e. from the construction culverts, bridges and stormwater infrastructure) can be mitigated by flood risk measures in accordance with the Construction Environmental Management Plan ('CEMP') (Condition 13(b)(vii) to NoR D1).

Operational effects on flood vary between the NoRs. For NoR D1, the AFE identifies the following potential adverse effects and mitigations:

*'The operational flood hazard effect of the Project is positive at the Ngakoroa Stream due to the greater conveyance capacity of the new Ngakoroa Stream Bridge. Operationally, this results in much improved freeboard to the bridge (with benefits to the safe passage of flow and safety of those using the bridge). There is an existing (and potential future) adverse effect with an increased depth of flooding over SH22 near Burberry Road. Design refinements and/or matters that need to be addressed further at detailed design to address this adverse effect have been identified. There is space within the designation sought for the works required for stormwater and flood mitigation.'*⁶

In order to provide a framework to mitigate operational effects, a Flood Hazard condition is proposed for all NoRs (Condition 12 to NoR D1), setting standards/thresholds for increases in flood levels/hazards.

Submissions

Submissions have been received in relation to the following matters:

- Integration of stormwater infrastructure with Auranga land

Submissions D1.9 from Anthony and Jennifer Joyce and D1.11 from Karaka and Drury Limited are concerned with the lack of integration of stormwater infrastructure between the Project and the Auranga land. Submission D1.9 notes that alternative locations for pond/wetland treatment devices have not been considered, and that large areas on the southern side of SH22 which are already council owned would be better suited to the treatment of stormwater. Submission D1.11 seeks that NoR D1 recognise that all stormwater management/conveyance proposed for SH22 works should integrate with development anticipated to occur on surrounding land. The submission seeks that such infrastructure recognise and integrate with the SMP that Kara and Drury Limited have prepared for the PC51 land.

Specialist assessment

Flooding and stormwater effects have been assessed for the council by Mr Trent Sunich, Consultant Stormwater Technical Specialist, 4Sight Consulting, in a memo dated 18 August 2021, which is provided in Appendix 1 to this report.

⁶ p. 2, Drury Arterial Network: Assessment of Flooding Effects, prepared by Loudene Marais

Mr Sunich's assessment of Project-wide effects and considerations is set out in the hearing report for NoR D2 – D5. In essence, Mr Sunich finds that the methodology of the AFE is appropriate, and the effects of the NoRs are well understood. In relation to operational effects, Mr Sunich supports the proposed Flood Hazard condition, noting that a performance-based condition allows for flexibility to respond to the detailed design processes for each NoR.

However, Mr Sunich supports amendments to the respective Flood Hazard conditions in order to:

- Delete references to 'existing authorised habitable floors', on the basis that 'existing authorised' presents complexities in its implementation and interpretation.
- Introduce a new standard requiring 'no additional habitable floors flooded', and related to this, amending the definitions of 'habitable floor' and 'habitable floor level that has existing flooding' to:
 - Specify that a habitable floor encompasses those existing at the start of detailed design for a Stage of Work; and
 - Delete the reference to 'existing authorised' within the definition of 'habitable floor level that has existing flooding'

In particular relation to NoR D1, Mr Sunich notes that:

Overall effect of the upgrade on operational phase flood hazards is positive due to the greater conveyance capacity of the new Ngakoroa Stream Bridge. This results in much improved freeboard to the bridge (with benefits to the safe passage of flow safety of those using the bridge) and reduced flood levels upstream with improved safety for the public and properties.

In response to submissions, Mr Sunich advises the following:

- D1.9 Anthony and Jennifer Joyce: Mr Sunich notes that Healthy Waters does not have a view on the exact location of ponds/wetlands, noting that this will be addressed through detailed design, and that there may be functional requirements for the wetlands to be in their proposed location. Mr Sunich advises that the southern side of SH22 appears to be in the flood plain. However, Mr Sunich supports the aspect of the submission that seeks to delete reference to 'existing authorised', and instead has proposed amendments to conditions to apply Flood Hazard performance based standards to any habitable floors existing at the start of detailed design for a Stage of Work.
- D1.11 Karaka Drury Limited: Mr Sunich notes that Healthy Waters supports the integration of land use and the corridors. Mr Sunich considers that this integration can be achieved through the proposed Flood Hazard conditions.

Planning assessment

Based on Mr Sunich's advice, we support amendments to the proposed conditions, as outlined in Appendix 1 to this report. In addition, we refer the readers to the assessment set out in the hearing report for NoR D2 – D5.

In relation to the specific matters raised for NoR D1, based on Mr Sunich's advice:

- We agree with submitter D1.9 in respect of the reference to the term ‘existing authorised’ in relation to habitable floors. Instead, we recommend that habitable floors be defined in the conditions as those existing at the start of detailed design for a Stage of Work.
- In relation to the exact location of the wetland on 15 Burberry Road⁷, whilst we acknowledge this will be determined through the detailed design, this does inform the designation extent. In this regard, we suggest that the SGA present additional information at the hearing on the rationale for the location of this wetland on the submitter’s property.
- In relation to the integration of stormwater infrastructure with the SMP prepared by Karaka and Drury Limited for PC51, we consider that the Flood Risk conditions, subject to our recommended amendments, provide for this integration to occur. These conditions are performance based and do not prescribe how the outcomes sought⁸ will be achieved, and therefore do not preclude an integrated stormwater approach with adjacent land.

Based on the advice provided by Mr Sunich, the reporting planners consider that the adverse flooding and stormwater effects can be avoided, remedied or mitigated, in conjunction with regional consents being obtained during detailed design of the Project, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report.

4.4.6 Ecology Effects

Application

Effects on ecology are addressed in sections 9.6 of the AEE and in the Assessment of Ecology Effects (**‘Ecology Report’**) prepared by Kate Feickert, Conor Reid and Michiel Jonker, AECOM, and dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In relation to NoR D1, the AEE and Ecology Report find that the construction and operational phases of the project are likely to result in adverse effects on the habitat of coastal bird species within the Ngakoroa Stream wetlands. This includes habitat for Threatened or At Risk species. Effects of the Project on bats and herpetofauna (lizards) are anticipated to be Low – Very Low.

Construction of the new bridge of Ngakoroa River will require temporary construction works areas to be located adjacent to WL19 raupo reedland habitat, which the Ecology Report advises is a potential habitat for breeding banded rail fern bird and spotless crane. The AEE notes that the location of these facilities is largely unavoidable as an all-weather construction yard will be required for bridge construction and staging will be required from both sides of the bridge. Existing exotic buffer vegetation, although unsuitable as habitat for At Risk – Declining wetland birds, could be retained as a buffer between construction laydown areas and adjacent habitat.

⁷ Wetland 1

⁸ Refer Condition 12(b) to NoR D1, as notified.

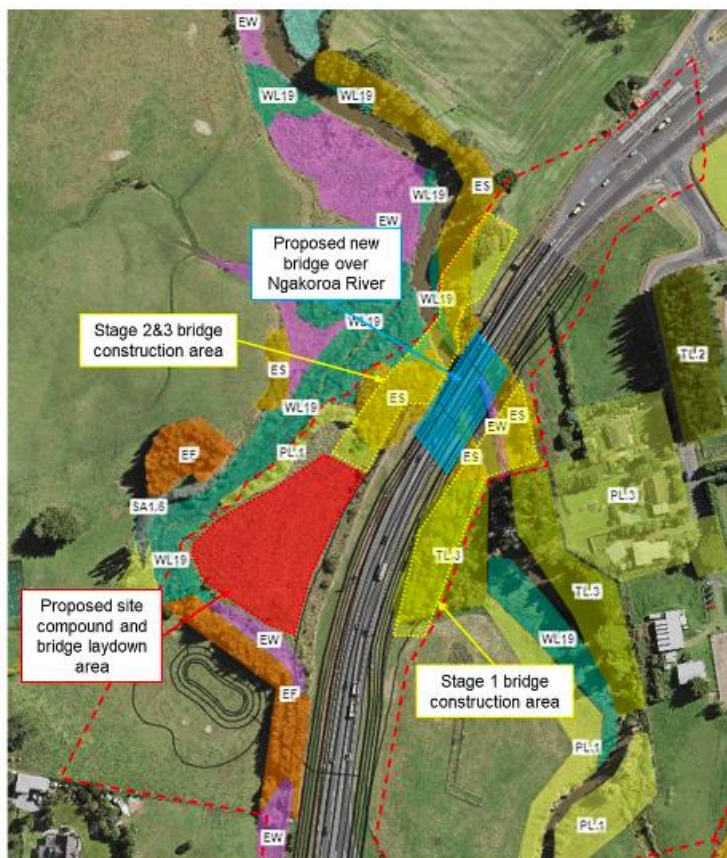
In order to mitigate construction effects on wetland bird habitat in the Ngakoroa Stream, the AEE and Ecology Report propose that a Bird Management Plan ('BMP') be prepared prior to construction. This is outlined in proposed Condition 27 to NoR D1, which requires the BMP to set out the methods that will be used to 'avoid and/or minimise impacts of construction activities on Threatened or At-Risk wetland birds in the Ngakoroa Stream Wetlands'. Such potential methods specified by the BMP include undertaking construction works outside of wetland bird breeding season where practicable, undertaking a nesting bird survey prior to construction and on an ongoing basis, protection and buffer measures, and specifically a 10m setback where practicable between the edge of the Ngakoroa Stream Wetlands and the construction area.

Operational effects on birds are identified by the AEE and Ecology Report as being 'displacement as a result of light spill and noise during operation of the widened road corridor, and fragmentation of habitats where the Project crosses habitat corridors'. However, the assessments note that adverse effects of fragmentation and disturbance already exist, and that:

- Noise and vibration are likely to be reduced compared with the existing baseline;
- Coastal wetland birds currently using the Ngakoroa Stream are potential habituated existing light levels or may already avoid the existing corridor; and
- Gradual incremental changes in habitat from urbanisation on both sides of SH22 may discourage nesting and reduce the viability of native fauna persisting over time.

Overall, the AEE and Ecology Report anticipated that operational effects on birds will be Negligible – Low. As such, the no mitigation measures are proposed in relation to operational effects.

Figure 3: Effect of NoR D1 works on Ngakoroa River habitats (Figure 9-1 from AEE, p.131)



Submissions

No submissions have been received in relation to ecology effects.

Specialist assessment

Effects on ecology have been assessed for the council by Mr Carl Tutt, Ecologist, Auckland Council in a memo dated 1 September 2021, which is provided in Appendix 1 to this report. Mr Tutt's assessment of Project-wide effects and considerations is set out in the hearing report for NoR D2 – D5. Mr Tutt's primary concern is the potential adverse effects of NoR D4 on existing wetlands. However, in relation to the Project-wide effects, Mr Tutt recommends that Condition 11 relating to the preparation of a ULDMP require that:

- Plant sourcing and planting use eco-sourced species where possible; and
- Restoration planting remedies the loss of ecosystem services provided by vegetation identified for removal, including the replacement of planting which fails to establish.

Mr Tutt does not make any specific recommendations in relation to NoR D1.

Planning assessment

Based on the advice provided by Mr Tutt, the reporting planners consider that the adverse ecological effects can be avoided, remedied or mitigated, in conjunction with regional consents being obtained during detailed design of the Project, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report.

4.4.7 Historic heritage and archaeological effects

Application

Historic heritage and archaeological effects are addressed in sections 9.4 of the AEE and in the Assessment of Effects on Historic Heritage ('**AEHH**') prepared by Danielle Trilford, CFG Heritage, dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In relation to NoR D1, the AEE and AEHH report that no recorded historic heritage sites or deposits were found within the designation footprint. Newly recorded archaeological sites were identified near the Ngakoroa Stream, which indicates a likelihood of exposing previously unrecorded deposits during construction of the Project. The AEE considers that any potential adverse effects on previously unrecorded archaeology can be mitigated through Condition 22 requiring the preparation of a Heritage and Archaeology Management Plan ('**HAMP**'). Specifically, Condition 22 requires the HAMP to identify known and potential heritage and archaeological sites, including sites for which Archaeological Authority under the HNZPTA will be sought or has been granted.

Submissions

Submissions have been received in relation to the following matters:

- Heritage New Zealand amendments to conditions to account for potential historic places, combination

Submissions D1.13 from Heritage New Zealand Pouhere Taonga ('HNZPT') relates to the HAMP condition, and seeks the following:

- Supports the specific recommendations in the AEHH to avoid known historic heritage sites, and where archaeological sites are suspected of extending into the Project works area, further research should be undertaken in accordance with NZHPT guidelines;
- Seeks minor amendments to the conditions to achieve consistency with the RMA definition of historic heritage, and that archaeological resource are not split out as a separate consideration from built heritage;
- Seeks that the conditions provide for mitigation of the adverse effects on historic heritage through interpretation of lost heritage sites and landscapes (including via incorporation into detailed design), to enable increased public awareness and amenity of the historic heritage in the area. HNZPT note that this opportunity to present historic information is listed in the AEE as a positive effect of the Project. HNZPT consider that this interpretation should be undertaken in accordance with the ICOMOS charter⁹;
- Supports the conditions providing for ongoing Mana Whenua engagement into the Project, including in the preparation of a Cultural Advisory Report¹⁰, and in the preparation of other management plans; and
- Note that whilst the Historic Summary prepared by Ngāti Tamaoho outlines that consultation has been undertaken, HNZPT considers that the delivery of roading projects should be informed by Cultural Impact Assessments.

HNZPT's submissions are supported by proposed amendments the HAMP conditions.

Submission D2.19 from Jessie Annamay Barriball advises that "We have placental from our mokos buried on our land. This is not to be uplifted. We want our complete property to be left as is.' This submission was made to NoR D2. However, the submitter's property at 160 Karaka Road is partly covered by the NoR D1 footprint (in addition to being adjacent to NoR D2).

Specialist assessment

Effects on historic heritage have been assessed by Cara Francesco, Principal Specialist Built Heritage, Auckland Council and by Principal Specialist Cultural Heritage, Auckland, in respective memos dated 3 August 2021, which are provided in Appendix 1 to this report.

⁹ ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value, 2010, specifically Principle 2. 'Understanding cultural heritage value'

¹⁰ Required by condition 8 for NoRs D2 – D5

Ms Francesco and Mr Brassey's assessment of Project-wide effects is discussed in the hearing report for NoR D2 – D5. In essence, they recommend amendments to the HAMP conditions in response to submissions, including the submissions made by HNZPT, which are relatively similar across the NoRs. There are no recorded historic heritage sites within the Project area for NoR D1, and as such the specialists do not make any specific recommendations for NoR D1.

Planning assessment

In relation to submission D2.19, we note that the extent of Project works shown in the indicative design drawing is minimal, and that this extent can be refined through the detailed design of the corridor in consultation with the submitter.

Based on Ms Francesco and Mr Brassey's advice, we support amendments to the proposed conditions, as outlined in Appendix 1 to this report. In addition, we refer the readers to the assessment set out in the hearing report for NoR D2 – D5 where this relates to Project-wide matters.

4.4.8 Arboricultural effects

Application

Arboricultural effects are addressed in Section 9.7 of the AEE and in the Assessment of Arboricultural Effects ('**Arborist Report**') prepared by Craig Webb and dated January 2021.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In essence, the Arborist Report has focussed its assessment on trees protected under the AUP. The application proposes to re-assess trees closer to the time of construction, and proposes a condition requiring the preparation of a Tree Management Plan ('**TMP**') for NoRs D1, D2 and D5 (Condition 25 to NoR D1). The proposed ULDMP also requiring details of landscape planting, including the retention of trees to be retained identified by the TMP.

In relation to NoR D1, AEE and Arborist Report identify trees protected under the AUP within the Drury Sports Complex that could be adversely affected by a construction laydown area. The Arborist Report notes that potential adverse effects can be avoided through implementation of tree protection measures, as part of a TMP prepared during detailed design for the Project.

Submissions

No submissions have been received in relation to arboricultural effects.

Specialist assessment

Arboricultural effects have been assessed by Mr Gavin Donaldson, Senior Arborist, Auckland Council, in a memo dated August 2021, which is provided in Appendix 1 to this report.

Mr Donaldson's assessment is set out in the hearing report for NoRs D2 – D5. In essence, Mr Donaldson supports the approach outlined in the Arborist Report, but seeks that:

- The ULDMP require Potential adverse effects from replanting are remediated rather than mitigated; and

- The TMP require remedial planting to match or exceed the carbon sequestration capacity of existing trees.

As such, Mr Donaldson supports amendments to the ULDMP conditions for all NoRs, and TMP conditions for NoRs D1, D2 and D5. No further specific recommendations are made by Mr Donaldson in respect of NoR D1.

Planning assessment

Based on Mr Donaldson's advice, we support amendments to the proposed conditions, as outlined in Appendix 5 to this report. In addition, we refer the readers to the Project-wide assessment set out in the hearing report for NoR D2 – D5. There are no specific submissions or matters that relate to NoR D1.

4.4.9 Open space and community facilities effects

Application

Effects on public open spaces are addressed at various points of the AEE, particularly in Sections 9.22 of the AEE which relate to community effects.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5.

Submissions

No submissions have been received in relation to open space effects.

Specialist assessment

Effects on open spaces have been assessed by Mr James Hendra, Consultant Parks Planner, Hendra Planning Limited. In relation to NoR D1, Mr Hendra is concerned with potential effects on two open spaces – Ngakoroa Reserve and the Drury Sports Complex.

Ngakoroa Reserve

Ngakoroa Reserve is located on the western side of the NIMT and comprises 7.3ha. The eastern part of the northern block of Ngakoroa Reserve is leased to "Riding for the Disabled" and contains building and facilities which support this activity. The remainder of the reserve contains open grassed areas and vegetation which is generally located alongside the stream. The Project involves expansion of the SH22 designation into Ngakoroa Reserve along the western side, including a site compound on the northern side of Great South Road.

Mr Hendra's primary concerns are the effects of batter slopes on the reserve, effects on the reserve and reserve users during construction, effects caused the proposed site compound and potential loss of vehicle access from Great South Road:

- The indicative design drawings show permanent batter slopes extending into the reserve. Whilst Mr Hendra finds this to be preferable compared with retaining works, he notes it will result in land being no longer being available for conservation or recreational purposes. However, Mr Hendra is satisfied that the proposed 'conditions 7 (Management Plans), 9 and 10 (Urban and Landscape Design Management Plan (ULDMP)) will adequately provide for visual integration of the permanent works into the reserve landform and landscape'.
- In relation to construction vehicle access, Mr Hendra is satisfied that proposed Condition 17(b)(vi) (CTMP) , which requires “methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be”, is sufficient to ensure access to the reserve is maintained during construction.
- In relation to operational vehicle access, the proposal is not clear on whether the sole existing vehicle access at the northern side of Great South Road. The reserve is otherwise inaccessible due to it being bisected by the Ngakoroa Stream. Mr Hendra recommends a condition to require this access to be retained post construction.

Drury Sports Complex

The Drury Sports Complex is an 8.4ha active sports park located west of Victoria Street and Great South Road. Car parking and facilities are located centrally and are accessed from Victoria Street. The proposed designation extends over the southwestern part of the Drury Sports Complex. Mr Hendra's primary concern with the effects of the Project relate to construction traffic. Mr Hendra considers that, whilst the Project does not directly affect the vehicle access to the Drury Sports Complex, the works on Great South Road may affect access for vehicles travelling north to the facility. Mr Hendra seeks that the CTMP condition address this matter and ensure that access to the reserve is maintained during construction.

Planning assessment

Based on Mr Hendra's advice, we support amendments to the proposed conditions, as outlined in Appendix 1 to this report. In addition, we refer the readers to the assessment set out in the hearing report for NoR D2 – D5 where this relates to Project-wide matters.

In relation to the specific matters raised for NoR D1, based on Mr Hendra's advice:

- Whilst we acknowledge that the CTMP condition¹¹ is required to identify methods to maintained vehicle access to property where practicable (and provide alternative access when it will not be), we consider that this could be strengthened by referencing 'public and private' vehicle access¹², and requiring a consideration of effects on vehicular and pedestrian traffic near open spaces¹³.

¹¹ Condition 17 to NoR D1, as notified.

¹² In condition 21(c)(vi) in our recommended conditions.

¹³ In condition 21(c)(iii) in our recommended conditions

Based on the advice provided by Mr Hendra, the reporting planners consider that the adverse effects on open spaces and community facilities can be avoided, remedied or mitigated, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report.

4.4.10 Air quality effects

Application

Air quality effects arising from construction are addressed generally relation to the construction methodology in Sections 4.4.5 of the AEE.

The Project-wide assessment of effects is discussed in the hearing report for NoR D2 – D5. In essence, the AEE reports that construction effects (dust) will be mitigated through measures outlined in a Construction Environmental Management Plan ('**CEMP**'), which are anticipated to include water carts to minimise dust during earthworks, covered tracks hauling material onto and off site, and mulching and top soiling of exposed earthworks. Operational air quality effects are not addressed in the AEE.

Submissions

No submissions have been received in relation to air quality effects.

Specialist assessment

Air quality effects have been assessed by Mr Paul Crimmins, Senior Specialist - Contamination, Air & Noise, Auckland Council in a memo dated 26 July 2021, which is provided in Appendix 1 to this report.

Mr Donaldson's assessment is set out in the hearing report for NoRs D2 – D5. In essence, Mr Crimmins supports the approach adopted by the SGA in relation to construction air quality effects, and highlights the ongoing application of AUP regional plan air quality provisions¹⁴. In Mr Crimmins' view, the proposed CEMP conditions in conjunction with these regional plan provisions provides an appropriate framework to manage potential air quality effects of the Project.

Planning assessment

Based on Mr Crimmins's advice, we support amendments to the proposed conditions, as outlined in Appendix 1 to this report. In addition, we refer the readers to the assessment set out in the hearing report for NoR D2 – D5 where this relates to Project-wide matters.

Therefore, the reporting planners consider that the adverse effects on air quality can be avoided, remedied or mitigated, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report.

¹⁴ Chapter E14 Air Quality, in particular Standards E14.6.1.1

4.4.11 Property, land use, business and other effects

Application

Property, land use and business effects are addressed in Section 9.12 of the AEE. The AEE reports that 25 private properties will be directly affected by the proposed designation extent of NoR D1. These properties comprise the following:

- The majority of land is private farmland, primarily used for raising with low density rural residential dwellings;
- For rural based business, including Golden Homes, two horticultural business and a transportation and logistics business;
- The Ngakoroa Reserve and Drury Sports Complex; and
- Land subject to private plan changes PC51 (Drury 2 Precinct) and PC61 (Waipupuke).

The assessment of effects on particular properties and proposed mitigation measures for NoR D1 is consistent across the Project. These are discussed in the hearing report for NoR D2 – D5. In essence, the AEE identifies pre-construction, construction and post construction effects. In essence:

- Pre-construction effects primarily relate to land within the proposed designation footprint, which will be restricted under s176(1)(b) of the RMA, and are proposed to be mitigated by the RA's working with affected landowners, and establishing a website or equivalent virtual information source for the Project.
- Construction effects are identified as being "disruption to farm activities and business, temporary loss of grazing pasture, stock-proof fencing, disruption to access, changes to driveway gradient, loss of vegetation and temporarily affected amenity". The implementation of management plans, being a Stakeholder Communication Management Plan ('**SCMP**'), CTMP, CNVMP and CEMP are proposed as tools to mitigate construction effects.
- In relation to post-construction effects, the AEE notes that land required for permanent work will be purchased following review of the designation boundary and completion of the works. Land no longer required will be reinstated in coordination with directly affected landowners or occupiers, including:
 - Reinstatement of construction areas and reintegrating with the surrounding landform;
 - Reinstatement of driveways, accessways, fences and gardens; and
 - Integration of batters and cut/fill slopes with the landscape.

Submissions

Submissions have been received in relation to the following matters:

- Loss of developable land and planning blight
- General relief to decline the NoR

- Effects on network utilities

Submissions D1.6 from Lynette Erceg seeks to decline the NoR, noting that it will cause an adverse effect on their property, and will not be a sustainable use of natural and physical resources. The submitter has not specified what site(s) their concerns relate to.

D1.9 from Anthony and Jennifer Joyce is concerned with the loss of developable land and seeks appropriate compensation. The submitter is the landowner of 15 Burberry Road, Drury, and considers that the extent of land required by the NoR on this site has not sufficiently taken into consideration the anticipated urban development of adjoining land. The submitter is of the view that the NoR effectively blights the development potential of the submitter's property for years, and causes uncertainty as to the actual yield that can be realised, until detailed design of the corridor is complete.

Submissions D1.3 from Kiwi Property No. 2 Limited, D1.4 from Oyster Capital, D1.8 from Fletcher Residential Limited and D1.12 from Kāinga Ora Homes and Communities seek that the designation extent/boundary is reviewed and reduced/refined.

Submissions D1.1 from Kiwirail Holdings Limited and D1.10 from Firstgas Limited relate to effects on network utilities. Kiwirail support the NoR, subject to their asset and project interests being addressed through a suitable NUMP. Firstgas seek that 'if approved, a framework for both enabling and protecting the gas transmission network (including ancillary equipment) is established. Firstgas notes such a framework is generally provided for in the Application'.

Specialist assessment

No specialist assessment has been sought for property, land use, business and other effects.

Planning assessment

We understand the key matters to be:

- Spatial extent of the designation
- Loss of developable land, and planning blight
- Effects on network utilities

In relation to the spatial extent of the designation, this has been assessed in section 4.4.3 of this report in relation to urban design effects.

In relation to loss of developable land and planning blight, we generally consider the spatial extent of the designation necessary to implement the NoR. As set out in section 4.4.3 of this report, we consider that the extent of the NoR does not preclude future development within the footprint occurring, in consultation with Waka Kotahi, through a s176 approval process.

In terms of planning blight arising from the route-protection nature of the NoR, we consider that route-protection is reasonably necessary to achieve the Project objectives. However, we note that no lapse date will apply given the designation is existing, and this may be of concern to submitters, as this does not provide certainty on the timeframe for implementing the NoR. We suggest that the potential planning blight from the absence of lapse dates on NoR D1 be addressed by the SGA at the hearing.

In relation to effects on network utilities, we agree with Firstgas and Kiwirail in that the conditions should provide an appropriate framework to manage effects on network utilities. We consider that that the concerns addressed in the submissions can be appropriately addressed by the proposed Network Utility Management Plan ('**NUMP**') condition¹⁵, which requires a NUMP to be prepared in consultation with relevant network utility operators, to provide access to networks for utility providers and appropriately manage construction effects.

The reporting planners consider that the adverse effects on property, land use, and businesses and network utilities can be avoided, remedied or mitigated, subject to an amended set of conditions being imposed for NoR D1. The amendments associated with this recommendation are set out in Appendix 5 to this report

4.5 Effects conclusion

The reporting planners consider that subject to the further amendments to the conditions recommended above and included in Appendix 5 to this report, the potential adverse effects on the environment from the construction and operation of NoR D1 of the Drury Arterial Network can be appropriately avoided, remedied or mitigated.

4.6 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.

4.6.1 National Policy Statement on Urban Development ('NPSUD')

The SGA have assessed the Project against the relevant provisions of the NPSUD in Section 41.1 of the AEE. In summary, the SGA find that the Project will give effect to the NPSUD because:

- The Project is necessary to support growth and the establishment of necessary development in Drury-Opāheke, and will ensure that transport infrastructure is planned and integrated to meet feasible development capacity targets.
- Where necessary, the RA's will work with landowners and developers under the process in section 176(1)(b) to enable development within extent of the NoRs.
- The Project will enhance accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport.
- The Project supports reductions in greenhouses gas emissions by providing for public transport (through the FTN) and active transport thus reducing the reliance on low occupancy vehicles.

¹⁵ NoR D2 condition 27, NoR D3 – D4 Condition 24, Nor D5 condition 25, as notified.

- The Project is resilient to the effects of climate change, as demonstrated to the flooding and inundation assessment provided in the AFE. The Project also will provide street tree planting that will contribute to reducing urban heat island effects.

Overall, the reporting planners consider that NoR D1 is consistent with the NPSUD.

4.6.2 National Policy Statement on Freshwater Management

The NPSFM seeks to implement Te Mana o te Wai¹⁶ 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.

The SGA have assessed the Project against the NPSFM in section 41.1 of the AEE. In summary, the SGA find that the Project will give effect to the NPSFM because:

- 'Although resource consents (regional and NES Freshwater) are not being sought for the Drury Package at this time, ecological effects arising in respect of activities that require consents have been considered to inform alternatives assessment, Project design and the proposed designation and proposed alteration to the existing SH22 designation footprints'.
- The Project has sought to avoid or minimise impacts on streams and high value wetlands. Where the Project seeks to upgrade roads over existing stream crossings, effects on high value stream and wetland environments have been avoided or reduced where practicable ;
- Some freshwater environments have been impacted where there is a functional and operational need to do so. Any potential effects of the Project on ecological features within or adjacent to the Project areas, can be adequately managed in any future consent processes. Additionally, there is flexibility in the proposed designation and the proposed alteration to the existing SH22 designation to further minimise impacts at detailed design.

The reporting planners consider that NoR D1 is consistent with the NPSFM.

4.6.3 New Zealand Coastal Policy Statement 2010 ('NZCPS')

The NZCPS contains objectives and policies relating to the coastal environment. NoR D1 is not within the coastal environment and therefore the NZCPS is not a relevant consideration.

4.7 Regional Policy Statement (Chapter B of the AUP) (RPS)

The RPS sets the strategic direction for managing the use and development of natural and physical resources throughout Auckland. The SGA have assessed the Project against the relevant provisions of the RPS in Section 41.1 of the AEE. In summary, the SGA find that the Project will give effect to the RPS because:

¹⁶ A concept that seeks to recognise and protect the health of freshwater in order to protect the health and well-being of the wider environment

- The Project supports urban growth and the establishment of development capacity as set out in relation to the NPSUD assessment (RPS B2.2 Urban growth);
- The Project provides a wide range of benefits¹⁷ and will avoid, remedy or mitigate the effects of the infrastructure as outlined in the AEE¹⁸ (RPS B3 Infrastructure);
- The Project will not compromise the National Grid, particularly in relation to Ngakoroa Stream bridge which has been design to manage potential effects from working underneath the 220kV transmission lines;
- The Project provides for the protection and enhancement of ecological values, noting that the alignments have sought to avoid or minimise impacts on high value ecological areas. NoR D1 has a functional need to locate within a Significant Ecological Area ('SEA') identified in the AUP, and has sought to minimise impacts on this SEA by widening to the opposite side of the SEA which is of lesser ecological value (RPS B7 Natural Resources);
- The Project has actively involved Mana Whenua throughout the Project preparation and recognises and provides for the principles of Te Tiritiri o Waitangi (RPS B6 Mana Whenua);
- The Project is resilient to natural hazards, particularly by providing positive flood resilience effects that will avoid, remedy and mitigate potential adverse effects on people and property in areas subject to natural hazards and risk. In particular, the SH22 will allow greater conveyance capacity by the proposed Ngakoroa Stream Bridge, and potential stormwater effects during construction can be appropriately managed by the CEMP conditions (RPS B10 Natural Hazards); and
- NOR D1 is does not impact on scheduled historic heritage and recognises the importance of historic heritage through the implementation of the HAMP, and providing a precautionary approach to the potential of identifying previously unrecorded sites during construction (RPS B5 Historic heritage and special character).

Overall, the reporting planners consider that NoR D1 is consistent with the RPS.

4.8 Auckland Unitary Plan – district plan provisions

The SGA have assessed the Project against the relevant provisions of the AUP district plan in Section 41.1 of the AEE. The majority of district plan matters have been discussed in section 4.7 above in relation to the RPS. In addition to the RPS matters, we consider NoR D1 to be consistent with the AUP district plan provisions because:

¹⁷ Refer to section 4.3 of this report in relation to positive effects

¹⁸ Sections 9, 16, 23, 30 and 37

- In relation to Chapter E25 – Noise and Vibration, subject to our recommended amendments to conditions, the NoR D1 conditions provide an appropriate framework to protecting people from unreasonable levels of noise and vibration, and provide mechanisms for construction activities exceeding the relevant noise and vibration standards to be enabled whilst controlling their duration, frequency and timing by requiring the preparation of a CNVMP Schedule.
- In relation to Chapter H7 - Open Space zones, the SGA report that NoR has sought to reduce impacts on open space zones, including by mostly avoiding direct permanent impacts on the Ngākoroa Reserve and Drury Sports Complex, mitigating construction effects through the preparation of relevant management plans, and replacing protected trees that cannot be retained; and
- In relation to Chapter H22.- Strategic Transport Corridor Zone, SGA report that the NoR D1 will have significant positive effects on the transport network, thus providing an integrated, safe effective and efficient transport corridor.

4.9 Alternative sites, routes or methods – section 171(1)(b)

The requiring authority does not have an interest in all the land and the effects of the works are likely to be significant. Therefore an assessment of alternative sites, routes or methods is required. The requiring authority's assessment of alternatives is set out in sections 8 and 41.2 of the AEE and in the Assessment of Alternatives provided as Appendix A to the AEE.

We agree with the assessment undertaken and conclusions reached by the AEE and Assessment of Alternatives. In our view, the RA 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

4.10 Necessity for work and designation – section 171(1)(c)

The requiring authority has set out its specific project objectives in Form 18 and section 41.3 of the AEE.

The AEE concludes that the designation is reasonably necessary to achieve the project objectives. Therefore we consider that the works and designation are reasonably necessary to achieve the requiring authority's objectives.

4.11 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.

The SGA has assessed the Project against a range of central government and local government plans, strategies and policies in Section 41.4 of the AEE. We agree with the SGA's assessment against these documents, and add the following:

The Heritage New Zealand Pouhere Taonga Act 2014 promotes the identification, protection, preservation, and conservation of the historical and cultural heritage of New Zealand. The Project includes conditions that integrate with the process of obtaining an Archaeological Authority from NZHPT and complying with any statutory requirements of an such an authority under the HNZPT.

4.12 Designation lapse period extension – section 184(1)(c)

The SGA does not propose a lapse period for NoR D1 as the designation has already been given effect to.

4.13 Part 2 of the Resource Management Act 1991

4.13.1 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 environment.*

4.13.2 Section 6 of the RMA

Section 6 of the RMA sets out the matters of national importance which must be recognised and provided for. An assessment of the NoR D1 against Section 6 is provided in Table 13 below.

Table 13: Assessment of NoR D2 – D5 against section 6 of the RMA

Matter of national importance	Assessment
(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:	NoR D1 is not located within the coastal environment. The reporting planners' recommended conditions, along with regional plan and NESFM resource consent processes, provides an appropriate framework to protect wetlands, lakes and rivers and their margins. NoR D1 also provides opportunities for replacement landscaping and opportunities to integrate with the Blue-Green network identified in the Drury-Opāheke Structure Plan.
(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:	There are no outstanding natural features or landscapes affected by the NoR.

(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:	The Project alignment and design has been developed to avoid areas of significant indigenous vegetation and habitats. Where there is a functional need to locate within these areas, particularly Ngākoroa Stream which contains significant wetland bird habitat, the recommended conditions attached to this report provide for the protection of significant habitats.
(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:	The Project does not affect public access to or along the coastal marine area, lakes or rivers.
(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:	Mana Whenua have been engagement throughout the development of the Project, and the conditions provide for this engagement to continue through the preparation of management plans at the detailed design stage. No sites of significance to Mana Whenua is identified within the Project area.
(f) the protection of historic heritage from inappropriate subdivision, use, and development:	No historic heritage sites are identified within the designation extent. A detailed set out conditions are recommended in order to protect unidentified historic heritage and archaeology within the Project area, by requiring the preparation of a HHMP and setting out accidental discovery protocols.
(g) the protection of protected customary rights:	The NoR does not affect any protected customary rights.
(h) the management of significant risks from natural hazards.	Potential flood hazards will be managed through construction under the CEMP, and during the operation of the NoRs through the Flood Risk conditions.

4.13.3 Section 7 of the RMA

Section 7 of the RMA sets out other matters which shall be given particular regard to. The SGA has assessed the Project against these matters in section 41.5.3 of the AEE. We agree with this assessment.

4.13.4 Section 8 of the RMA

Section 8 of the RMA requires the principles of the Treaty of Waitangi to be taken into account. The SGA has assessed the Project against these matters in section 41.5.4 of the AEE. We agree with this assessment.

5 Conclusions

Waka Kotahi as the requiring authority has lodged an NoR under section 181(2) of the RMA for project D1 within the Drury Arterial Network.

That the notice of requirement should be confirmed subject to conditions and with modifications, 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 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.

6 Recommendation and conditions

6.1 Recommendation

Subject to new or contrary evidence being presented at the hearing, and the requiring authority supplying adequate responses on issues raised in the body of the report, pursuant to section 171(2) of the RMA, it is recommended that the notice of requirement be confirmed, subject to the amended and additional conditions set out in Appendix 6 to this report.

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 New Zealand coastal policy statement, relevant national policy statements, regional policy statement 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)(c) of the RMA, the notice(s) of requirement is reasonably necessary to achieve the requiring authority's objectives.

Restrictions, by way of conditions attached to the notice(s) of requirement have been recommended to avoid, remedy or mitigate adverse environmental effects associated with the works.

6.2 Recommended conditions

The set recommended by the reporting planners for NoR D1 is set out in Appendix 5 to this report.

- Appendix 1: AUCKLAND COUNCIL SPECIALIST REVIEWS**
- Appendix 2: SECTION 92 REQUESTS AND RESPONSES**
- Appendix 3: SUMMARY OF SUBMISSIONS**
- Appendix 4: COPIES OF SUBMISSIONS AND LOCAL BOARD VIEWS**
- Appendix 5: PROPOSED NOTICE OF REQUIREMENT CONDITIONS**

APPENDIX ONE

AUCKLAND COUNCIL SPECIALIST REVIEWS



Drury Arterial Network NoR

Transportation Review
Report



August 2021

flow

TRANSPORTATION SPECIALISTS

Project: Drury Arterial Network NoR
Title: Transportation Hearing Report
Document Reference: P:\ACXX\406 Supporting Growth Drury Local NORs\Reporting\R1C210830 - Hearing report.docx
Prepared by: Mat Collins/Terry Church
Reviewed by: Terry Church

Revisions:

Date	Status	Reference	Approved by	Initials
26 July 2021	For Council comment	R1A210726	T Church	
18 August 2021	Final	R1B210818	T Church	
30 August 2021	Update for revised conditions	R1C210830	M Collins	

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SUMMARY OF MY PEER REVIEW

Auckland Council (Council) has requested Flow Transportation Specialists (Flow) to review the transportation matters associated with five Notices of Requirement (NoRs), which have been prepared by Te Tupu Ngātahi Supporting Growth (SG) on behalf of Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (Waka Kotahi). The NoRs seek to alter an existing designation and to introduce new designations for future strategic transport corridors to support the planned urban growth in the Drury-Opāheke area of South Auckland.

The five NoRs are outlined below

- ◆ D1 Alteration to Waka Kotahi designation 6707 - SH22 (Waka Kotahi)
- ◆ D2 Jesmond to Waihoehoe West Frequent Transit Network (FTN) Upgrade (AT)
- ◆ D3 Waihoehoe Road East Upgrade (AT)
- ◆ D4 Opāheke North-South FTN Arterial (AT)
- ◆ D5 Ponga Road and Opāheke Road Upgrade (AT).

Key transport matters raised during my review

- ◆ Matters relevant to effects within the boundaries of the NoRs
- ◆ Mill Road dependencies
- ◆ Effect on existing vehicle accesses to private properties adjacent to the NoRs
- ◆ Effect of the change in road level relative to adjacent land/private property access
- ◆ Closure of the Waihoehoe Road/Flanagan Road intersection
- ◆ Closure of the Bremner Road/Creek Street intersection
- ◆ Safety effects on the proposed Great South Road/Tui Street intersection
- ◆ Opāheke Road localised improvements
- ◆ Lack of tie in details to the existing transport network at the Waihoehoe Road/Drury Hills Road intersection
- ◆ Lack of tie in details to the existing transport network at the Ponga Road/Jack Paterson Road intersection.
- ◆ Construction effects including staging.

Submissions that raised matters that I support and that were not already addressed as part of my review of the lodged application are

- ◆ NoR D2: Submission 5. Melanie Jane Hendricksen, Kerry Dean Hendricksen and Warwick Lyndon Bremner. This submission relates to private property access, specifically, access to a consented building.
- ◆ NoR D5: Submission 06. Hayes Family Trust. Again, related to property access. SG has confirmed that access to the property can be maintained from Opāheke Road, and I consider that the

“Existing Property Access” condition, discussed in Section 3.3, ensures that the submitter will be consulted as the project progresses.

In summary

- ◆ I consider that the deferral of funding for and therefore construction of Mill Road does not have a consequential impact on NoR D1 – D5
- ◆ I consider that potential effects on existing vehicle crossings adjoining the boundaries of NoR D1 – D5 can be assessed and addressed during the detailed design stage of the projects. I recommend that the “Existing Property Access” condition, offered by SG, is accepted with amendments as shown in red, and that this condition is applied to all NoRs in this package

Condition xx: Existing Property Access, on-site parking and manoeuvring areas

~~Where existing property vehicle access~~ Where the accessibility, location and/or design of property vehicle access (including vehicle crossings and accessways), on-site parking and manoeuvring areas which exists at the time the Outline Plan is submitted is altered by the project, the Requiring Authority shall consult with the directly affected landowner regarding the required changes at least 6 months prior to the Start of Construction, and the Outline Plan shall demonstrate how ~~safe alternate access will be provided the affected areas will be relocated or reinstated to achieve compliance with relevant AUP standards (or any subsequent standards) or to a similar location and standard to that existing,~~ unless otherwise agreed with the affected landowner

- ◆ I consider that potential differences between the relative level of the road and adjoining land are unlikely to have a transport effect on future land development, however I recommend that Council’s Urban Design expert comment on how this may affect built form outcomes
- ◆ I recommend that NoR D2 Condition 13: Closure of Flanagan Road Intersection with Waihoehoe Road, offered by the applicant should be adopted by Council
- ◆ I recommend that NoR D2 Condition 14: Closure of Creek Street Intersection with Bremner Road, offered by the applicant should be adopted by Council.
- ◆ I recommend that the “Realignment of Tui Street” condition for NoR D2, offered by SG, is accepted with amendments as shown in red

Condition xx: Realignment of Tui Street

The Outline Plan shall demonstrate how the realignment of Tui Street provides for safe and legible access for the Drury and Districts Rugby Football and Recreation Club and community facilities ~~using and the use of the Drury Domain from Tui Street and Great South Road and the use of the Drury Domain. This shall include consideration of a left in turn at Waihoehoe Road and confirmation of completion of a safety audit. This shall include the Outline Plan making provision for permanent left turn access from Waihoehoe Road to the realigned Tui Street unless alternative access can be provided and a road safety audit being submitted with the Outline Plan, The road safety audit shall assess the access and safety effects of turning restrictions at the Great South Road/Tui Street intersection, including likely rerouting and potential u-turning movements, and~~

recommend mitigation measures where required, including measures to be implemented as part of the detailed design of the Project

- ◆ I recommend that the Stakeholder and Communication Management Plan conditions proposed for each NoR be amended to ensure engagement is undertaken with affected parties
- ◆ I recommend that Council's Planner consider who is responsible for updating the Auckland Unitary Plan Arterial Road Control, and when this should occur

Should my recommendations be adopted, I consider, from a transportation perspective that the NoRs can be approved and that they will support a safe and efficient transport network.

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APPENDICES

APPENDIX A SECTION 92 REVIEW REPORT

APPENDIX B SUBMISSION SUMMARY

1 INTRODUCTION

This report has been completed by Mat Collins (Associate) with assistance and review by Terry Church (Senior Associate). Both Terry and I are experts in the field of transport planning and engineering. We both have a sound knowledge of the Auckland Unitary Plan. Terry and I frequently attend Council and Environment Court mediation and hearings as transport experts for local government, road controlling authorities and private concerns.

In March 2020 Auckland Council (Council) requested Flow Transportation Specialists (Flow) to assist with the review of transportation matters associated with five Notices of Requirement (NoRs), which have been prepared by Te Tupu Ngātahi Supporting Growth (SG) on behalf of Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (Waka Kotahi). Flow has been involved prior to the lodgement of the NoRs and has had multiple meetings with SG through the lodgement and notification periods.

The NoRs seek to alter an existing designation and to introduce new designations for future strategic transport corridors to support the planned urban growth in the Drury-Opāheke area of South Auckland.

The five NoRs are outlined below

- ◆ D1 Alteration to Waka Kotahi designation 6707 - SH22 (Waka Kotahi)
- ◆ D2 Jesmond to Waihoehoe West Frequent Transit Network (FTN) Upgrade (AT)
- ◆ D3 Waihoehoe Road East Upgrade (AT)
- ◆ D4 Opāheke North-South FTN Arterial (AT)
- ◆ D5 Ponga Road and Opāheke Road Upgrade (AT).

The scope of this specialist transport report is to assist Council in determining the transport outcomes of the NoRs and includes the following

- ◆ A summary of the NoRs focusing on transport matters
- ◆ A review of the material provided to support the application for the NoRs
- ◆ Summary of submissions, relating to transport matters only
- ◆ My recommendations.

I have reviewed the following documents

- ◆ Drury Arterial Network Assessment of Effects on the Environment, prepared by Te Tupu Ngātahi Supporting Growth, dated January 2021
- ◆ NOR D1, D2, D3, D4, and D5 drawing packages, prepared by Te Tupu Ngātahi Supporting Growth, dated 27 January 2021
- ◆ Drury Arterial Network Assessment of Transport Effects, prepared by Te Tupu Ngātahi Supporting Growth, dated January 2021

- ◆ Traffic model files, provided via email¹
- ◆ Response to s92 Further Information Request for the Drury Arterial Network, prepared by Te Tupu Ngātahi Supporting Growth, dated 7 April 2021
- ◆ Response to additional s92 Further Information Request for the Drury Arterial Network, prepared by Te Tupu Ngātahi Supporting Growth, dated 25 June 2021
- ◆ Further information, including
 - Indicative designs for the NoR D5/Ponga Road/Jack Paterson intersection and the NoR D3/Waihoehoe Road/Drury Hills Road intersection, provided by email²
 - Tui Street realignment, provided by email³.
- ◆ Submissions and Local Board resolutions relevant to transport matters, as outlined in Section 4.

¹ RE: Modelling files, received from Werner Pretorius Werner.Pretorius@supportinggrowth.nz, Tue 9/02/2021 3:51 PM

² Drury Arterial NoRs: Safe Tie In at Rural Boundary (Jack Paterson and Drury Hills Roads), received from Helen Hicks Helen.Hicks@supportinggrowth.nz, Sat 31/07/2021 2:04 PM

³ Memo: Information after Council Workshop 15 July 2021, received from Helen Hicks Helen.Hicks@supportinggrowth.nz, Mon 26/07/2021 10:06 PM

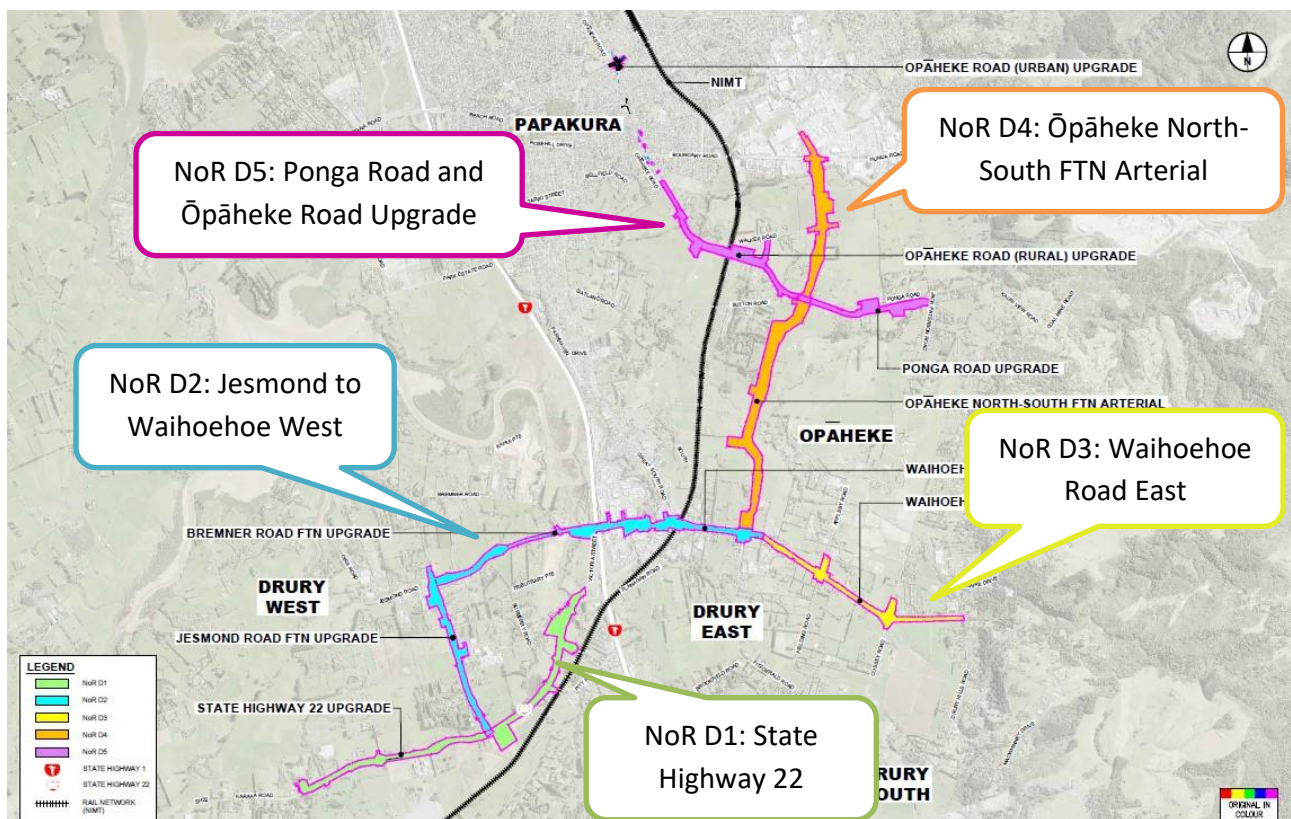
2 SUMMARY OF THE NORs

The five NoRs are shown in Figure 1 and are briefly described in the following sub-sections. The construction timing for each the Drury Project is not certain, with the NoRs seeking designation to allow construction of the corridor interventions when considered appropriate, for example with development of adjacent land occurs or as programmed within the Regional Land Transport Plan (RLTP).

To enable an assessment of the potential effects of the Projects on the environment, SG has assumed that construction will commence

- ◆ NoR D1, D2 and D3: by approximately 2028
- ◆ NoR D4 and D5: from approximately 2028 to 2048.

Figure 1: Overview of the NoRs



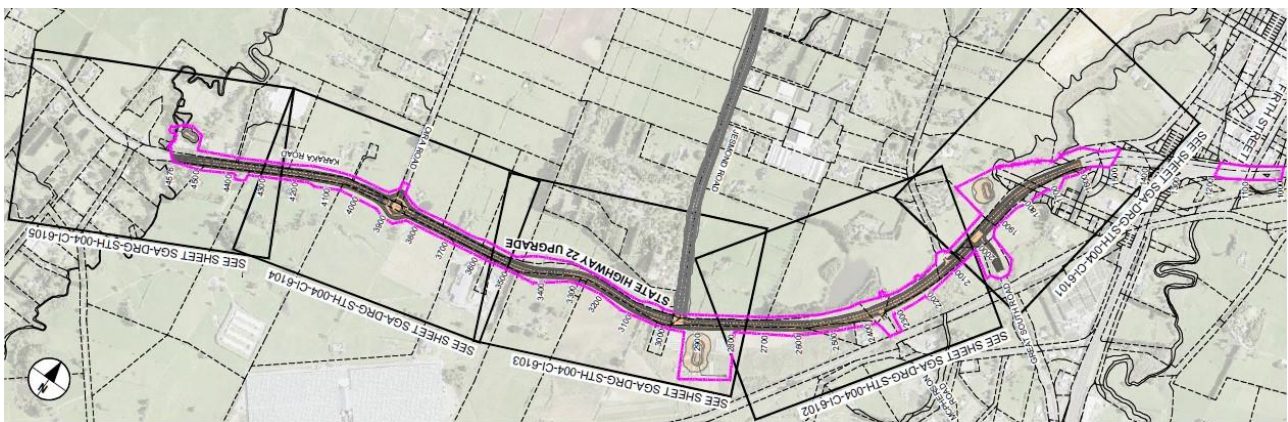
2.1 NoR D1: State Highway 22

The land to be designated is an area of approximately 12.8ha located on either side of Karaka Road (State Highway 22 (SH22)) in Drury between State Highway 1 (SH1) Drury Interchange and Oira Creek, as shown in Figure 2. While a State Highway designation already exists along this section of corridor (New Zealand Transport Agency 6707), further widening is required to allow for the anticipated corridor improvements. The requirement encroaches on 42 land parcels.

The proposed work includes

- ♦ Widening Karaka Road (State Highway 22) from the Drury Interchange at State Highway 1 (SH1) to Oira Creek to a four-lane urban arterial with separated active transport facilities.

Figure 2: NoR D1 overview



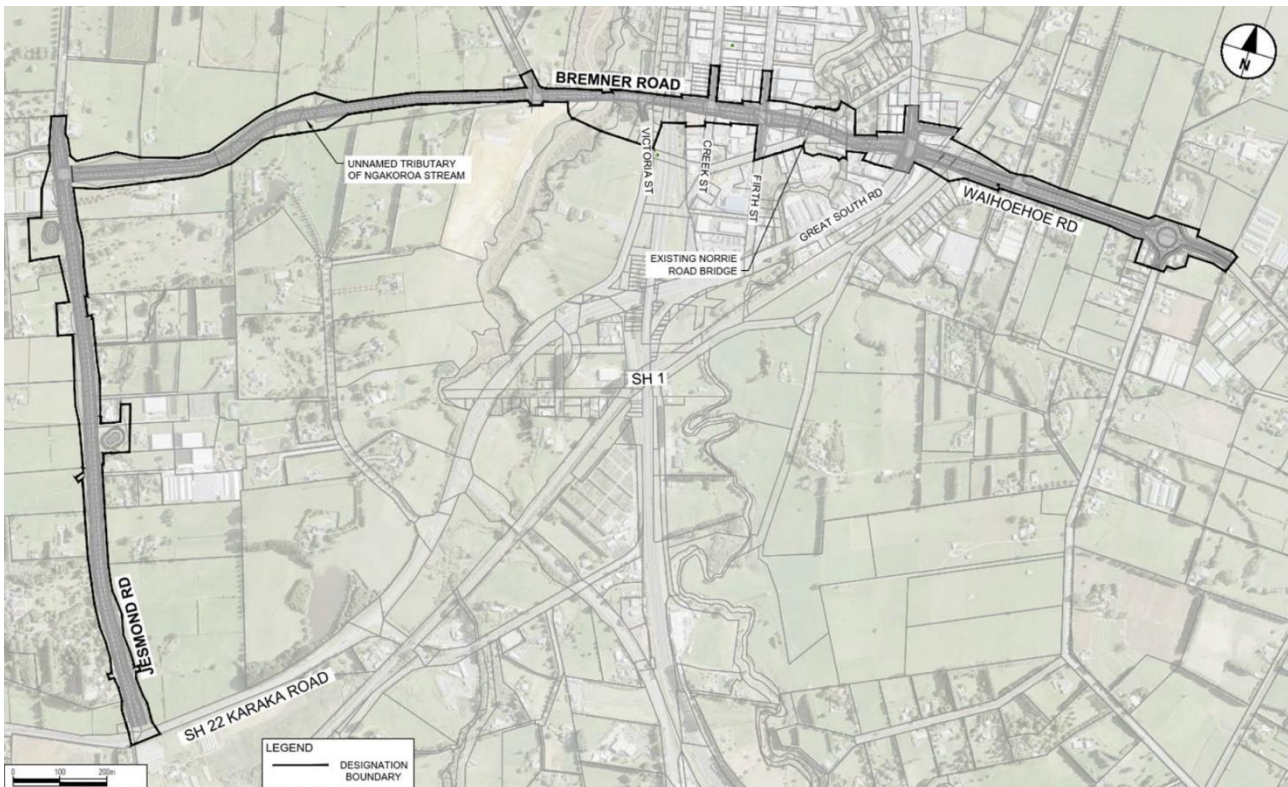
2.2 NoR D2: Jesmond to Waihoehoe West

The land to be designated is located in Drury and includes Jesmond Road (from State Highway 22) and a new East-West link that connects through to Bremner Road through to Waihoehoe Road east of Fitzgerald Road, as shown in Figure 3. The requirement encroaches 111 land parcels (not including legal roads).

The proposed work includes

- ◆ Widening Jesmond Road between SH22 and 256 Jesmond Road to a four-lane FTN urban arterial with separated active transport facilities
- ◆ A four-lane FTN urban arterial with separated active transport facilities from Jesmond Road to Norrie Road. It includes upgrading existing and constructing new transport corridors
- ◆ Widening of Waihoehoe Road from the Norrie Road/Great South Road intersection to Fitzgerald Road to a four-lane FTN urban arterial with separated active transport facilities.

Figure 3: NoR D2 overview



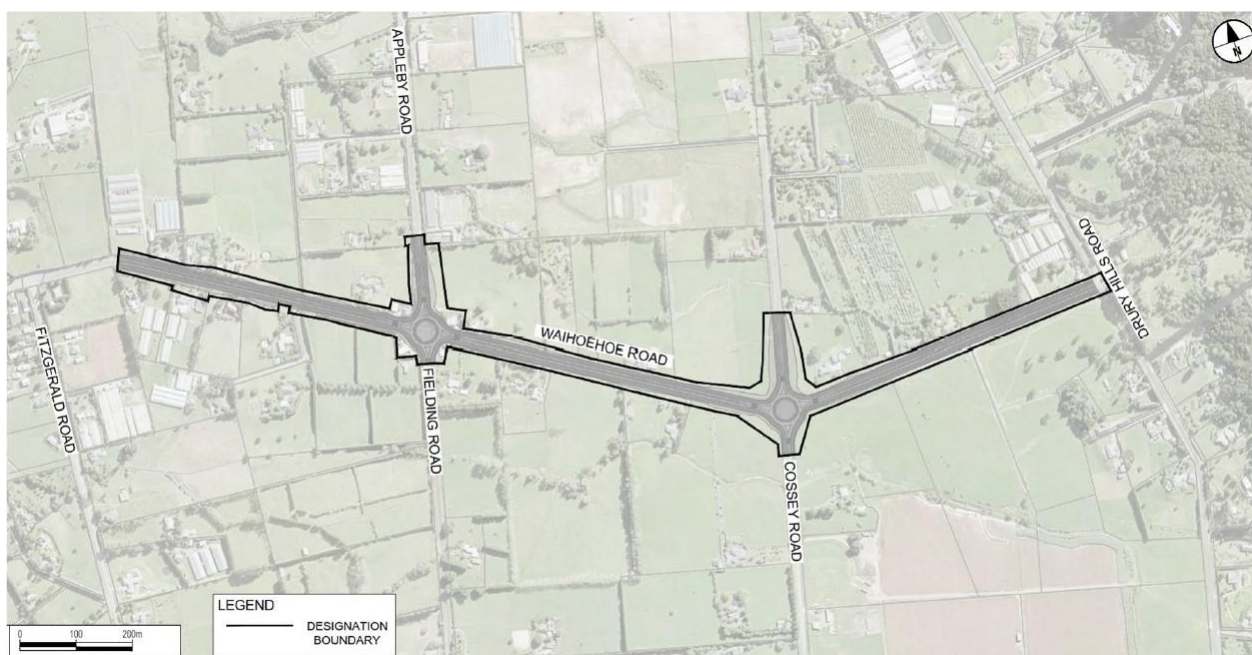
2.3 NoR D3: Waihoehoe Road East

The land to be designated is located in Drury East between Fitzgerald Road (some 140m to the east) and Drury Hills Road, as shown in Figure 4. The requirement encroaches 33 land parcels (not including legal roads).

The proposed work includes

- ♦ Widening of Waihoehoe Road east of Fitzgerald Road to Drury Hills Road to a two-lane urban arterial with separated active transport facilities.

Figure 4: NoR D3 overview



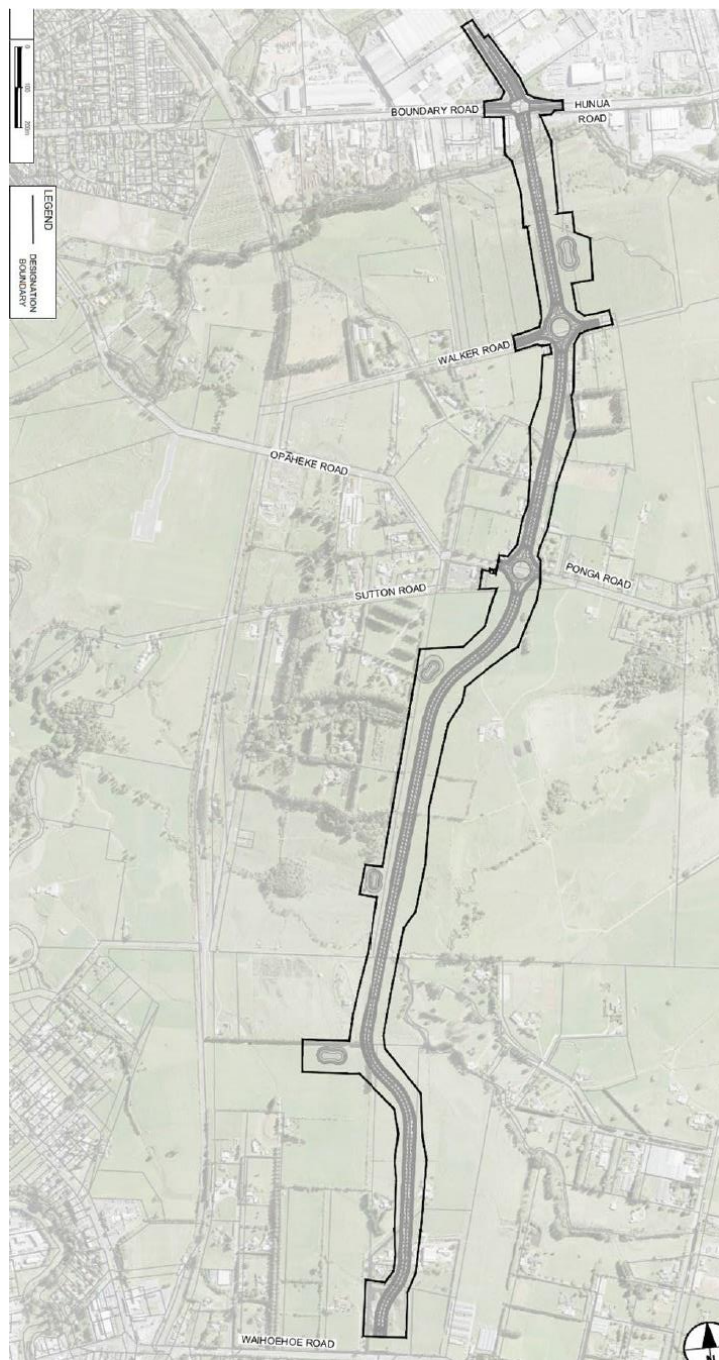
2.4 NoR D4: Opāheke North-South FTN Arterial

The land to be designated is located in the Drury-Opāheke area and sits between Waihoehoe Road and Hunua Road, as shown in Figure 5. The requirement applies to 35 land parcels (not including legal roads).

The proposed work includes

- ◆ A new four-lane FTN urban arterial with separated active transport facilities from Hunua Road in the north to Waihoehoe Road in the south.

Figure 5: NoR D4 overview



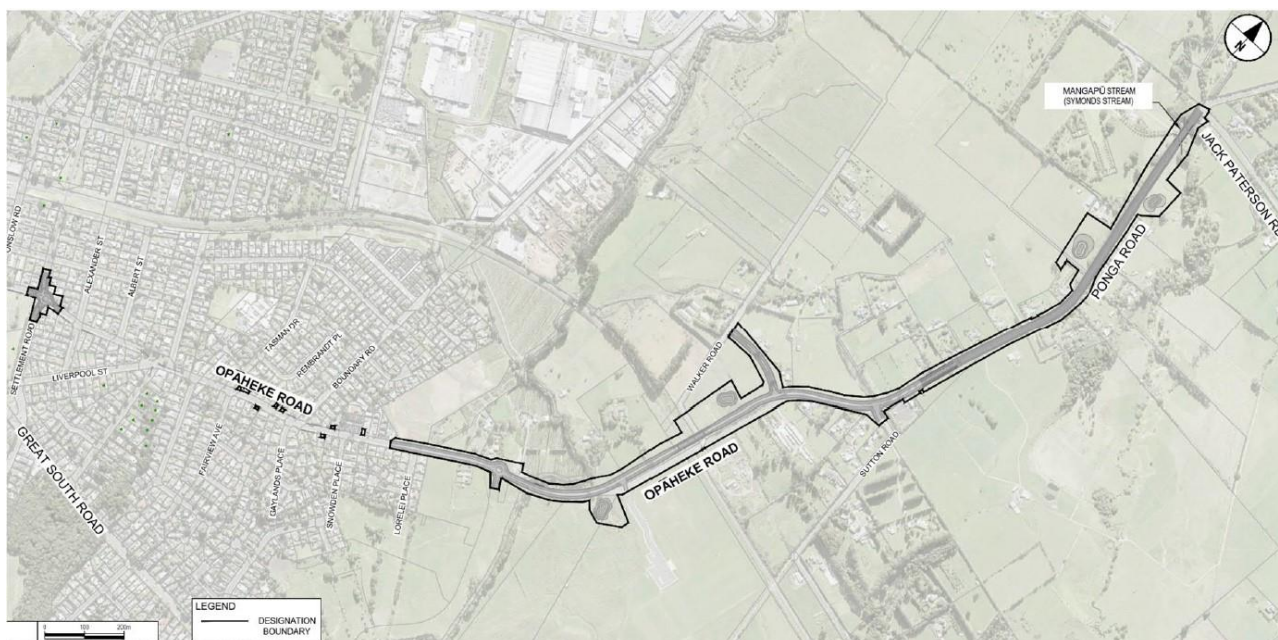
2.5 NoR D5: Ponga Road and Opāheke Road Upgrade

The land to be designated is in Opāheke along Ponga Road and Opāheke Road from Jack Paterson Road in Opāheke to Settlement Road in Papakura, as shown in Figure 6. The requirement encroaches 67 land parcels (not including legal roads).

The proposed work includes

- ♦ Widening of Ponga Road from Opāheke Road to Jack Paterson Road to a two-lane urban arterial with separated active transport facilities
- ♦ Widening of Opāheke Road from the extent of the Future Urban Zone (FUZ) in the north to Ponga Road in the south to a two-lane urban arterial with separated active transport facilities
- ♦ Upgrade of the Opāheke Road/Settlement Road intersection to a roundabout with active transport facilities, including crossing facilities and re-grading of nine private driveways.

Figure 6: NoR D5 overview



3 MY REVIEW OF TRANSPORT MATTERS

A summary of all the transportation matters raised throughout my review, including Section 92 information requests, is contained in Appendix A. The following subsections summarise the key transport matters raised during my review, which include

- ◆ Matters relevant to effects within the boundaries of the NoRs
- ◆ Mill Road dependencies
- ◆ Effect on existing vehicle accesses to private properties adjacent to the NoRs
- ◆ Effect of the change in road level relative to adjacent land/private property access
- ◆ Closure of the Waihoehoe Road/Flanagan Road intersection
- ◆ Closure of the Bremner Road/Creek Street intersection
- ◆ Safety effects on the proposed Great South Road/Tui Street intersection
- ◆ Opāheke Road localised improvements
- ◆ Lack of tie in details to the existing transport network at the Waihoehoe Road/Drury Hills Road intersection
- ◆ Lack of tie in details to the existing transport network at the Ponga Road/Jack Paterson Road intersection.
- ◆ Construction effects including staging.

My position is provided for each transport matter.

3.1 Matters relevant to effects within the boundaries of the NoRs

As part of my review, I queried several matters that may be consequential to the boundaries of the NoRs, though the effects of these matters would be contained within the proposed designation boundary and/or the existing legal road. Therefore, they are a matter for the requiring authority to consider rather than the consenting authority. These matters included

- ◆ The Norrie Road realignment. I queried whether sufficient optioneering had been undertaken to support Option B1 rather than Option A⁴ (NoR: D2)
- ◆ A direct road connection from Drury Interchange into Private Plan Change 48 (PPC48). I noted in my review that the traffic model used to support the NoRs included a direct road connection between Drury Interchange and the future Metropolitan Centre proposed as part of PPC48, despite this connection being opposed by Waka Kotahi in its submission on PPC48 and the uncertainty at this time as to the form and function of this link.
- ◆ A new road connection to Hunua Road through live zoned land. I noted in my review that the traffic model used to support the NoRs included a new road connection between Hunua Road and Walker Road. While this connection is consistent with the Drury-Opāheke Structure Plan, it would require the acquisition of developed industrial land which is not included through these NORs and

⁴ Option A and Option B1 are detailed in Table 11-12 of Appendix A – Assessment of Alternatives of the application

therefore may be somewhat uncertain. As such, I queried whether it is reasonable to assume this traffic link in the assessment

- ◆ Public Transport effects. I queried whether there had been sufficient consideration of routing and frequency of future public transport services along the Opāheke North-South (NoR: D4)
- ◆ Opāheke Road/Liverpool Street intersection. I queried whether the access effects of closing the Opāheke Road/Liverpool Street intersection had been considered
- ◆ Pukekohe Expressway. I queried what effects a delay in the delivery of the Pukekohe Expressway might have on NoR: D1
- ◆ Hunua Road/Settlement Road intersection. I noted in my review that the traffic model used to support the NoRs included changes to the priority of this intersection, although these changes were not included within the NoRs
- ◆ Hunua Road/Croskery Road intersection. I noted in my review that the traffic model used to support the NoRs included changes to the form of this intersection to a roundabout, although these changes were not included within the NoRs
- ◆ Opāheke N-S arterial intersections with Walker Road and Ponga Road. I noted in my review that in the traffic model used to support the NoRs, the Opāheke N-S arterial intersections with Walker Road and Ponga Road are assumed to be signalised intersections. However, the designation layout includes roundabouts at both intersections
- ◆ Sutton Road at-grade rail crossing closure. I noted in my review that the traffic model used to support the NoRs included the closure of the Sutton Road at-grade rail crossing, although this change was not included within the NoRs.

Outcome: Transport effects within the proposed designation boundaries are for the requiring authority to consider, I do not discuss them further in my report.

3.2 Mill Road dependencies

At the time SG lodged the application documents for the NoRs, the Mill Road corridor, between Drury South Interchange and Manukau was included in the New Zealand Upgrade Programme (NZUP) and was therefore considered to be funded and expected to be operational by 2028. However, the Government announced on 4th June 2021 that the funding for the Mill Road project and elements of the Papakura to Bombay Project, being the widening of the Southern Motorway (SH1) between Drury Interchange and a new Drury South Interchange (Stage 2) which connects to Mill Road has been deferred.

I queried whether the deferral of funding had a material effect on the assumptions contained within the NoR applications (particularly construction effects), or the indicative design drawings.

In their response, SG provided the view that no material changes were required to the transport effects assessment for the NoRs and that the Mill Road corridor remains a part of the Supporting Growth South Indicative Transport Network, like several other unfunded projects included in potential future-year scenarios used in the assessments such as Pukekohe Expressway. The SG view is that the amount of growth within the Drury area should be integrated with the infrastructure capacity that is available, and that these NoR corridors would not change to replace the function of Mill Road.

I agree with SG's view that the release of any Future Urban Zone land in the Drury area for urbanisation needs to be integrated with the transport infrastructure that is planned and funded to support it. In the instance that Mill Road was not in place, the form and function of the NoR corridors would unlikely change, but the amount of development enabled within Drury may decrease.

However, I consider that NoR D3 should demonstrate an appropriate tie in between the upgraded Waihoehoe Road and Drury Hills Road (the assumed future route of Mill Road). I discuss this matter further in Section 3.9 of this report.

While the lodged NoR documents do not include traffic modelling to determine the potential effects on the transport network during the construction phase, in my opinion Mill Road is likely to have a significant influence on network efficiency effects during the construction of the NoR projects. This is consistent with SG's commentary on the closure of SH1 during NoR D2, as discussed in Section 7.3.3.2.1 temporary traffic management of the Assessment of Transport Effects. I discuss construction effects further in Section 3.11 of this report.

Outcome: I consider that the deferral of funding for and therefore construction of Mill Road does not have a consequential impact on NoR D1 – D5.

3.3 Effects on existing vehicle accesses

As part of my review, I queried how existing vehicle accesses might be affected by the NoRs through design aspects such as

- ♦ proposed raised medians, which prevent right turns into and out of properties
- ♦ changes to the relative level of the road, including up to 1:3 batters, leading to changes to gradients for property accesses
- ♦ temporary access restrictions and/or damage caused during the construction phase.

Further, several submitters have raised concerns about how the project works might alter their existing private property accessways.

In their response, SG explained that the detailed design has not yet occurred, including detail regarding how individual vehicle access restrictions will be mitigated. SG consider that this should be assessed at the time of implementation of the projects, based on what vehicle accessways exist at the time and the movements required to operate both the transport corridors and property access safely and efficiently. SG suggested that this matter would be better addressed via an outcome-based condition, which it put forward to Council for consideration.

Following discussion with Council's Planner, I recommend that amendments are made to the condition offered by SG.

Outcome: I recommend that the "Existing Property Access" condition, offered by SG, is accepted with amendments as shown in red, and that this condition is applied to all NoRs in this package

Condition xx: Existing Property Access, on-site parking and manoeuvring areas

~~Where existing property vehicle access~~ Where the accessibility, location and/or design of property vehicle access (including vehicle crossings and accessways), on-site parking and manoeuvring areas which exists at the time the Outline Plan is submitted is altered by the project, the Requiring Authority shall consult with the directly affected landowner regarding the required changes at least 6 months prior to the Start of Construction, and the Outline Plan shall demonstrate how ~~safe alternate access will be provided~~ the affected areas will be relocated or reinstated to achieve compliance with relevant AUP standards (or any subsequent standards) or to a similar location and standard to that existing, unless otherwise agreed with the affected landowner.

3.4 change in road level relative to adjacent land

As part of my review, I queried how changes to the relative level of the road, including up to 1:3 batters, could affect the future development of adjacent land.

In its response, SG explained that

- ◆ no future direct vehicle accesses to the arterial roads were anticipated, as all future vehicle access would be via local roads and collector roads
- ◆ there was the opportunity to lower or raise the relative level of the road to match with the development plans of adjacent landowners during the detail design phase.

From a transport perspective I support SG's assumption that all future vehicle access to adjacent properties should be via local and collector roads, however I note that the Auckland Unitary Plan allows for vehicle crossings on Arterial Roads as a Restricted Discretionary Activity. As such, suggesting that no future direct vehicle accesses to arterial roads will occur would in my view be overly optimistic. However, I note that Council's Urban Design expert should comment on how the difference in relative level may affect built form outcomes.

Outcome: I consider that potential differences between the relative level of the road and adjoining land are unlikely to have a transport effect on future land development, however I recommend that Council's Urban Design expert comment on how this may affect built form outcomes.

3.5 Closure of the Waihoehoe Road/Flanagan Road intersection

In my review, I questioned how the closure of the Waihoehoe Road/Flanagan Road intersection would be managed, as it would require a new road to be constructed between Fitzgerald Road and Waihoehoe Road to allow continued access to properties on Fitzgerald Road, which is not provided for in NoR D2.

The applicant responded by explaining that alternative access would be included as part of the future NoR for the Drury Central Train Station and that construction works between the two projects is expected to be coordinated. However, to address the possibility that works under NoR D2 proceed the Drury Central Rail Station project, the applicant has offered Condition 13, which requires the project to provide alternative access to Flanagan Road if the closure of the intersection has not been progressed as part of the Drury Central Train Station project.

I recommend that Council adopt the offered condition.

Outcome: I recommend that NoR D2 Condition 13: Closure of Flanagan Road Intersection with Waihoehoe Road, offered by the applicant should be adopted by Council.

3.6 Closure of the Bremner Road/Creek Street intersection

Drawing SG-DRG-STH-04-CI-2103 shows the closure of the southern leg of the Bremner Road/Creek Street intersection. I noted during my review that the design does not demonstrate that a vehicle turning head can be accommodated within the proposed designation boundary and/or the existing legal road boundary. My concern is that heavy vehicles accessing Creek Street, an industrial area may not be able to turn around within the legal road. Given the surrounding land use is predominately light industrial, a high proportion of traffic movements on Creek Street can be expected to be heavy vehicles.

SG suggested that this matter could be addressed via a condition, which it put forward to Council for consideration.

Outcome: I recommend that NoR D2 Condition 14: Closure of Creek Street Intersection with Bremner Road, offered by the applicant should be adopted by Council.

3.7 Safety effects at the Great South Road/Tui Street intersection

NoR D2 shows the realignment of Tui Street, to form a new intersection with Great South Road as shown in Figure 7. I queried whether the proximity of the proposed intersection with the upgraded Great South Road/Waihoehoe Road intersection (to traffic signals) is likely to create safety issues for drivers turning right into and out of Tui Street. The applicant responded by stating that right turns into and out of Tui Street would be prohibited and that the Project will be subject to a detailed safety audit prior to construction.

I note that two land parcels gain access from Tui Street

- ◆ 232 Great South Road
- ◆ 8R and Lot 1 DP 41336, ALLOT 297 Parish OF OPAHEKE, Lot 3 DP 31548 (collectively known as Drury Domain).

Along with Council Community Facilities staff I investigated whether Tui Street could be closed, and alternative access to Drury Domain could be provided via Great South Road near the Cameron Place intersection with Great South Road, as shown in Figure 8. However, following discussions with Auckland Council Community Facilities staff I understand that relocating the access and parking for Drury Domain to the northern side of the Drury Domain Club Rooms may not be supported.

I further questioned SG on the access and safety effects of restricting right turns at the proposed Great South Road/Tui Street intersection, as this will result in detours and potentially unsafe u-turn manoeuvres, as drivers arrive from the south and/or depart to the north. In response, SG stated it was investigating whether a left turn into Tui Street could be provided from Waihoehoe Road, which would mitigate effects from prohibiting right turns in from Great South Road, however this would not be included within the NoR drawings. I have indicatively marked this in Figure 7. SG suggested that this matter could be addressed via a condition, which it put forward to Council for consideration.

Following discussion with Council’s Planner, I recommend that amendments are made to the condition offered by SG.

Outcome: I recommend that the “Realignment of Tui Street” condition for NoR D2, offered by SG, is accepted with amendments as shown in red

Condition xx: Realignment of Tui Street

The Outline Plan shall demonstrate how the realignment of Tui Street provides for safe and legible access for the Drury and Districts Rugby Football and Recreation Club and community facilities ~~using and the use of the Drury Domain from Tui Street and Great South Road and the use of the Drury Domain.~~ This shall include consideration of a left in turn at Waihoehoe Road and confirmation of completion of a safety audit. This shall include the Outline Plan making provision for permanent left turn access from Waihoehoe Road to the realigned Tui Street unless alternative access can be provided and a road safety audit being submitted with the Outline Plan, The road safety audit shall assess the access and safety effects of turning restrictions at the Great South Road/Tui Street intersection, including likely rerouting and potential u-turning movements, and recommend mitigation measures where required, including measures to be implemented as part of the detailed design of the Project.

Figure 7: Except from drawing SGA-DRG-STH-04-CI-3101, showing potential left turn access

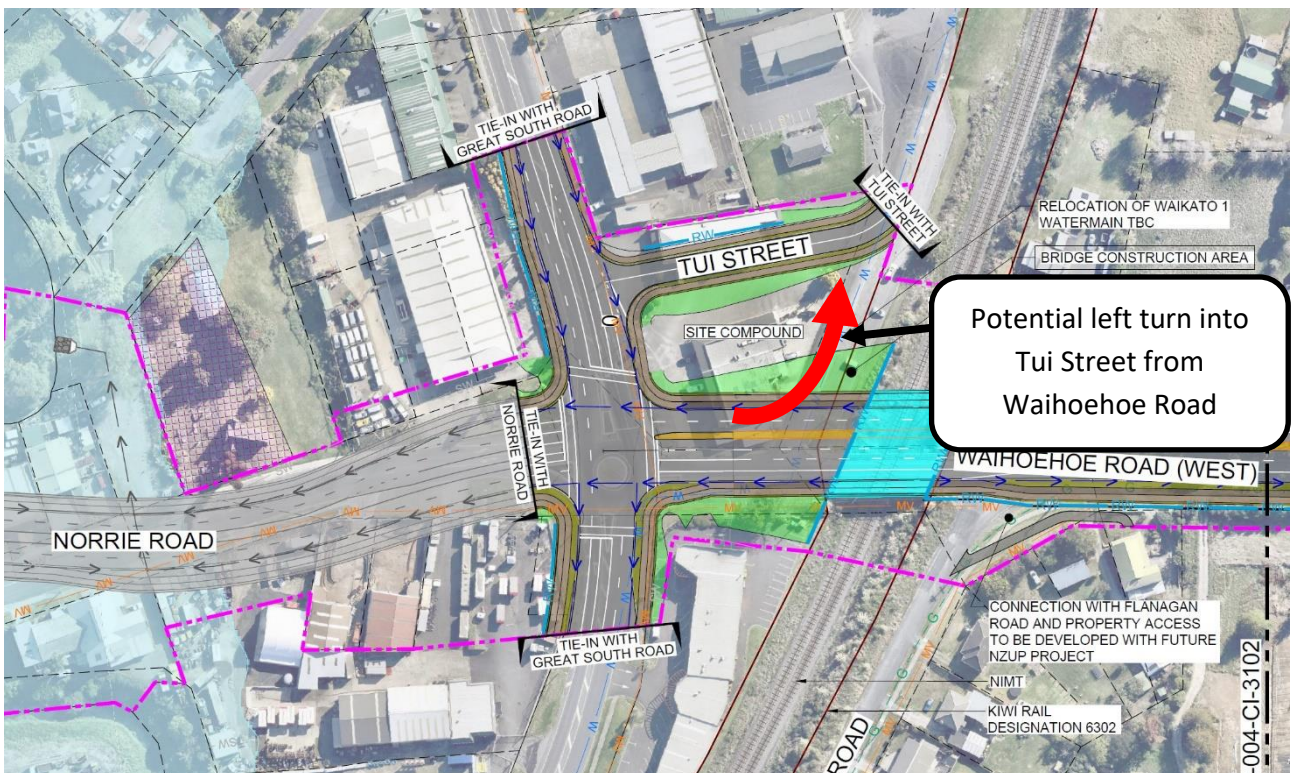
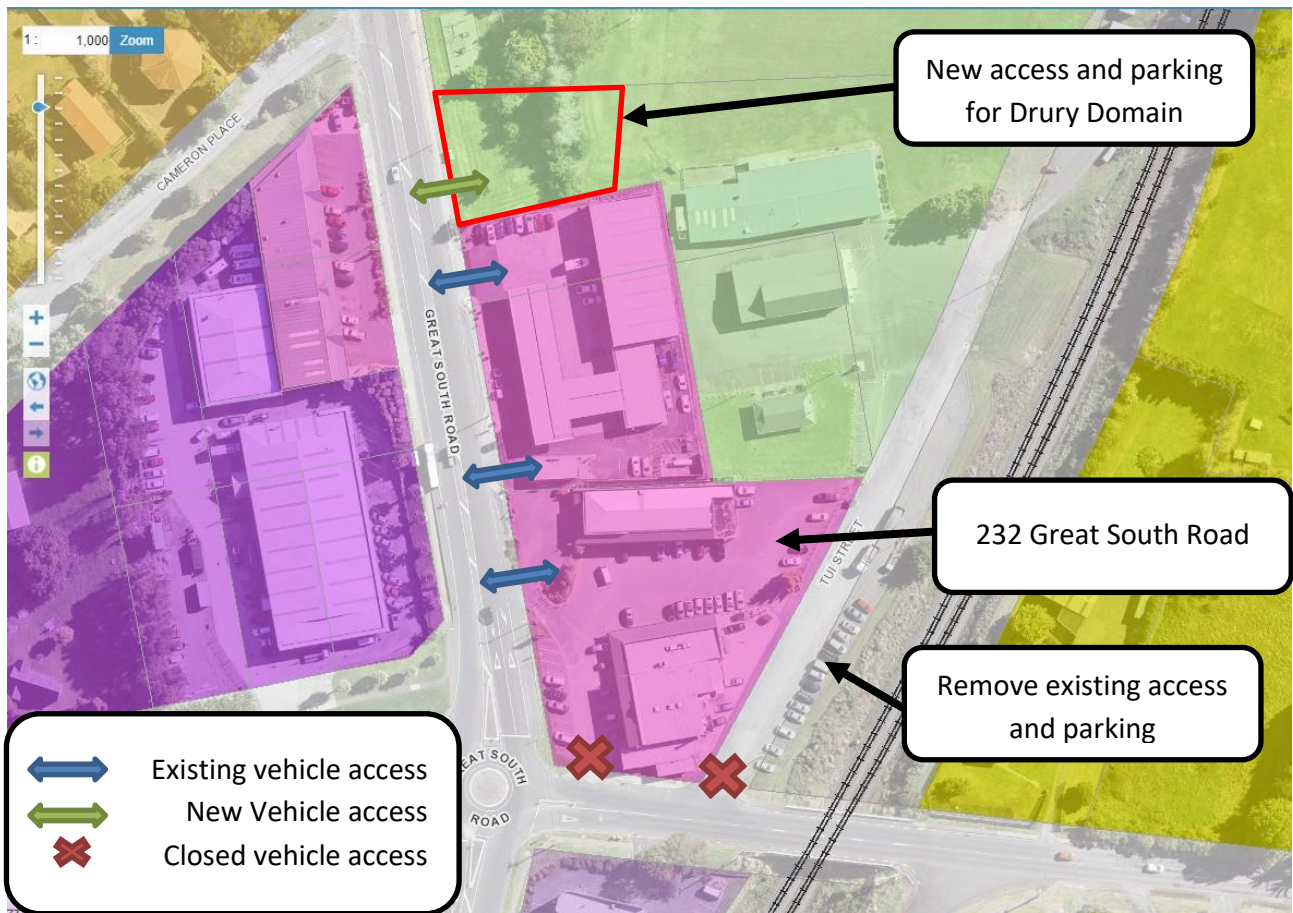


Figure 8: Alternative location for Drury Domain access and parking



3.8 Opāheke Road localised improvements

I noted in my review that the traffic model used to support the NoRs predicts a significant increase in traffic on Opāheke Road. For example, the base traffic model assumes some 150 vehicles northbound on Opāheke Road about Boundary Road during peak hours, with this predicted to increase to some 750 vehicles per hour as a result of the Drury Arterial network.

While the boundary of NoR D5 includes several existing vehicle crossings on Opāheke Road, where localised works are required, the NoR does not provide comment on the extent to which turning lanes and localised intersection improvements may be required. For example, right turning storage space will likely be required at local road intersections to ensure right turning vehicles can stack safely based on the increased demand predicted along this route.

The applicant considers that NoR D5 does not preclude future localised intersection improvements that might be needed in the future. I agree with this feedback and note that the width of the designation generally allows for designs to consider longer turning bays if needed through the detailed design phase.

Outcome: No further action is required as part of the NoR.

3.9 Lack of tie in details to the existing transport network – NoR D3 and Drury Hills Road

I queried with SG whether a safe transition between an urbanised arterial (NoR D3) and a rural local road (Drury Hills Road) could be accommodated within the proposed designation boundary and/or the existing legal road boundary. As shown in Figure 9, Drawing SGA-DRG-STH-004-CI-4103 does not include an appropriate tie in to Drury Hills Road. I consider that this is particularly relevant given the deferral of funding for Mill Road (which is assumed to be along Drury Hills Road for this section of the Mill Road project).

In response to my query, SG stated that the existing legal road boundary and the proposed designation boundary provide sufficient footprint to enable a tie in to be formed.

As the western side of Drury Hills Road is the current Rural Urban Boundary (RUB), it is possible that Drury Hills Road will not be urbanised in conjunction with adjacent land-use consent applications. It is therefore possible that the requiring authority will need to include the transition from a rural to urban road environment within its works for NoR D3.

In response to my further query, SG provided an indicative intersection design to demonstrate how the transition might be constructed (shown in Figure 10). I consider that this conceptual design demonstrates that there is sufficient space to accommodate the intersection and transition, and that the actual arrangement can be determined during the future OPW.

Outcome: No further action is required as part of the NoR.

Figure 9: Intersection of Drury Hills Road and Waihoehoe Road, from drawing SGA-DRG-STH-004-CI-4103

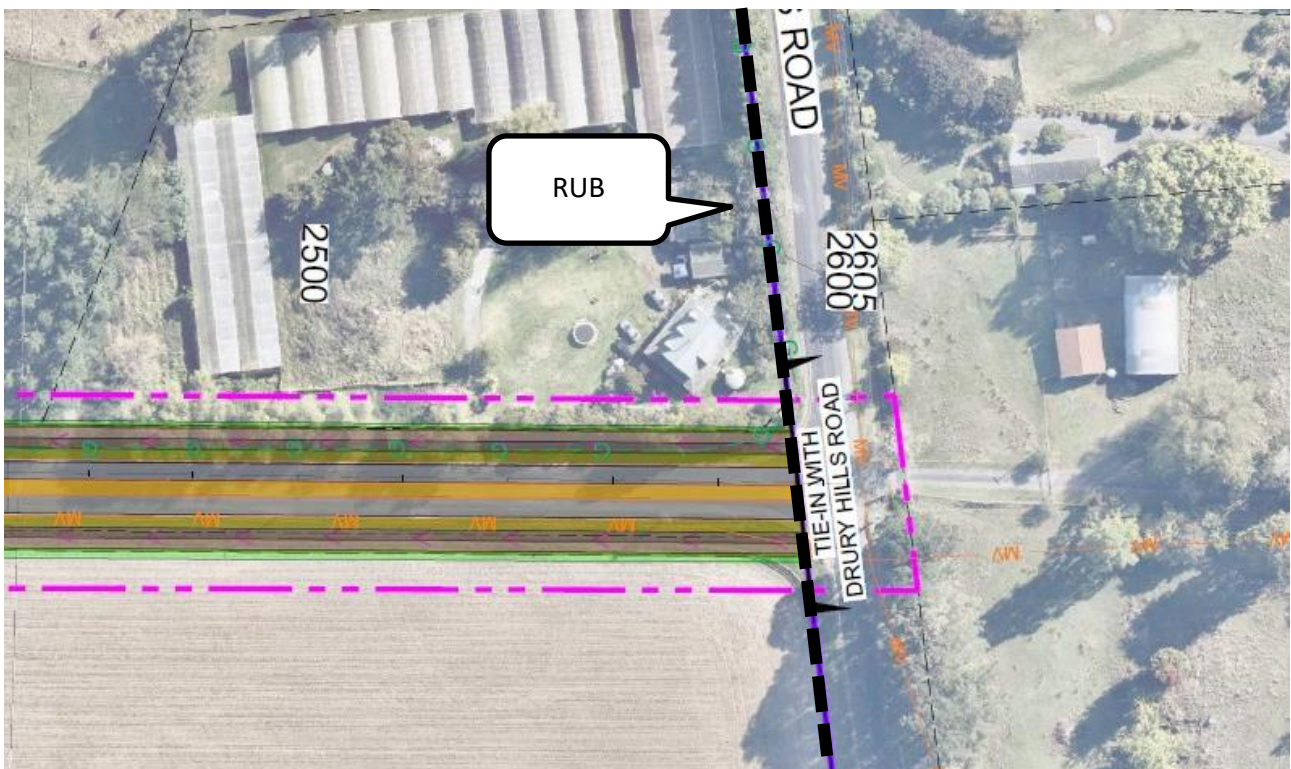
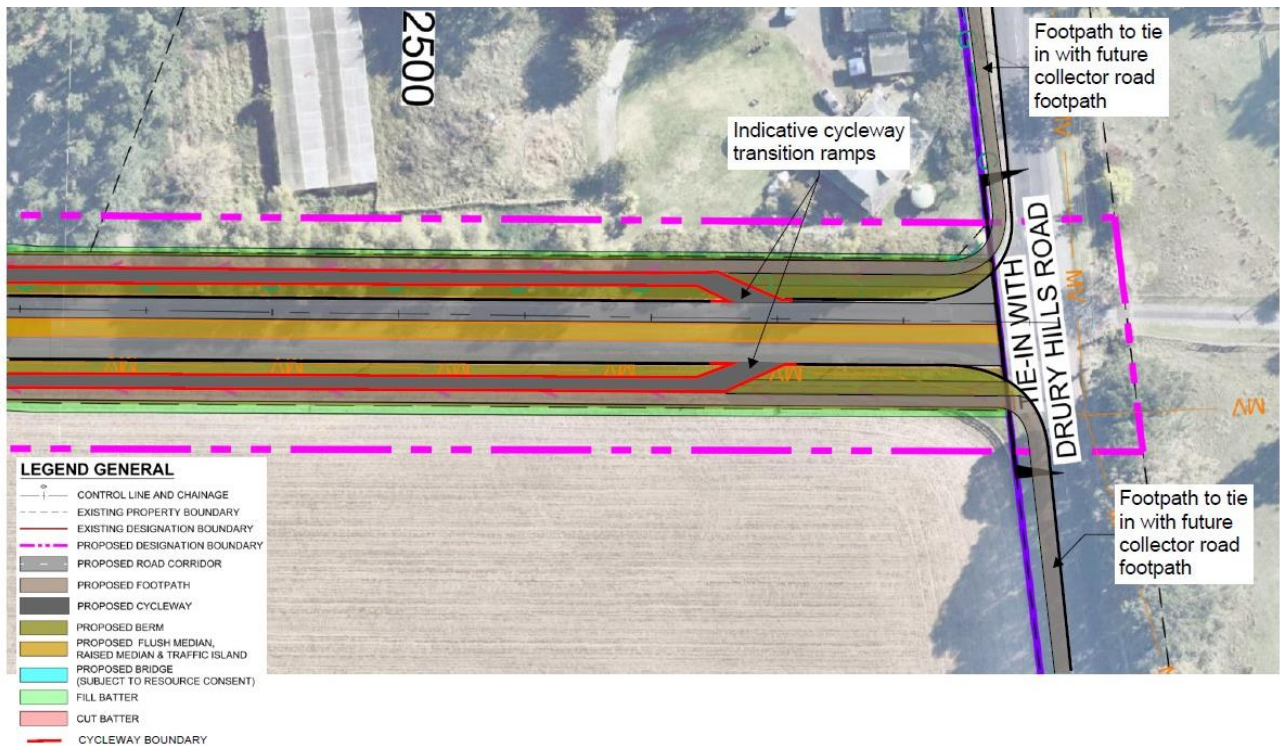


Figure 10: Indicative design for NoR D3/Waihoehoe Road/Drury Hills Road intersection⁶



3.10 Lack of tie in details to the existing transport network – NoR D5 and Jack Paterson Road

I queried with SG whether a safe transition between an urbanised arterial (NoR D5) and a rural local road (Ponga Road and Jack Paterson Road), could be accommodated within the proposed designation boundary and/or the existing legal road boundary. As shown in Figure 11, Drawing SGA-DRG-STH-004-CI-8102 does not include an appropriate tie in to Ponga Road.

In response to my query, SG stated that the existing legal road boundary and the proposed designation boundary provide sufficient footprint to enable a tie in to be formed.

As the southern side of Ponga Road is the current RUB, it is possible that Ponga Road will not be urbanised in conjunction with adjacent land-use consent applications. It is therefore possible that the requiring authority will need to include the transition from a rural to urban road environment within its works for NoR D5.

In response to my further query, SG provided an indicative intersection design to demonstrate how the transition might be constructed (shown in Figure 12). I consider that this conceptual design demonstrates that there is sufficient space to accommodate the intersection and transition, and that the actual arrangement can be determined during the future OPW.

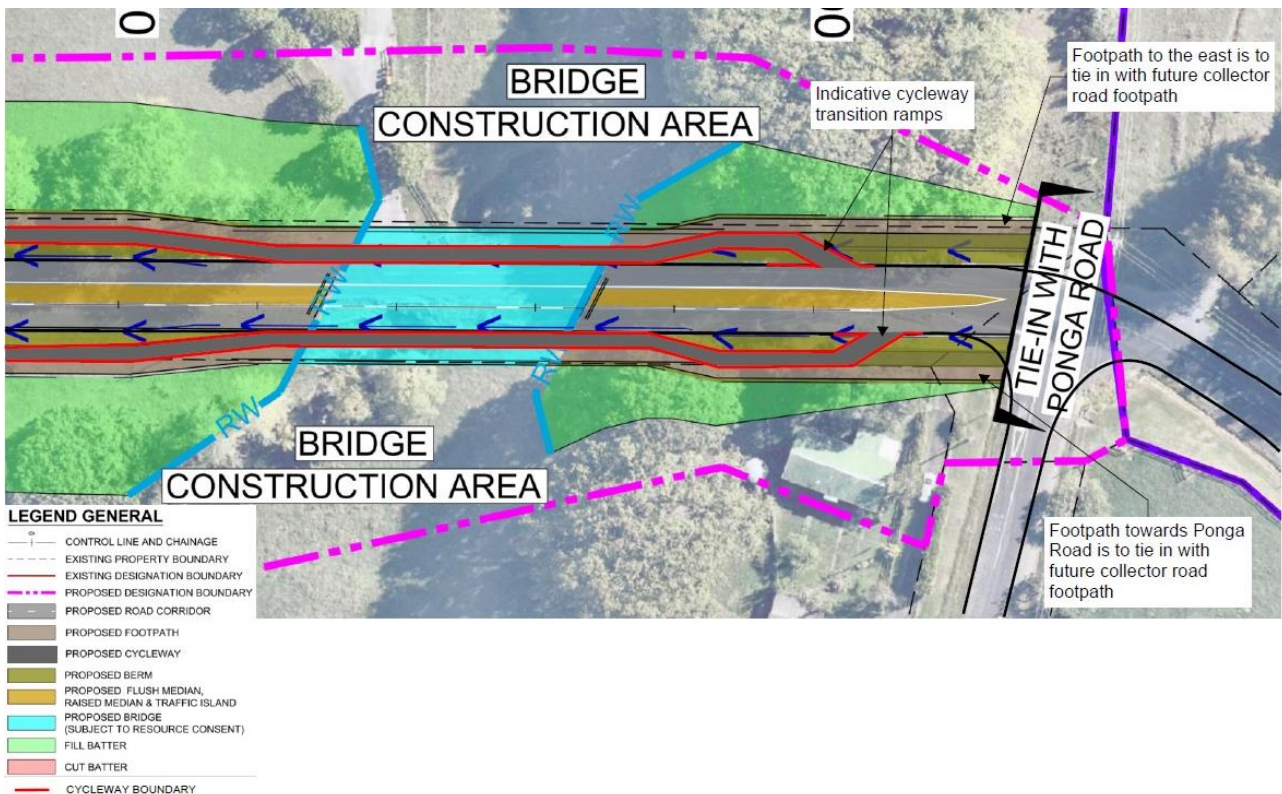
⁶ Drawing SGA-004-NoR-PIV Waihoehoe Drury Hills Tie In Option, provided via email, Drury Arterial NoRs: Safe Tie In at Rural Boundary (Jack Paterson and Drury Hills Roads), received from Helen Hicks Helen.Hicks@supportinggrowth.nz, Sat 31/07/2021 2:04 PM

Outcome: No further action is required as part of the NoR.

Figure 11: Intersection of Ponga Road and Jack Paterson Road, from drawing SGA-DRG-STH-04-CI-8102



Figure 12: Indicative design for NoR D5/Ponga Road/Jack Paterson Road intersection⁷



⁷ Drawing SGA-004-NoR-PIV Ponga Jack Paterson Tie In Option, provided via email, Drury Arterial NoRs: Safe Tie In at Rural Boundary (Jack Paterson and Drury Hills Roads), received from Helen Hicks Helen.Hicks@supportinggrowth.nz, Sat 31/07/2021 2:04 PM

3.11 Engagement and communication

Section 5.2 of the Assessment of Transport Effects identifies the methodology used to assess the potential construction traffic effects, including consideration of any works that should not occur at the same time. The assessment is high level out of necessity, as the actual effects on the transport network, including congestion effects, cannot be accurately predicted at this stage. In my view the construction effects should be further investigated as part of future Construction Traffic Management Plan (CTMP), as proposed by the applicant and provided for in Condition 17.

However, the applicant's CTMP condition only requires the requiring authority to submit the CTMP to Council for information. In my view there is insufficient detail in the NoRs to allow Council and other affected parties to fully understand the access, safety, and efficiency effects, nor does the CTMP condition provide Council with the opportunity to consider these effects at a future stage.

I accept that the future CTMPs will be subject to internal checks and balances within the respective Road Controlling Authorities, however I consider that the Requiring Authority should continue engagement with affected parties up to and including during the construction phase.

I consider that the Stakeholder and Communication Management Plan should be amended to require "engagement and communication" with affect parties rather than just "communication".

Outcome: *I recommend that the Stakeholder and Communication Management Plan conditions proposed for each NoR be amended to ensure engagement is undertaken with affected parties.*

3.12 Auckland Unitary Plan: Arterial Road control

It is not clear when the Auckland Unitary Plan Arterial Road Control will be updated to reflect the future arterial roads, should the notices of requirements be approved, and who would be responsible for ensuring such an update.

Outcome: *I recommend that Council's Planner consider who is responsible for updating the Auckland Unitary Plan Arterial Road Control, and when this should occur.*

4 MY REVIEW OF SUBMISSIONS

4.1 Submissions

Multiple submissions related to transport matters were received. Some submitters made submissions on several NoRs, and some submitters made a submission on a single NoR but their submission was relevant to multiple NoRs.

Submissions that raised matters that I support and that were not already addressed as part of my review of the lodged application are

- ◆ NoR D2: Submission 5. Melanie Jane Hendricksen, Kerry Dean Hendricksen and Warwick Lyndon Bremner.
 - Relates to Lot 1 DP 495426
 - The submitters' request that the extent of the designation boundary be adjusted to enable an accessway from Creek Street to be reinstated.
 - I support the submitters request as it appears that this will not have a fundamental effect on the implementation of the NoR D2 project
- ◆ NoR D5: Submissions 06. Hayes Family Trust.
 - Relates to 174 Opāheke Road
 - Seeks that provision for access to the property to allow future subdivision be provided
 - I support the submitters' request in part. SG has confirmed that access to the property can be maintained from Opāheke Road⁸. I consider that the "Existing Property Access" condition, discussed in Section 3.3, ensures that the submitter will be consulted as the project progresses.

Details of the submissions and my comments are provided Table 1 in Appendix B.

4.2 Local board feedback

I have reviewed Local Board feedback from

- ◆ Franklin Local Board, minutes from Tuesday 22 June 2021 meeting
- ◆ Papakura Local Board, minutes from Wednesday 23 June 2021 meeting.

There were no matters raised by the Local Boards that I had not already considered as part of my review.

⁸ Memo: Information after Council Workshop 15 July 2021, received from Helen Hicks Helen.Hicks@supportinggrowth.nz, Mon 26/07/2021 10:06 PM

5 SUMMARY AND CONCLUSION

I have reviewed the NoRs application documents, submissions, and further submissions. I consider that several changes to the NoR design, and several new and amended conditions are required to ensure the safe and efficient function of the existing and future transport network.

Submissions that raised matters that I support and that were not already addressed as part of my review of the lodged application are

- ◆ NoR D2: Submission 5. Melanie Jane Hendricksen, Kerry Dean Hendricksen and Warwick Lyndon Bremner.
 - Relates to Lot 1 DP 495426
 - The submitters' request that the extent of the designation boundary be adjusted to enable an accessway from Creek Street to be reinstated.
 - I support the submitters request as it appears that this will not have a fundamental effect on the implementation of the NoR D2 project
- ◆ NoR D5: Submissions 06. Hayes Family Trust.
 - Relates to 174 Opāheke Road
 - Seeks that provision for access to the property to allow future subdivision be provided
 - I support the submitters' request in part. SG has confirmed that access to the property can be maintained from Opāheke Road, and I consider that the "Existing Property Access" condition, discussed in Section 3.3, ensures that the submitter will be consulted as the project progresses.

Details of the submissions and my comments are attached to this document.

In summary

- ◆ I consider that the deferral of funding for and therefore construction of Mill Road does not have a consequential impact on NoR D1 – D5
- ◆ I consider that potential effects on existing vehicle crossings adjoining the boundaries of NoR D1 – D5 can be assessed and addressed during the detailed design stage of the projects. I recommend that the "Existing Property Access" condition, offered by SG, is accepted with amendments as shown in red, and that this condition is applied to all NoRs in this package

Condition xx: Existing Property Access, on-site parking and manoeuvring areas

Where existing property vehicle access Where the accessibility, location and/or design of property vehicle access (including vehicle crossings and accessways), on-site parking and manoeuvring areas which exists at the time the Outline Plan is submitted is altered by the project, the Requiring Authority shall consult with the directly affected landowner regarding the required changes at least 6 months prior to the Start of Construction, and the Outline Plan shall demonstrate how safe alternate access will be provided the affected areas will be relocated or reinstated to achieve compliance with relevant AUP

standards (or any subsequent standards) or to a similar location and standard to that existing, unless otherwise agreed with the affected landowner

- ◆ I consider that potential differences between the relative level of the road and adjoining land are unlikely to have a transport effect on future land development, however I recommend that Council's Urban Design expert comment on how this may affect built form outcomes
- ◆ I recommend that NoR D2 Condition 13: Closure of Flanagan Road Intersection with Waihoehoe Road, offered by the applicant should be adopted by Council
- ◆ I recommend that NoR D2 Condition 14: Closure of Creek Street Intersection with Bremner Road, offered by the applicant should be adopted by Council.
- ◆ I recommend that the "Realignment of Tui Street" condition for NoR D2, offered by SG, is accepted with amendments as shown in red

Condition xx: Realignment of Tui Street

The Outline Plan shall demonstrate how the realignment of Tui Street provides for safe and legible access for the Drury and Districts Rugby Football and Recreation Club and community facilities ~~using and the use of the Drury Domain from Tui Street and Great South Road and the use of the Drury Domain.~~ This shall include consideration of a left in turn at Waihoehoe Road and confirmation of completion of a safety audit. This shall include the Outline Plan making provision for permanent left turn access from Waihoehoe Road to the realigned Tui Street unless alternative access can be provided and a road safety audit being submitted with the Outline Plan, The road safety audit shall assess the access and safety effects of turning restrictions at the Great South Road/Tui Street intersection, including likely rerouting and potential u-turning movements, and recommend mitigation measures where required, including measures to be implemented as part of the detailed design of the Project

- ◆ I recommend that the Stakeholder and Communication Management Plan conditions proposed for each NoR be amended to ensure engagement is undertaken with affected parties
- ◆ I recommend that Council's Planner consider who is responsible for updating the Auckland Unitary Plan Arterial Road Control, and when this should occur.

Should my recommendations be adopted, I consider, from a transportation perspective that the NoRs can be approved and that they will support a safe and efficient transport network.

APPENDIX A

Section 92 review report

PROJECT ACXX406: DRURY ARTERIAL NOTICES OF REQUIREMENT
SUBJECT SECTION 92 INFORMATION REQUESTS
TO SANJAY BANGS
FROM MAT COLLINS
REVIEWED BY TERRY CHURCH
DATE 18 FEBRUARY 2021

SUMMARY

Flow Transportation Specialists (Flow) has reviewed the transportation matters associated with five Notices of Requirement, which have been prepared by Te Tupu Ngātahi Supporting Growth on behalf of Auckland Transport and Waka Kotahi New Zealand Transport Agency for the “Drury Arterial Network”.

We consider that further information is required to understand the potential transport effects of the projects, with our review placing the outcomes of our review into three categories

- ◆ Fundamental Gaps, discussed in Section 3
- ◆ Speculative Facts, discussed in Section 4 and
- ◆ Inadequate Level of Details, discussed in Section 5.

Section 6 identifies affected landowners/occupiers who may experience adverse operational transport effects. We note that we have not identified landowners/occupiers that may be impacted by construction transport effects, as we consider that it is more appropriate that this be undertaken as part of the Construction Traffic Management Plan that will be prepared as part of future works. A key component of the Construction Traffic Management Plan should be consultation with parties impacted.

Section 7 summarises all information requests contained within our technical note.

This technical note does not contain any recommendation on whether or not the proposal should be approved or declined by the decision-maker.

1 INTRODUCTION

Auckland Council (Council) has requested Flow Transportation Specialists (Flow) to review the transportation matters associated with five Notices of Requirement (NoRs), which have been prepared by Te Tupu Ngātahi Supporting Growth (SGA) on behalf of Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (Waka Kotahi). The NoRs seek to alter an existing designation and to introduce new designations for future strategic transport corridors to support the planned urban growth in the Drury-Ōpāheke area of Auckland.

The five NoRs are outlined below

- ◆ D1 Alteration to Waka Kotahi designation 6707 - SH22 (Waka Kotahi)
- ◆ D2 Jesmond to Waihoehoe West Frequent Transit Network (FTN) Upgrade (AT)
- ◆ D3 Waihoehoe Road East Upgrade (AT)
- ◆ D4 Ōpāheke North-South FTN Arterial (AT)
- ◆ D5 Ponga Road and Ōpāheke Road Upgrade (AT).

This technical note has been requested to

- ◆ Confirm whether the submitted information is sufficient, or whether further information is required to understand the effects of the NoRs under section 92 of the Resource Management Act 1991 (RMA) in relation to transport matters
- ◆ Assist the Council officers in determining the extent of persons directly affected by the project that should be served notice of the NoRs, in relation to transport matters.

This report is intended to

- ◆ Assess the completeness and adequacy review of the information provided by the applicant in relation to transport matters. Specifically, the focus of this report is on
 - identifying the fundamental gaps (refer Section 3)
 - checking the fundamental facts (refer Section 4)
 - confirming sufficient detail is provided (refer Section 5)
- ◆ Assess whether the effects of the proposal in relation to transport matters require the Council to serve notice of the NoRs on persons who are identified as being adversely affected by the applications (refer Section 6).

We have reviewed the following documents

- ◆ Drury Arterial Network Assessment of Effects on the Environment, prepared by Te Tupu Ngātahi Supporting Growth, dated January 2021
- ◆ NOR D1, D2, D3, D4, and D5 drawing packages, prepared by Te Tupu Ngātahi Supporting Growth, dated 27 January 2021
- ◆ Drury Arterial Network Assessment of Transport Effects, prepared by Te Tupu Ngātahi Supporting Growth, dated January 2021

- ◆ Traffic model files, provided via email¹

We note that the traffic model files were received after the lodgement of the application, and that our review of the model is not complete. In relation to the traffic model, we will confirm whether the submitted information is sufficient or whether further information is required in due course.

This technical note does not contain any recommendation on whether or not the proposal should be approved or declined by the decision-maker.

¹ RE: Modelling files, received from Werner Pretorius Werner.Pretorius@supportinggrowth.nz, Tue 9/02/2021 3:51 PM

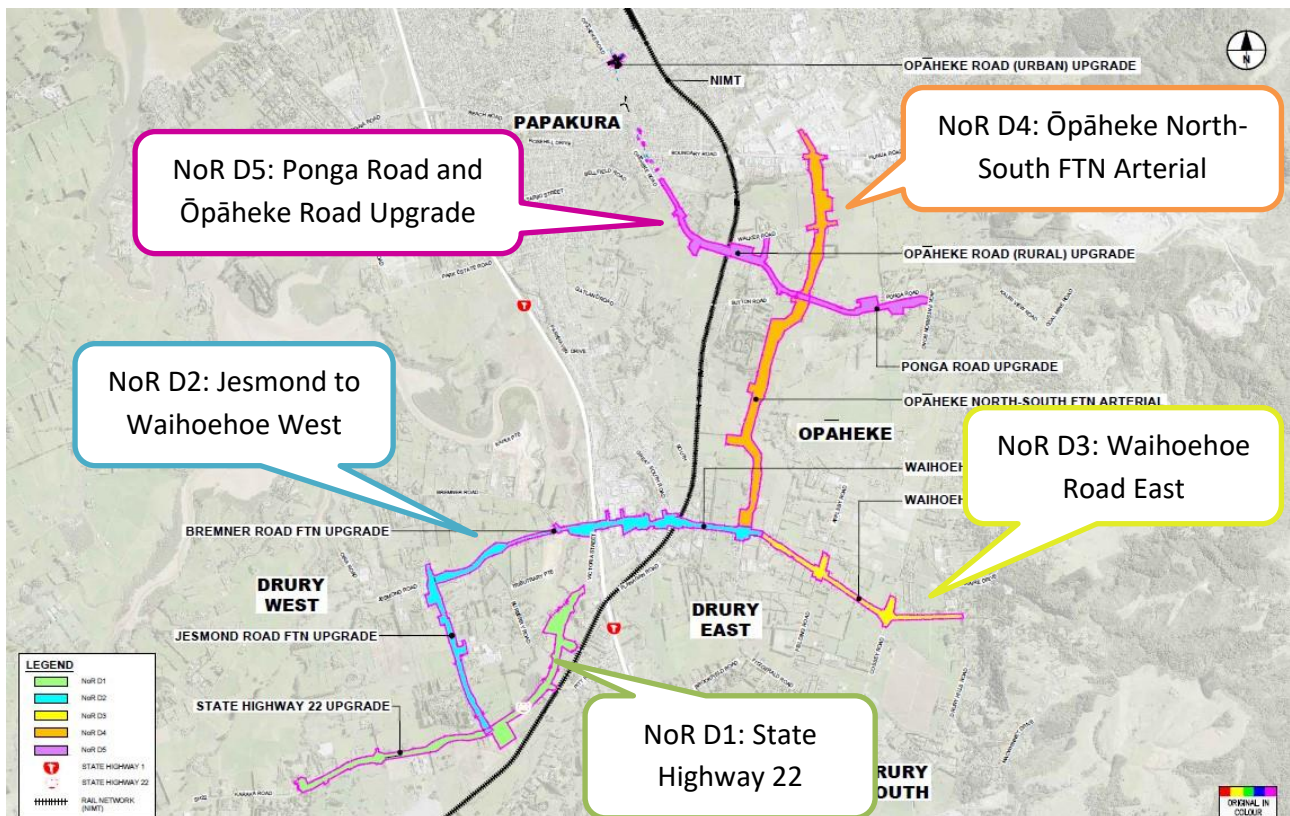
2 SUMMARY OF THE NORs

The five NoRs are shown in Figure 1 and briefly described in the following sub-sections. The timing for construction of the Projects within the Drury Package is not certain, with the NoRs seeking designation to allow construction when considered appropriate, for example with development of adjacent land or as programmed within the Regional Land Transport Plan.

To enable an assessment of the potential effects of the Projects on the environment, SGA has assumed that construction will commence

- ◆ NoR D1, D2 and D3: by approximately 2028
- ◆ NoR D4 and D5: from approximately 2028 to 2048.

Figure 1: NoRs overview



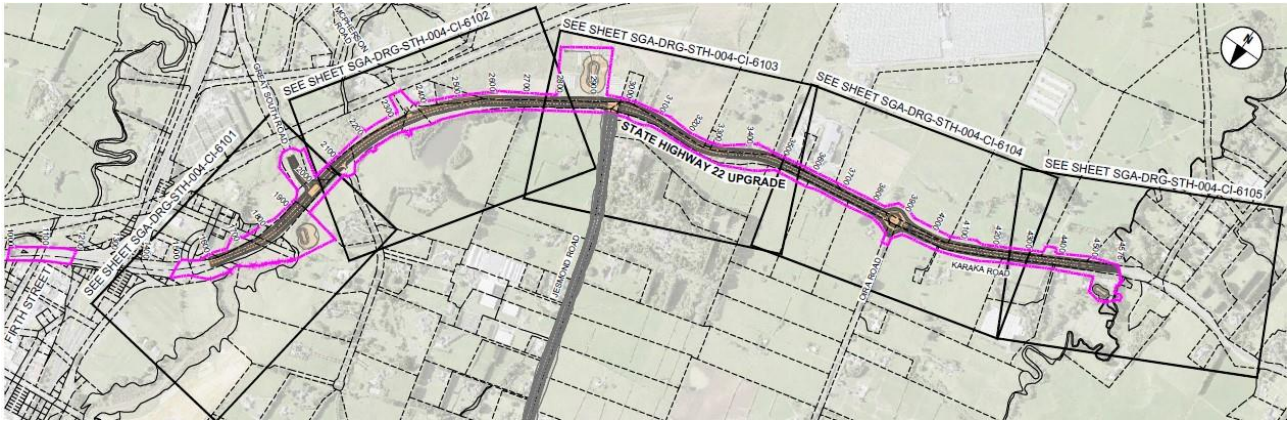
2.1 NoR D1: State Highway 22

The land to be designated is an area of approximately 12.8ha located on either side of the existing State Highway 22 (SH22) in Drury between State Highway 1 (SH1) Drury Interchange and Oira Creek, as shown in Figure 2. The requirement applies to 42 land parcels.

The proposed work includes

- ◆ Widening of existing state highway from the Drury Interchange at State Highway 1 (SH1) to Oira Creek to a four-lane urban arterial with separated active transport facilities.

Figure 2: NoR D1 overview



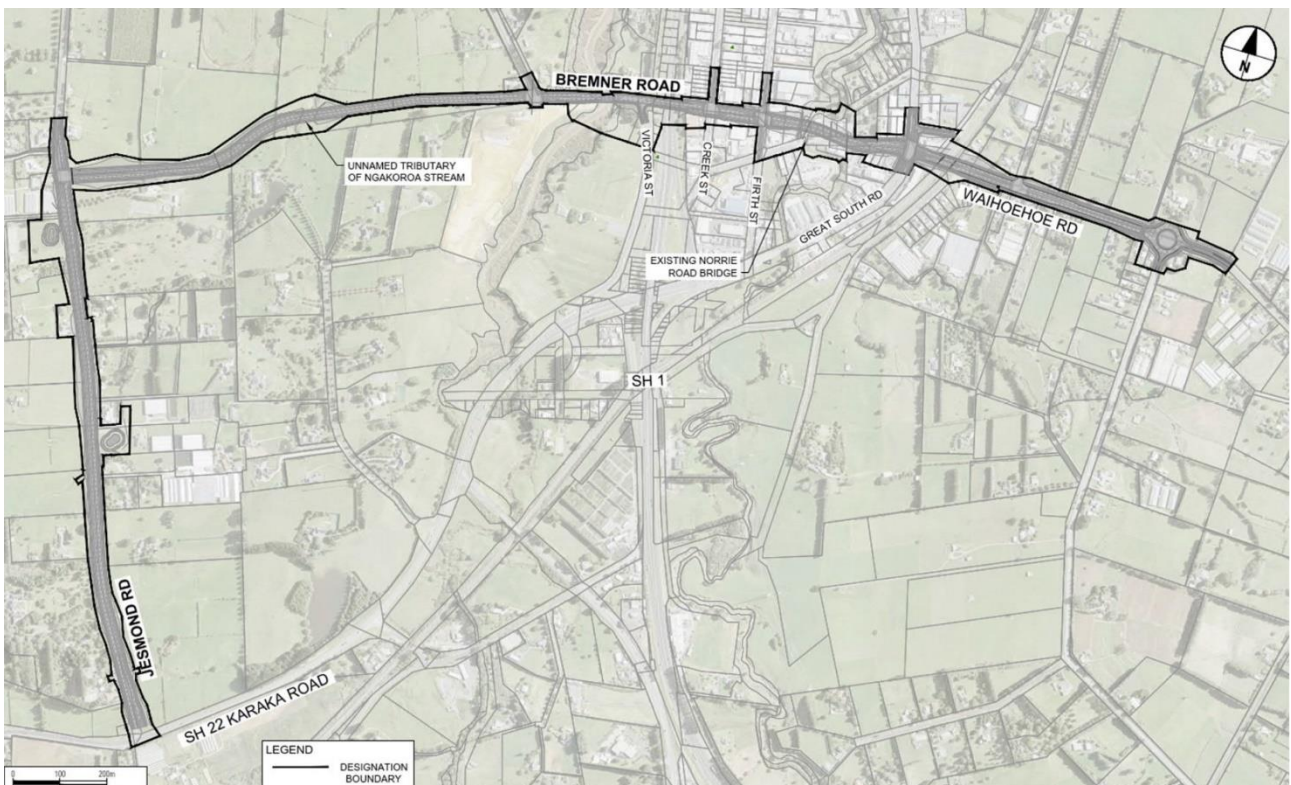
2.2 NoR D2: Jesmond to Waihoehoe West

The land to be designated is located in Drury from Jesmond Road (from State Highway 22) to Waihoehoe Road east of Fitzgerald Road, as shown in Figure 3. The requirement applies to 111 land parcels (not including legal roads).

The proposed work includes

- ◆ Widening of the existing Jesmond Road from SH22 to near 256 Jesmond Road to a four-lane FTN urban arterial with separated active transport facilities
- ◆ A four-lane FTN urban arterial with separated active transport facilities from Jesmond Road to Norrie Road. It includes upgrading existing and constructing new transport corridors
- ◆ Widening of Waihoehoe Road from the Norrie Road/Great South Road intersection to Fitzgerald Road to a four-lane FTN urban arterial with separated active transport facilities.

Figure 3: NoR D2 overview



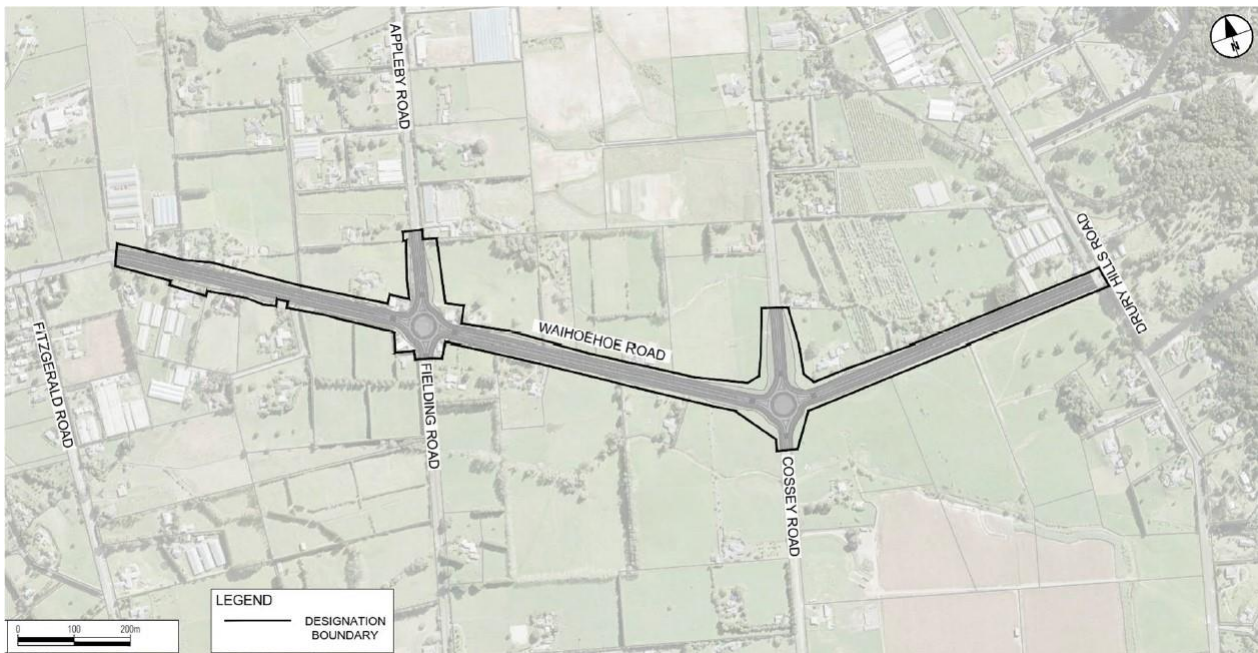
2.3 NoR D3: Waihoehoe Road East

The land to be designated is located in Drury East between east of Fitzgerald Road and Drury Hills Road, as shown in Figure 4. The requirement applies to 33 land parcels (not including legal roads).

The proposed work includes

- ◆ Widening of Waihoehoe Road east of Fitzgerald Road to Drury Hills Road to a two-lane urban arterial with separated active transport facilities.

Figure 4: NoR D3 overview



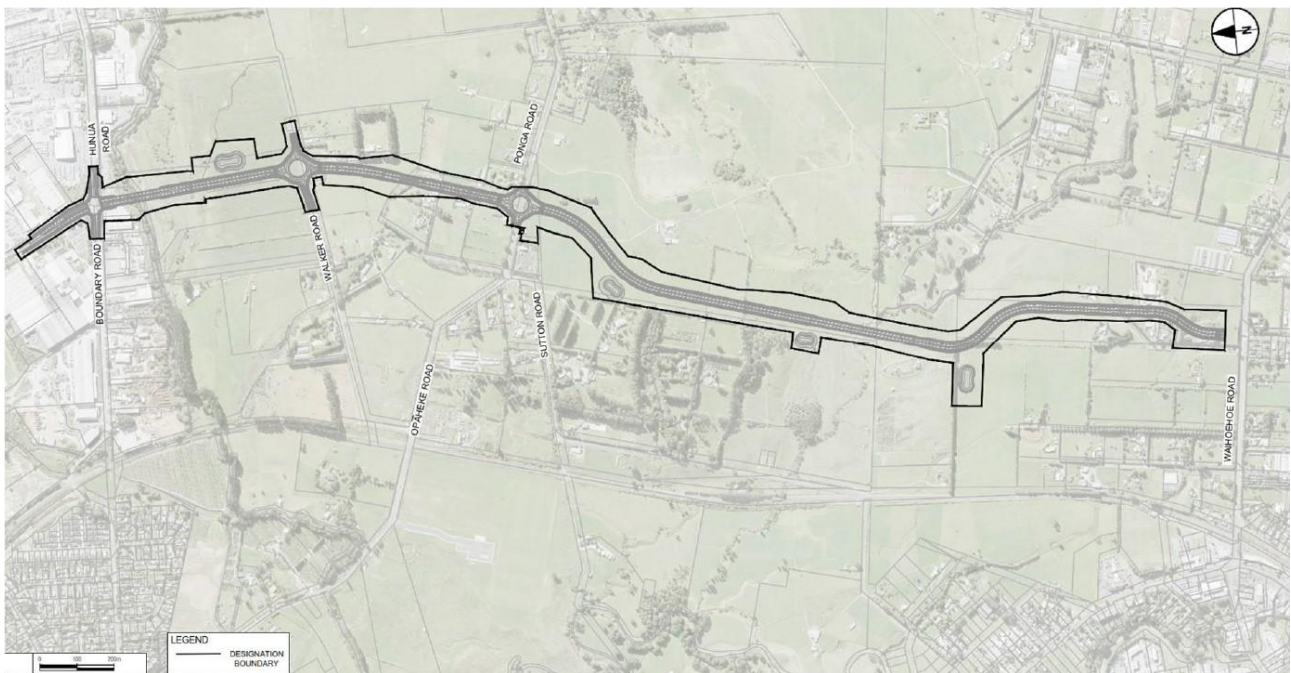
2.4 NoR D4: Ōpāheke North-South FTN Arterial

The land to be designated is located in Drury-Ōpāheke between Waihoehoe Road and Hunua Road, as shown in Figure 5. The requirement applies to 35 land parcels (not including legal roads).

The proposed work includes

- ◆ A new four-lane FTN urban arterial with separated active transport facilities from Hunua Road in the north to Waihoehoe Road in the south.

Figure 5: NoR D4 overview



2.5 NoR D5: Ponga Road and Ōpāheke Road Upgrade

The land to be designated is located in Ōpāheke along Ponga Road and Ōpāheke Road from Jack Paterson Road in Ōpāheke to Settlement Road in Papakura, as shown in Figure 6. The requirement applies to 67 land parcels (not including legal roads).

The proposed work includes

- ◆ Widening of Ponga Road from Ōpāheke Road to Jack Paterson Road to a two-lane urban arterial with separated active transport facilities
- ◆ Widening of Ōpāheke Road from the extent of the Future Urban Zone (FUZ) in the north to Ponga Road in the south to a two-lane urban arterial with separated active transport facilities
- ◆ Upgrade of the Ōpāheke Road / Settlement Road intersection to a roundabout with active transport facilities, including crossing facilities and re-grading of nine driveways.

Figure 6: NoR D5 overview



3 FUNDAMENTAL GAPS IDENTIFIED IN OUR REVIEW

The following subsections discuss fundamental gaps in the description and extent of the activity and the nature of its effects.

3.1 Fundamental Gap 1: Effects on existing vehicle accesses

Several of the NoRs indicate that the future corridors will have raised central medians. Raised medians will affect existing access to some properties, preventing right turns into and out of existing vehicle crossings. While we appreciate the positive safety and efficiency effects that raised medians can provide for road users travelling along the corridor, we query how and when affected land owners will have the opportunity to have input into the design.

Fundamental gap 1: Please confirm how and when affected land owners will have the opportunity to review and comment on corridor designs that may affect existing access to their properties.

4 SPECULATIVE FACTS IDENTIFIED IN OUR REVIEW

The following subsections discuss facts included in the application which we considered to be speculative in nature and may not be based on sound predictions.

4.1 Speculative fact 1: Norrie Road realignment

Section 11.2.4 of Appendix A – Assessment of Alternatives details several options that were considered for the alignment of the Bremner Road FTN through the existing urban area of Drury Village, with Option B1, which is shown in Figure 7, being carried through to NoR D2.

Option A, which is shown below in Figure 8, was discounted for a variety of reasons (detailed in Table 11-12 of Appendix A – Assessment of Alternatives), including perceived congestion effects and it having similar effects on existing businesses compared with Option B1.

A metrics-based comparison of the transport and property effects between options is not provided within the application documents. Without evidence of more rigorous assessment between options for the Norrie Road realignment, we consider that the assumption that Option A results in greater congestion effects while having a similar land take impact may be speculative. For example, intersection options at the intersection of Norrie Street/Firth Street and Bremner Road/Firth Street that maintain priority to east-west movements may be a means to reduce potential congestion effects of Option A.

Speculative fact 1: the application documents do not provide sufficient evidence to support Norrie Road realignment Option B1 on the grounds of transport benefit and land take effects.

Figure 7: “Option B1” reproduced from Appendix A – Assessment of Alternatives – Figure 11.17

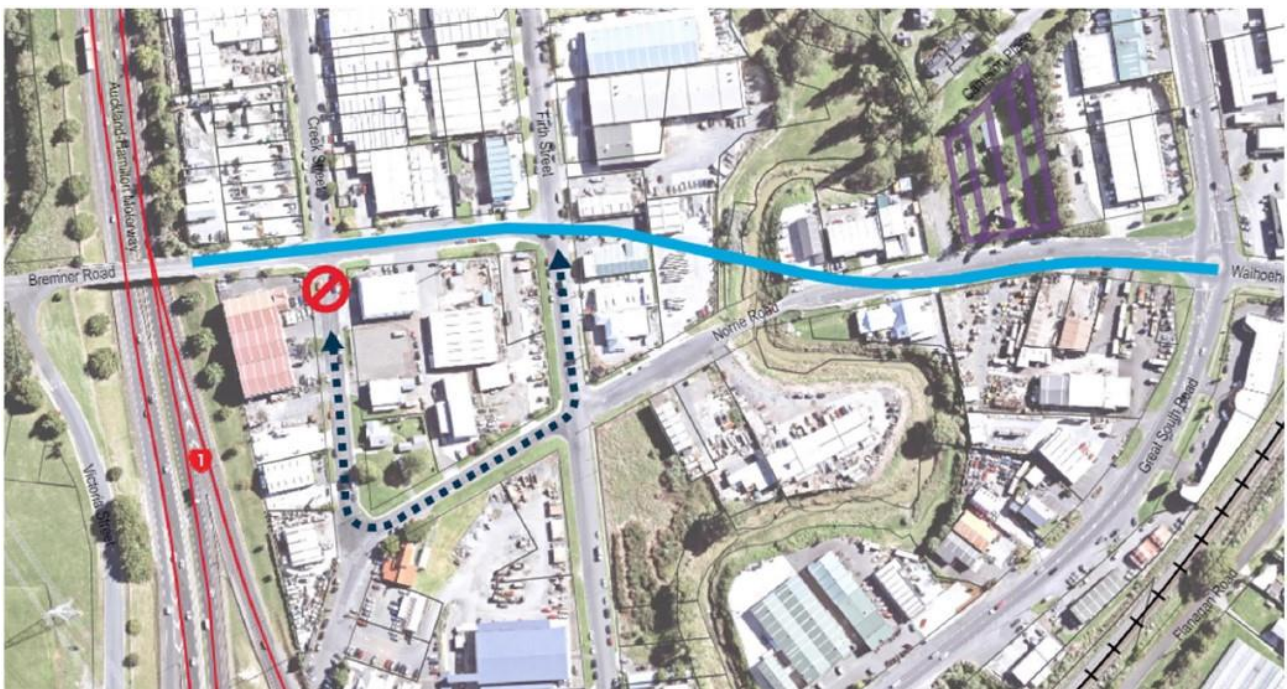
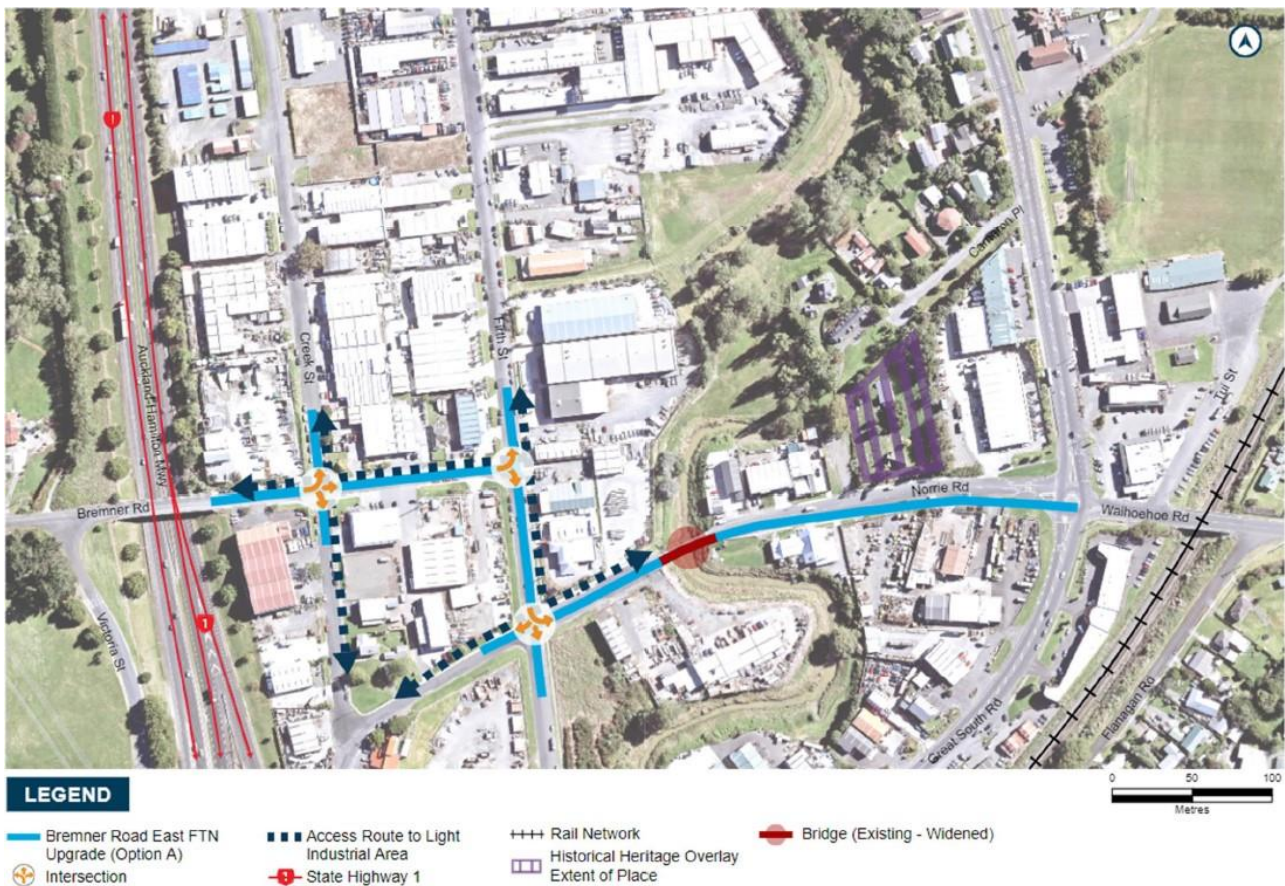


Figure 8: “Option A” reproduced from Appendix A – Assessment of Alternatives – Figure 11.10



4.2 Speculative fact 2: Drury Interchange road connection to PPC48

The traffic model used to assess the appropriateness of the NoRs assumes that there is a direct connection between the Kiwi Development (Proposed Private Plan Change 48) and Drury Interchange. We note through the submissions received for PPC48 that Waka Kotahi do not support a direct connection between PPC48 and the Drury Interchange, and as such, the assumption of a connection being in place for the purposes of assessing the NoRs is questionable.

We query what the impacts are to the proposed designation when removing the direct connection, in particular the designation width on Waihoehoe Road (between Great South Road and the Ōpāheke N-S Arterial), and the footprint about the Great South Road/Waihoehoe Road intersection.

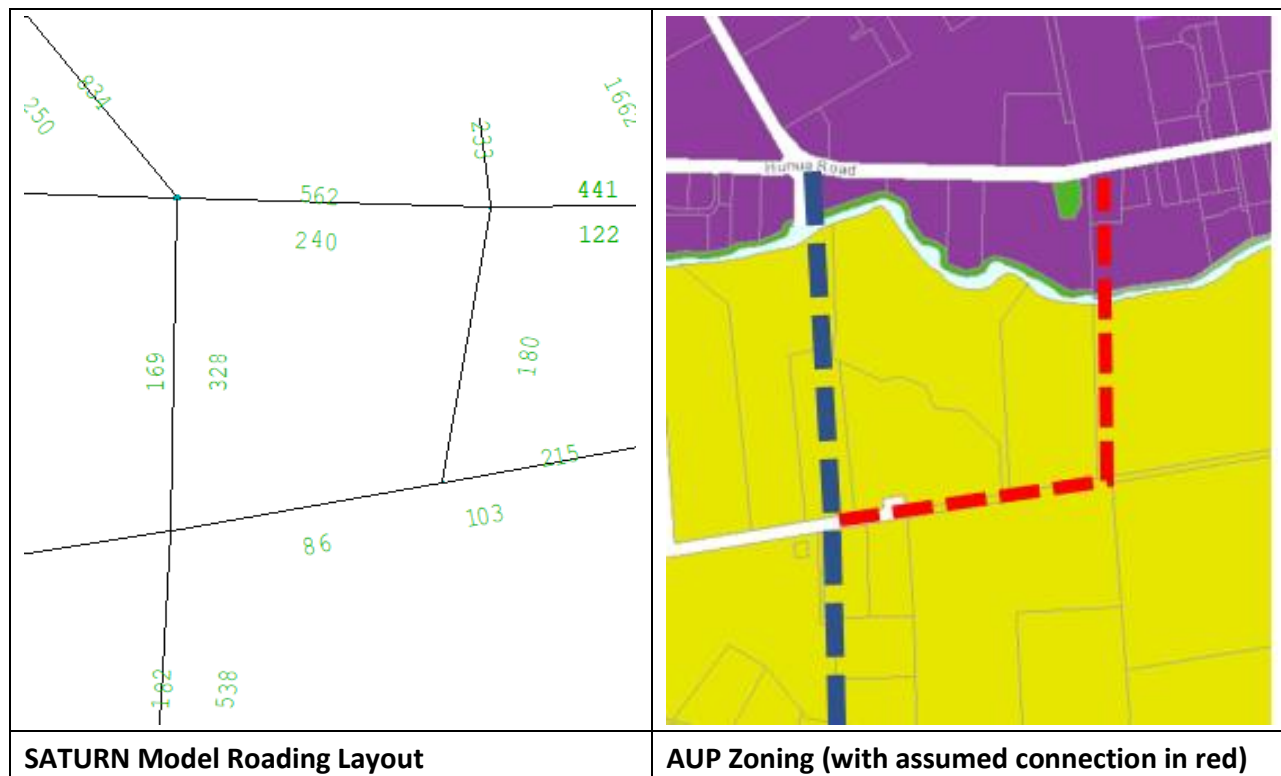
Speculative fact 2: the traffic model used to support the NoRs assumes a direct road connection between the Drury Interchange and PPC48. However, Waka Kotahi’s submission on PPC48 opposes this connection. In our view the traffic modelling may underpredict traffic demands on Waihoehoe Road (between Great South Road and the Ōpāheke N-S Arterial), and the Great South Road/Waihoehoe Road intersection.

4.3 Speculative fact 3: new road through live zoned land

The traffic model includes future roads which feature in the Drury-Ōpāheke Structure Plan. While new roads located within the Future Urban Zone can be considered likely, the traffic model includes a new road, south of Hunua Road which connects to NOR D4 (as shown in Figure 9).

We query whether it is feasible to include a future road that passes through live zoned industrial land that would require a designation to enable construction. The road carries some 200 vehicles per hour, which is a reasonable increase in demand. While the midblock design of NoR D4 (approaching Hunua Road) would allow for this increase in demand, we query whether the designation about the intersection of NOR D4/Hunua Road has a sufficient envelope to allow for what may be a slightly higher traffic demand when catering a higher flow should the road assumed through live zoned land not exist in the future.

Figure 9: Assumed road connection through live zoned industrial land



Speculative fact 3: the traffic model used to support the NoRs assumes a new road connection between the Ōpāheke N-S arterial and Hunua Road, via live zoned industrial land. We query whether it is feasible to include a future road that passes through live zoned industrial land that would require a designation to enable construction. We query whether the designation about the intersection of NoR D4/Hunua Road has a sufficient envelope to allow for a higher traffic demand should the road assumed through live zoned land not exist in the future.

5 INADEQUATE LEVEL OF DETAIL IDENTIFIED IN OUR REVIEW

The following subsections discuss matters which we consider have been inadequately assessed in terms of their scale and intensity (significance) on the environment, impacts upon potentially affected persons and/or effectiveness of proposed mitigation measure.

5.1 Inadequate level of detail 1: Public transport effects

Section 7.3.1.4 of the Assessment of Transport Effects report discusses the expected routing and frequency of future public transport services on Jesmond Road, Bremner Road, and Waihoehoe Road, and the modelled journey time savings that are predicted along these corridors. However, the Ōpāheke North-South arterial is not discussed, despite it being identified in NoR: D4 as a FTN arterial.

Inadequate level of detail 1: Please provide further information on the expected frequency of public transport services on the Ōpāheke North-South arterial, and what the anticipated travel time saving (based on ridership rather than vehicle time) will be due to the proposed bus lanes.

5.2 Inadequate level of detail 2: Waihoehoe/Drury Hills intersection

Drawing SGA-DRG-STH-004-CI-4103 does not include an appropriate tie in to Drury Hills Road, as shown in Figure 10. We consider that NoR: D3 should demonstrate an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary.

Inadequate level of detail 2: Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Drury Hills Road and Waihoehoe Road

Figure 10: Intersection of Drury Hills Road and Waihoehoe Road, from drawing SGA-DRG-STH-004-CI-4103



5.3 Inadequate level of detail 3: Waihoehoe/Flanagan intersection

Drawing SGA-DRG-STH-04-CI-3101 identifies that the intersection between Waihoehoe Road and Flanagan Road will be closed and that:

“CONNECTION WITH FLANAGAN ROAD AND PROPERTY ACCESS TO BE DEVELOPED WITH FUTURE NZUP PROJECT”

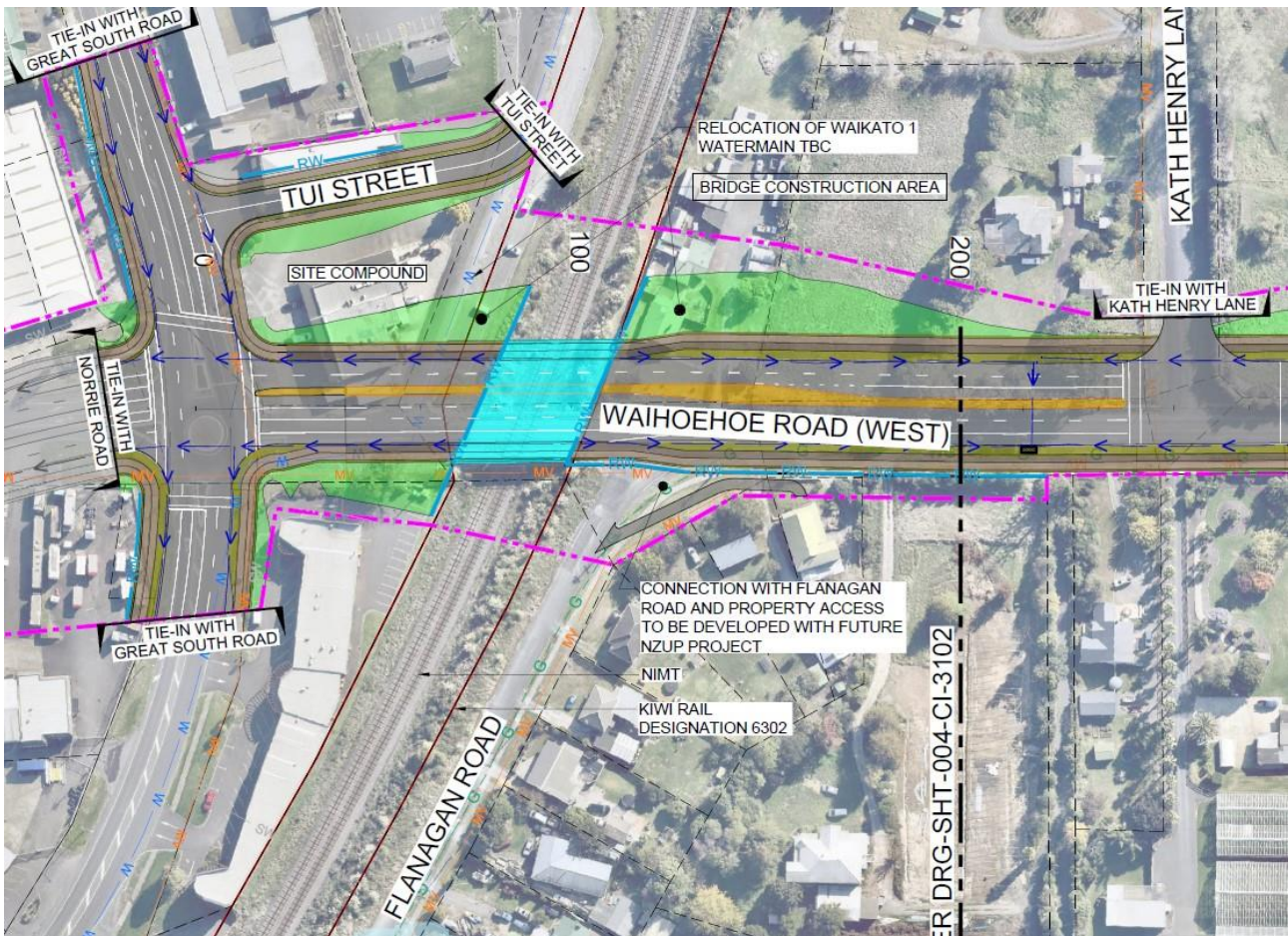
Further, Table 7-15 of the Assessment of Transport Effects states that

“The Flanagan Road intersection with Waihoehoe Road West is expected to be closed through NZUP as a result of the new Drury Central Rail station and park and ride facilities.”

In our view NoR D2 should not include the closure of the Flanagan Road intersection, as currently shown in Drawing SGA-DRG-STH-04-CI-3101. If the closure of the intersection proceeds works under NZUP, this affect access to the future rail station and existing properties on Flanagan Road, noting there is currently no alternative access for Flanagan Road.

Inadequate level of detail 3: Please provide further detail on the proposed closure of the Waihoehoe/Flanagan intersection, including timing, co-ordination with any other works needed to maintain access to Flanagan Road, and consultation with affected parties. Alternatively, if the closure of the intersection is not proposed as part of the designation, drawing SGA-DRG-STH-04-CI-3101 should be updated.

Figure 11: Intersection of Waihoehoe Road and Flanagan Road, from drawing SGA-DRG-STH-04-CI-3101



5.4 Inadequate level of detail 4: Construction staging

Section 5.2 of the Assessment of Transport Effects identifies the methodology used to assess the potential construction traffic effects, including consideration of any works that should not occur at the same time. The subsequent sections of the report do not identify any works that should not occur at the same time. It is unclear whether the author considers that all sections of all corridors could be constructed in parallel. While NoR D2 is assessed in sections, there is no detail on whether NoR D2 is likely constructed in sections, or as a single corridor of works. Should the Jesmond Road and Bremner Road sections be constructed in parallel, there may be significant effects on access as there are no alternative corridors to access existing and future development within the Auranga Precinct.

Inadequate level of detail 4: Please provide further detail on the effects on the transport network should the Jesmond Road and Bremner Road sections of NoR D2 be constructed in parallel.

5.5 Inadequate level of detail 5: Bremner/Creek intersection

Drawing SGA-DRG-STH-04-CI-2103 shows the closure of the southern leg of the Bremner Road/Creek Street intersection. The design does not demonstrate that a compliant vehicle turning head can be accommodated within the proposed designation boundary and/or the existing legal road boundary.

Inadequate level of detail 5: Please demonstrate that a turning head that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road

boundaries for the closure of the Bremner Road/Creek Street intersection, or otherwise assess the effects on the transport network should one not be provided.

5.6 Inadequate level of detail 6: Great South Road/Tui Street intersection

Drawing SGA-DRG-STH-04-CI-3101 shows the realignment of Tui Street, to form a new intersection with Great South Road, as shown in Figure 11 above. We consider that the proximity of the proposed intersection with the upgraded Great South Road/Waihoehoe Road intersection is likely to create safety issues for drivers turning right into and out of Tui Street. Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects, and comment on what means to mitigate potential safety effects were considered (such as an alternative access to the north of the Drury Rugby Clubrooms).

Inadequate level of detail 6: Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects. Please comment on what, if any, alternatives have been considered to maintain access to properties on Tui Street.

5.7 Inadequate level of detail 7: Opāheke/Liverpool intersection

Drawing SGA-DRG-STH-04-CI-9202 shows the closure of the Opāheke Road/Liverpool Street intersection, as shown in Figure 12. The design does not demonstrate that a compliant vehicle turning head can be accommodated within the proposed designation boundary and/or the existing legal road boundary.

Inadequate level of detail 7: Please demonstrate that a turning head that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries for the closure of the Opāheke Road/Liverpool Street intersection, or otherwise assess the effects on the transport network should one not be provided.

Figure 12: Intersection Ōpāheke Road and Liverpool Street, from drawing SGA-DRG-STH-04-CI-9202



5.8 Inadequate level of detail 8: Ponga/Jack Paterson intersection

Drawing SGA-DRG-STH-04-CI-8102 does not include an appropriate tie in between NoR D5 and the Ponga Road/Jack Paterson Road intersection, as shown in Figure 13. We consider that NoR D5 should demonstrate that an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary. The design should demonstrate that safe intersection sight distances can be met, that the interface between a rural and urban road environment is appropriately managed, and appropriate vehicle tracking movements can be accommodated.

Inadequate level of detail 8: Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Ponga Road and Jack Paterson Road. This should include an assessment of sight distances, management of the interface between a rural and urban road environment, and accommodation of vehicle tracking.

Figure 13: Intersection of Ponga Road and Jack Paterson Road, from drawing SGA-DRG-STH-04-CI-8102



5.9 Inadequate level of detail 9: Pukekohe Expressway

We appreciate that the extent and impacts of the NoRs have been completed with the long term 2048 horizon in mind. With projects such as Mill Road (for example) having Government support and therefore potential for construction in the short/medium term, we query the reasonableness and impacts of including longer term infrastructure projects that don't have the same level of support and funding.

Should the Pukekohe Expressway not be in place for 20 to 30 years (or thereabouts) to what extent will the proposed designation for SH22 be sufficient to cater for flows associated with ongoing adjacent development, as well as the providing access to the wider Franklin area. To what extent should the proposed designation allow for localised widening, allowing for sufficient room to cater for its continuing role as a state highway route for the next 20 to 30 years, but also a transitioning corridor in response to adjacent land use development?

Inadequate level of detail 9: Please assess the required form and function of SH22, and confirm any widening that may be required, should Pukekohe Expressway not be constructed within a 30 year horizon.

5.10 Inadequate level of detail 10: Hunua Road/Settlement Road intersection

In the traffic model, the Hunua Road/Settlement Road intersection has been altered to that which currently exists, with priority being given to Settlement Road (west) and Hunua Road (south). As a result of this change, an additional lane is placed on Settlement Road (east) in the modelling. While it appears that the lane can be provided for within the current designation, clarification is required on

- ◆ is the change in layout in response to NOR D4 or considered to be a separate business as usual project
- ◆ what are the implications if the intersection is not altered prior to implementing NOR D4
- ◆ whether any localised widening is required and whether it should be included in the NOR D4 designation.

Inadequate level of detail 10: Please confirm whether the arrangement of the Hunua Road/Settlement Road intersection, as assumed in the traffic model, can be accommodated within the existing legal road boundaries and/or NoR D4 boundary. Further, please confirm the timing of the alteration in priority (priority to Settlement Road west and Hunua Road south).

5.11 Inadequate level of detail 11: Hunua Road/Croskery Road intersection

In the traffic model, the Hunua Road/Croskery Road intersection is assumed to be a roundabout, in both the future Do Minimum and NoR SATURN models. Clarification is required on

- ◆ is the change in layout in response to NOR D4 or considered to be a separate business as usual project
- ◆ what are the implications if the intersection is not altered prior to implementing NOR D4
- ◆ whether any localised widening is required and whether it should be included in the NOR D4 designation.

Inadequate level of detail 11: Please confirm whether the arrangement of the Hunua Road/Croskery Road intersection, as assumed in the traffic model, can be accommodated within the existing legal road boundaries and/or NoR D4 boundary. Further, please confirm the timing of the alteration in intersection form (conversion to a roundabout).

5.12 Inadequate level of detail 12: Ōpāheke N-S arterial intersections with Walker Road and Ponga Road

In the traffic model, the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road are assumed to be signalised intersections. However, the designation layout includes roundabouts at both intersections. While we appreciate that the detail around intersection design and control will be dealt with through the design phase, the traffic modelling includes a sizeable delay at the Ponga Road intersection (more than 3 minutes).

Our concern here isn't related to the potential footprint at these particular intersections, as a roundabout presents a conservative approach, but the footprint about the upstream and downstream

signalised intersections may alter, as the level of delay included in the traffic model may be pushing demand away from the corridor and onto alternative routes.

Some feedback on possible impacts to the NOR D4 designation is worth teasing out should modelled constraints (high delays along the route) be reduced.

Inadequate level of detail 12: Please explain what effects on the transport network may be under or over stated in the NoR due to the difference between the traffic model and the NoR design for the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road.

5.13 Inadequate level of detail 13: Sutton Road at-grade rail crossing closure

The SATURN traffic model assumes that Sutton Road is closed when the Ōpāheke N-S arterial is operational. We support the closing of this level rail crossing, noting that it presents a safer outcome and aligns with the Vision Zero safety strategy. To what extent should this assumption be discussed in the reporting, noting that the closure of this connection places additional importance on adjacent sections of the NOR D4 corridor. That is, it is important that adjacent sections of NOR D4 are protected to allow for this network change.

Inadequate level of detail 13: We recommend that the NoR application be updated to emphasise that the closure of the Sutton Road at-grade rail crossing, as assumed in the traffic model, places additional importance on the Ōpāheke N-S arterial being protected to allow for this network change.

5.14 Inadequate level of detail 14: Ōpāheke Road localised improvements

The traffic modelling suggests predicts a significant increase in traffic on Ōpāheke Road into the future. For example, the base traffic model assumes some 150 vehicles northbound about Boundary Road, with this predicted to increase to some 750 vehicles per hour. While the proposed designation includes several vehicle crossings, where localised works are required, we ask for clarification on the extent to which turning lanes and localised intersection improvements have been captured within the analysis. For example, right turning storage space will likely be required to ensure right turning vehicles can stack safely based on the increased demand predicted along this route.

Inadequate level of detail 14: Please provide clarification on whether turning lanes and/or intersection improvements along the urban section of Ōpāheke Road may be required due to the increase in vehicle movements resulting from NoR D5.

6 AFFECTED PERSONS ASSESSMENT

We consider that the following landowners/occupiers may experience adverse transport effects as a result of NoR D1 – NoR D5

- ◆ SH22, all properties with existing vehicle access onto SH22 within NoR D1
- ◆ Burberry Road, all properties with existing vehicle access onto Burberry Road
- ◆ Jesmond Road, all properties with existing vehicle access onto Jesmond Road within NoR D2
- ◆ Bremner Road, all properties with existing vehicle access onto Bremner Road within NoR D2
- ◆ Clark Street, all properties with existing vehicle access onto Clark Street south of Bremner Road
- ◆ Norrie Road, all properties with existing vehicle access onto Norrie Road west of Firth Street
- ◆ Norrie Road, all properties with existing vehicle access onto Norrie Road east of Firth Street
- ◆ Tui Street, all properties with existing vehicle access onto Tui Street
- ◆ Flanagan Road, all properties with existing vehicle access onto Flanagan Road
- ◆ Waihoehoe Road, all properties with existing vehicle access onto Waihoehoe Road
- ◆ Ponga Road, all properties with existing vehicle access onto Ponga Road within NoR D5
- ◆ Ōpāheke Road, all properties with existing vehicle access onto Ōpāheke Road within NoR D5
- ◆ Liverpool Street, all properties with existing vehicle access onto Liverpool Road
- ◆ Walker Road, all properties with existing vehicle access onto Walker Road, west of the proposed Ōpāheke North-South arterial

We note that we have not identified landowners/occupiers that may be affected by construction transport effects, as we consider that it is more appropriate that this be undertaken as part of the Construction Traffic Management Plan that will be prepared as part of future works.

7 ADDITIONAL INFORMATION REQUESTS

Having reviewed the relevant documents provided, we consider that additional information is required to better understand the transport effects and their management. Information requests are summarised below, with full discussion provided in Sections 3 to 5 above.

7.1 Fundamental Gaps

Fundamental gap 1: Please confirm how and when affected land owners will have the opportunity to review and comment on corridor designs that may affect existing access to their properties.

7.2 Speculative facts

Speculative fact 1: the application documents do not provide sufficient evidence to support Norrie Road realignment Option B1 on the grounds of transport benefit and land take effects.

Speculative fact 2: the traffic model used to support the NoRs assumes a direct road connection between the Drury Interchange and PPC48. However, Waka Kotahi's submission on PPC48 opposes this connection. In our view the traffic modelling may underpredict traffic demands on Waihoehoe Road (between Great South Road and the Ōpāheke N-S Arterial), and the Great South Road/Waihoehoe Road intersection.

Speculative fact 3: the traffic model used to support the NoRs assumes a new road connection between the Ōpāheke N-S arterial and Hunua Road, via live zoned industrial land. We query whether it is feasible to include a future road that passes through live zoned industrial land that would require a designation to enable construction. We query whether the designation about the intersection of NoR D4/Hunua Road has a sufficient envelope to allow for a higher traffic demand should the road assumed through live zoned land not exist in the future.

7.3 Inadequate level of detail

Inadequate level of detail 1: Please provide further information on the expected frequency of public transport services on the Ōpāheke North-South arterial, and what the anticipated travel time saving (based on ridership rather than vehicle time) will be due to the proposed bus lanes.

Inadequate level of detail 2: Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Drury Hills Road and Waihoehoe Road

Inadequate level of detail 3: Please provide further detail on the proposed closure of the Waihoehoe/Flanagan intersection, including timing, co-ordination with any other works needed to maintain access to Flanagan Road, and consultation with affected parties. Alternatively, if the closure of the intersection is not proposed as part of the designation, drawing SGA-DRG-STH-04-CI-3101 should be updated.

Inadequate level of detail 4: Please provide further detail on the effects on the transport network should the Jesmond Road and Bremner Road sections of NoR D2 be constructed in parallel.

Inadequate level of detail 5: Please demonstrate that a turning head that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries for the closure of the Bremner Road/Creek Street intersection, or otherwise assess the effects on the transport network should one not be provided.

Inadequate level of detail 6: Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects. Please comment on what, if any, alternatives have been considered to maintain access to properties on Tui Street.

Inadequate level of detail 7: Please demonstrate that a turning head that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries for the closure of the Ōpāheke Road/Liverpool Street intersection, or otherwise assess the effects on the transport network should one not be provided.

Inadequate level of detail 8: Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Ponga Road and Jack Paterson Road. This should include an assessment of sight distances, management of the interface between a rural and urban road environment, and accommodation of vehicle tracking.

Inadequate level of detail 9: Please assess the required form and function of SH22, and confirm any widening that may be required, should Pukekohe Expressway not be constructed within a 30 year horizon.

Inadequate level of detail 10: Please confirm whether the arrangement of the Hunua Road/Settlement Road intersection, as assumed in the traffic model, can be accommodated within the existing legal road boundaries and/or NoR D4 boundary. Further, please confirm the timing of the alteration in priority (priority to Settlement Road west and Hunua Road south).

Inadequate level of detail 11: Please confirm whether the arrangement of the Hunua Road/Croskery Road intersection, as assumed in the traffic model, can be accommodated within the existing legal road boundaries and/or NoR D4 boundary. Further, please confirm the timing of the alteration in intersection form (conversion to a roundabout).

Inadequate level of detail 12: Please explain what effects on the transport network may be under or over stated in the NoR due to the difference between the traffic model and the NoR design for the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road.

Inadequate level of detail 13: We recommend that the NoR application be updated to emphasise that the closure of the Sutton Road at-grade rail crossing, as assumed in the traffic model, places additional importance on the Ōpāheke N-S arterial being protected to allow for this network change.

Inadequate level of detail 14: Please provide clarification on whether turning lanes and/or intersection improvements along the urban section of Ōpāheke Road may be required due to the increase in vehicle movements resulting from NoR D5.

APPENDIX B

Submission summary

Table 1: Submission summary and commentary

NoR and submission No.	Submitter	Summary of submission	Flow comment	Status
NoR D1: State Highway 22 (Karaka Road)				
NoR D1: 02	Fire and Emergency New Zealand (FENZ)	Seeks direct access to SH22 for a fire station and regional headquarter for FENZ. Seeks that Waka Kotahi work collaboratively with submitter.	FENZ has interest in 67 Mercer St. Mercer St intersection with Karaka Rd/SH22 is outside of the NoR footprint. No further action or comment needed from Council.	I recommend that Waka Kotahi continue engagement with FENZ
NoR D1: 03	Kiwi Property No. 2 Limited	Opposes the use of multi-lane roundabouts and instead prefers signalised intersections. That the extent of the designation boundary of NOR D1 be reviewed and reduced.	A multi-lane roundabout is proposed at Oira/Karaka Road. I consider that the intersection form is appropriate and consistent with applicable standards and guidelines, however a signalised intersection may also be an appropriate design. I consider that the design of the intersection is a matter for the Waka Kotahi to determine, and that the NoR does not preclude a signalised intersection being constructed. The designation footprint referred to by the submitter relates to constructability. I consider that the extent of the designation boundary is a matter for the Applicant to determine.	No action for Council
NoR D1: 04	Oyster Capital	Transport: Opposes the use of multi-lane roundabouts and instead prefers signalised intersections. Seeks that the designation boundary is reviewed and reduced.	Refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	
NoR D1: 05	Drury South Limited	Confirm the designation subject to resolving DSL concerns, primarily ensuring that the SH22/Great South Road upgrades are sufficient to accommodate future traffic demands.	The submitter is concerned that the Karaka Road/Great South Road intersection may not accommodate traffic flows if Mill Road and/or the Pukekohe expressway are delayed. I raised similar concerns in my S92. The Applicant contends that this is a matter for the road controlling authority, and that the Applicant carries the risk should the designation not be sufficient. Refer to my discussion in Section 3.2.	No action for Council, refer to my discussion in Section 3.2
NoR D1: 07	Lomai Properties Ltd	Supports the NoR and seeks ongoing engagement with Waka Kotahi throughout the project, and at OPW stage, particularly for traffic, noise and vibration.	I agree that ongoing engagement with affected land owners is required. Refer to my discussion in Section 3.3.	Refer to my discussion in Section 3.3
NoR D1: 08	Fletcher Residential Limited	Opposes the use of multi-lane roundabouts and instead prefers signalised intersections. That the extent of the designation boundary of NOR D1 be reviewed and reduced.	Refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	
NoR D1: 11	Karaka and Drury Limited	Supports the NoRs but concerned with the form and location of intersections and consistency with Plan Change 51 and structure plan	I am familiar with the Plan Change 51 application, as I am acting as Council's Transport expert. As Plan Change 51 has not been approved it carries no statutory weight. Therefore, the NoR is not required to allow for the intersections to SH22 that are proposed as part of Plan Change 51.	No action for Council, the submitter should liaise directly with the applicant

NoR D1: 12	Kāinga Ora Homes and Communities	<p>Seeks that the spatial extent of the NoR is reviewed and refined to minimise the extent of affected land.</p> <p>Seeks the provision of suitable pedestrian and/or cyclist access to avoid severance effects.</p>	<p>The designation footprint referred to by the submitter relates to constructability. I consider that the extent of the designation boundary is a matter for the Waka Kotahi to determine.</p> <p>I agree with the submitter that the design for the designation lacks pedestrian/cyclist crossing points, however I consider that to do so requires an understanding of surrounding land uses, which are yet to be determined along the majority of the corridor.</p> <p>I consider that the Urban and Landscape Design Management Plan condition included within each NoR is sufficient to ensure that pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses will be considered and provided at OPW stage.</p>	No action for Council
NoR D2: Jesmond to Waihoehoe West				
NoR D2: 03	Bruce Stuart-Menteath	<p>Concerned with scale of works, demand for Jesmond as an arterial road, loss of property value, impact on soils, consistency with Auckland Council policies on climate change</p>	<p>The Drury Opāheke Structure Plan ITA provides the background evidence for the need for the arterial roads included in NoR D2. I seek Council's Planner's view on whether property values, soils, and consistency with climate change policies have been adequately considered by the Applicant.</p>	No action for Council on transport matters
NoR D2: 04	Ischtar Toomey	<p>Seeks to 'abandon this insane proposal', in part because it does not resolve the ongoing transport issues and will only create further congestion.</p>	<p>The Drury Opāheke Structure Plan ITA provides the background evidence for the need for the arterial roads included in NoR D2.</p>	No action for Council

<p>NoR D2: 05</p>	<p>Melanie Jane Hendricksen, Kerry Dean Hendricksen and Warwick Lyndon Bremner</p>	<p>Remove the dogleg in the proposed designation boundary where it extends through the block of land bordered by Creek Street, Bremner Road and Firth Street, Drury (primarily Lot 1 DP 495426), to enable an accessway from Creek Street to be reinstated.</p>	<p>I agree with the submitter that the designation will affect access to their property. The design drawing provided by the Applicant indicates that access to the northern roller door and western accessway to Creek Street may be able to be retained. I recommend that the Applicant address access matters raised by the submitter.</p> <p>I support the Submitters request. During my review I raised queries about how affected land owners would have the opportunity for input once the designation was confirmed. Particularly where existing/planned/consented vehicle accesses might be affected by turning restrictions.</p> <p>Submitters diagram showing access to the “Central Building”</p>  <p>Applicant’s design for Bremner Road</p> 	<p>Refer to my discussion in Section 3.3 and Section 4.1.</p>
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NoR D2: 06	Kiwi Property No.2 Limited	Amend alignment to align with the location of the Drury Central train station. That the extent of the designation boundary of NOR D2 be reviewed and reduced. Reduce the northern extent of designation for the Waihoehoe Road West FTN, amend the design of the Waihoehoe Road, Fitzgerald Road and Opāheke N-S FTN from a roundabout to a signalised intersection and amend designation extent at this intersection.	NoR D2 does not provide for the Drury Train Station. SG has advised that the rail station and Fitzgerald Rd closure will be covered by a future NoR. I do not consider the NoR D2 requires realignment to integrate with the Train Station. My expectation is that Plan Change 48 and the future NoR for the Train Station will address integration between the station and Waihoehoe Road. Regarding the extent of designation and the form of intersections, refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	No action for Council
NoR D2: 07	Oyster Capital	Reduce the northern extent of designation for the Waihoehoe Road West FTN Amend the design of the Waihoehoe Road, Fitzgerald Road and Opāheke N-S FTN from a roundabout to a signalised intersection and amend designation extent at this intersection. That the extent of the designation boundary of NOR D3 be reviewed; and Schedule 1 of the proposed conditions of NOR D3 be amended following review of the extent of the designation boundary, including whether additional land is required at the Waihoehoe Road and Drury Hills Road intersection.	Regarding the land take from the north vs a more even take from north and south, the Applicant addressed the optioneering for this in their application. No further comment needed from Council. Regarding the intersection design and extent of designation, refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited. Regarding the Waihoehoe Road and Drury Hills Road intersection design, refer to my discussion in Section 3.9.	Refer to my discussion in Section 3.9
NoR D2: 08	David Bratton Saggs	Seeks maintenance of transport access to their properties throughout the works, additional access by completing formation of Cameron Road, compensation for development costs.	Landowners of 7 Norrie Road and 239-245 Great South Road. I support the Submitters request. During my review I raised queries about how affected land owners would have the opportunity for input once the designation was confirmed. Particularly where existing/planned/consented vehicle accesses might be affected by turning restrictions.	Refer to my discussion in Section 3.3
NoR D2: 10	Gleeson Contractors Ltd	Seeks that their property is excluded from the designation extent.	Transport evidence for the arterial road is provided in the Drury Opāheke Structure Plan ITA. The alignment and extent of footprint for the designation is a matter for the Applicant to consider.	No action for Council
NoR D2: 11	Lomai Properties Ltd	Supports the NoR and seeks ongoing engagement with Waka Kotahi throughout the project, and at OPW stage, particularly for traffic, noise and vibration.	Refer to my response to submissions NoR D1: 07 Lomai Properties	
NoR D2: 12	Fletcher Residential Limited	Reduce the northern extent of designation for the Waihoehoe Road West FTN Amend the design of the Waihoehoe Road, Fitzgerald Road and Opāheke N-S FTN from a roundabout to a signalised intersection and amend designation extent at this intersection. That the extent of the designation boundary of NOR D3 be reviewed; and Schedule 1 of the proposed conditions of NOR D3 be amended following review of the extent of the designation boundary, including whether additional land is required at the Waihoehoe Road and Drury Hills Road intersection.	Refer to my response to submission NoR D2: 07 Oyster Capital	
NoR D2: 13	Lyndsay Sutton	Have Tui Street meet up with Sutton Road and run parallel with the railway track.	Support in part, I raised concerns about the Tui St realignment as part of my review. The submitters proposed solution would require land take from AC (Drury Domain) plus others, and would require further assessment to determine feasibility. Refer to my discussion in Section 3.7.	Support in part. Refer to my discussion of Tui Street in Section 3.7 of this report

NoR D2: 17	Elly Pan and Benjamin Bann Chong Bong	Make provision for local road connections to the Future Road as indicated by Precinct Plan 2 in the Drury 1 Precinct, and confirm the location of the local road on the submitter's site connecting with the Future Road. Delete the proposed fill between Chainage 320 and 520 so that this section of road is the same level as the adjoining road.	I consider that NoR D2 does not preclude the local roads indicated by the submitter. Given the location of these local roads is still to be confirmed, it would be premature to include them within the NoR. I queried how the relative level of the future road could affect access/development of adjacent land, refer to my discussion in Section 3.4 of this report.	Refer to my discussion in Section 3.4 of this report
NoR D2: 18	The Drury and Districts Rugby Football and Recreation Club	Seeks a decision that improves access and provision of parking Tui Street, and clearly defines how north and south bound access will be provided to Tui Street.	Support in part, I raised concerns about the Tui St realignment as part of my review.	Refer to my discussion of Tui Street in Section 3.7 of this report
NoR D2: 23	Josephine Kleinsman	Transport: Move the boundary of the proposed designation south to achieve an equal land take from both sides of the road reserve Unclear, but appears to be concerned that right turn facilities from eastbound Waihoehoe Road south to PC48 land benefits the PC48 site.	Regarding land take from the north vs a more even take from north and south, the Applicant addressed the optioneering for this in their application. No further comment needed from Council. Regarding the "flush median", this is more likely to be a raised median and is a standard feature of the downstream section of a right turn lane at a signalised intersection. No further comment needed from Council.	No action for Council
NoR D2: 24	Kāinga Ora Homes and Communities	Seeks that the spatial extent of the NoR is reviewed and refined to minimise the extent of affected land. Seeks the provision of suitable pedestrian and/or cyclist access to avoid severance effects.	Refer to my response to submission NoR D1: 12 Kāinga Ora Homes and Communities.	
NoR D2: 25	Ministry of Education	Seeks changes to transport conditions to require an engagement process with affected landowners to provide opportunities for input into the management of localised traffic effects	I support the Submitters request. During my review I raised similar queries about how affected land owners would have the opportunity for input once the designation was confirmed. Particularly where existing/planned/consented vehicle accesses might be affected by turning restrictions.	Refer to my discussion in Section 3.3
NoR D3: Waihoehoe Road East				
NoR D3: 01	Godfrey and Ana White	We seek to have the existing concrete drive that services our home preserved, or alternatively modified to provide a practical alternative access to the existing dwelling. We seek to be able to continue to operate the existing detached garage as a fruit outlet shop with an appropriate in and out access together with existing on site parking.	I support the Submitters request. During my review I raised similar queries about how affected land owners would have the opportunity for input once the designation was confirmed. Particularly where existing/planned/consented vehicle accesses might be affected by turning restrictions.	Refer to my discussion in Section 3.3
NoR D3: 02	Kiwi Property No.2 Limited	That the extent of the designation boundary of NOR D3 be reviewed and reduced; and That Schedule 1 of the proposed conditions of NOR D3 be amended following review of the extent of the designation boundary.	Refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	

NoR D3: 03	Oyster Capital	<p>Confirmation that Waihoehoe Road (east of Fitzgerald Road) to Drury Hills Road will be a collector, or if the arterial standard is retained, confirmation that vehicle access to properties will not be unduly restricted</p> <p>That the design of the proposed Waihoehoe Road-Drury Hills Road intersection (including spatial extent within the proposed designation) be reviewed to confirm whether additional land may be required to accommodate corner rounding which is provided for in the design of all other intersections within NoR D3.</p> <p>That the extent of the designation boundary of NOR D3 be reviewed; and Schedule 1 of the proposed conditions of NOR D3 be amended following review of the extent of the designation boundary, including whether additional land is required at the Waihoehoe Road and Drury Hills Road intersection.</p>	<p>I understand the Waihoehoe Road (east of Fitzgerald Road) will be an arterial road. In Section 3.12 of this report I recommend that Council's Planner consider when and how the Auckland Unitary Plan Arterial Road Control will be applied.</p> <p>Regarding the Waihoehoe Road-Drury Hills Road intersection and extent of the designation boundary, refer to my response to submission NoR D2: 07 Oyster Capital.</p>	Refer to my discussion in Section 3.12 of this report
NoR D3: 04	Gail Spencer	That the proposed roundabout at the intersection of Waihoehoe Road (East)/Appleby Road/Fielding Road be moved to another location, such as further north, to reduce adverse effects on property at 272 Waihoehoe Road; and/or reduce the extent to which the designation's boundaries and spatial extent encroaches upon 272 Waihoehoe Road to accommodate construction and operational activities	In my view realigning the deviation of the Waihoehoe Road alignment would create a less efficient long term layout. I recommend that the Applicant respond to the submitter's request.	No action for Council
NoR D3: 07	Kiwon and Kihae Pak	Shift the roundabout and widening of Waihoehoe Rd towards the northern side of the road so that our house and land at 26A Fielding Road is not impacted (this follows in line with the proposed road upgrade which states the road widening will generally be on the northern side of the road).	Refer to my response to submission NoR D3: 04 Gail Spencer.	
NoR D3: 08	Fletcher Residential Limited	As per relief thought by submission NoR D3: 03 Oyster Capital.	Refer to my response to submission NoR D3: 03 Oyster Capital	
NoR D3: 09	Fulton Hogan Land Development	<p>Amend and reduce the proposed designation boundary to minimise the required land take, and reflect the actual and reasonable area of land that is needed to accommodate the appropriate future design for Waihoehoe Road. This must take into account of the final Mill Road alignment.</p> <p>Amend the designation boundary to specifically define the area of land that is required for the road, and separately define the area of land which is required only for temporary occupation for the construction of the road. Land not required for either of these purposes should be removed from the proposed NOR.</p> <p>That the design of the proposed Waihoehoe Road-Drury Hills Road intersection (including spatial extent within the proposed designation) be reviewed to confirm whether additional land may be required to accommodate corner rounding which is provided for in the design of all other intersections within NoR D3.</p> <p>Amend the proposed design of the Waihoehoe Road, Appleby Road and Fielding Road roundabout and the Waihoehoe Road and Cossey Road roundabout to signalised intersections.</p>	<p>Regarding the extent of designation, refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.</p> <p>Regarding the alignment of Mill Road, I understand that this will be the subject of a future NoR, therefore the final alignment is yet to be determined.</p> <p>Regarding the Waihoehoe Road-Drury Hills Road intersection, refer to my response to submission NoR D2: 07 Oyster Capital.</p> <p>Regarding the design of intersections as roundabouts or signalised intersections, refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.</p>	
NoR D3: 11	Kāinga Ora Homes and Communities	<p>That the spatial extent of the NoR is reviewed so that it may be refined to minimise the extent of effected land, or methods are introduced to ensure that land set aside for construction staging does to compromise efficient land use development. in the meantime. Only the area of land required for construction and infrastructure should be included in the NoR</p> <p>That the gradient of land adjoining the road corridor should be reviewed and minimised to ensure:</p> <ol style="list-style-type: none"> i. safe pedestrian and vehicular access can be provided to the adjoining sites, following the completion of construction; and ii. no adverse effects associated with potential stormwater runoff from roads to adjoining sites. <p>The provision of suitable pedestrian and/or cyclist access across the proposed arterial should be reviewed and included to avoid severance effects between land on either side of the arterial.</p>	Refer to my response to submission NoR D1: 12 Kāinga Ora Homes and Communities.	

NoR D4: Opāheke North-South FTN Arterial				
NoR D4: 01	Kiwi Property No.2 Limited	That the use of multi-lane roundabouts within NOR D4 be reviewed, with signalised intersections considered to be a better option in terms of road safety That the extent of the designation boundary of NOR D3 be reviewed; and Schedule 1 of the proposed conditions of NOR D4 be amended following review of using multi-lane roundabouts and the extent of the designation boundary	Refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	
NoR D4: 02	Oyster Capital	Amend NOR D4 so that it does not apply to Oyster's land interest at 116, 136 and 140 Waihoehoe Road. If this is not accepted, then amend NOR D4 as per submission points below Reduce the 30m wide road cross section to the 27m wide cross section shown in Attachment 2 to the submission and only include land area necessary for the works.	As this is a design issue, the Applicant should consider the submitters request rather than Council.	No action for Council
NoR D4: 03	Drury South Limited	Seeks confirmation that the Notice of Requirement is: (a) well integrated with surrounding land uses and the wider transport network; and (b) sufficient to accommodate future traffic demand, including its role within the regional freight network, if the New Zealand Upgrade Programme projects (eg Mill Road Corridor) are delayed or do not go ahead; and (c) implemented and responds appropriately to the timing, scale and form of urban development in the area.	Refer to my response to submission NoR D1: 05 Drury South Limited.	
NoR D4: 05	Brian Park	The extent of the Opaheke North-South FTN Arterial is too limited. The alignment should be extended south along Fitzgerald Rd to SH1 and north to Dominion Road, as shown in submission i.e. this should be the Mill Road alignment	Matter of scope – the extents of arterial roads are evidenced in Drury Opāheke Structure Plan.	No action for Council
NoR D4: 08	Asahi Beverages (NZ) Ltd	That the NoR section shown on Sheet SGA DRG-STH-004 CI5101, Rev E, dated 27.1.2021, be refused as there is insufficient information provided as part of NOR 04 to understand the nature and magnitude of potential effects on the Site. The Site needs to be able to operate throughout the entirety of the construction of the Project, and there is no information as to how the applicant will address the construction effects so as to ensure that can occur. There is no information available as to any carparks lost as part of any land take or driveway and access reconfiguration will be provided. There is no information about whether or not there will be any restrictions on right turns in or right turns out of the Site. Based on the information available, it appears that there will direct impacts on site access, on-site carparking, potential relocation and regrading of driveways, and effects on boundary landscaping and fencing. There may be other effects that become evident as more information becomes available. The effects have not been appropriately avoided, remedied or mitigated, and approving the NOR D4 will therefore not give effect to Part 2, Resource Management Act 1991.	I support the Submitters request. During my review I raised similar queries about how affected land owners would have the opportunity for input once the designation was confirmed. Particularly where existing/planned/consented vehicle accesses might be affected by turning restrictions.	Refer to my discussion in Section 3.3
NoR D4: 10	Mr Ken and Mr Aaron Davidson	Transport - Temporary access loss: it is acknowledged that there may be no access to the site during brief periods of road construction, as cited on page 340 of the AEE. Our clients request that this be limited to the hours of 5:00 pm to 6:00 am on Weekdays days.	I support the Submitters request. During my review I raised similar queries about how affected land owners would have the opportunity for input once the designation was confirmed. Particularly where existing/planned/consented vehicle accesses might be affected by turning restrictions.	Refer to my discussion in Section 3.3
NoR D4: 11	Kāinga Ora Homes and Communities	As per relief sought for submission 11 on NoR D3	Refer to my response to submission NoR D3: 11 Kāinga Ora Homes and Communities	

NoR D5: Ponga Road and Opāheke Road Upgrade				
NoR D5: 02	Mr Harvey Ronald Joshua Paltridge	Refrain from any use of my property, 56 Opāheke Road, prior to, during and after, the proposed period of construction. If it was to be used, driveway on council side to be repoured at project completion. Driveway within property to be repoured at project completion. A complete landscaping of the area under designation including leveling of lawns, all bare areas re top-soiled, re-seeded and watered at the cost of Auckland Council and/or Waka Kotahi NZ Transport Agency, to a design agreed to by myself [Mr Harvey Ronald Joshua Paltridge]. Full compensation for any damage to property including but not limited to; water pipes, storm water, house exterior and settling of land during this period, causing damage to house and/or property. Footing of house to be inspected prior to project commencement, and after completion of project. In which case, any damage, change, or settling in this period must be rectified and repaired at the cost of party/parties involved in co-coordinating the project, which for the purpose of this submission is Auckland Transport and Waka Kotahi NZ Transport Agency	Support in part, I consider that the Applicant should ensure that existing accessways are reformed/regraded/reconstructed as necessary to provide a tie in to the project works.	Refer to my discussion in Section 3.3
NoR D5: 03	Kiwi Property No.2 Limited	That the extent of the designation boundary of NOR D5 be reviewed; and Schedule 1 of the proposed conditions of NOR D5 be amended following review of using multi-lane roundabouts and the extent of the designation boundary	Refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	
NoR D5: 04	Oyster Captial	That the extent of the designation boundary of NOR D5 be reviewed; and Schedule 1 of the proposed conditions of NOR D5 be amended following review of using multi-lane roundabouts and the extent of the designation boundary	Refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	
NoR D5: 06	Hayes Family Trust	"(a) That my property at 174 Opaheke Road be excluded from the Notice of Requirement and an alternative route identified; (b) That provision for access to my property, protecting my ability to subdivide now be identified; (c) That the Public Works Act acquisition process now be commenced; and (d) Such other consequential relief as may be necessary to recognise these concerns"	The transport evidence for the link alignment, including alternative route options, is provided in the Drury Opāheke Structure Plan ITA. Regarding property access, the Drury Opāheke Structure Plan ITA does not indicate future collector roads in this location. The submitters property is largely locked from alternative access due to the flood plain and rail line. Future access is limited to Opāheke Road, and this may be affected by the change in the relative level of the road as it approaches the rail overbridge. I queried whether future access to 174 Opāheke Road could be achieved. SG responded that "The Project Team confirm that the existing access to 174 Opāheke Road can be regraded on its current alignment and tie into the upgrade Opaheke Road. Approach sight distance and safe intersection sight distance can be achieved. We are preparing a new condition which will be on all of the proposed designations. The Outline Plan will need to demonstrate that any access that is altered by the project provides safe access for those properties" ⁹ At the time of writing this report, a condition has not been provided by SG.	Refer to my discussion in Section 3.3 and Section 4.1.
NoR D5: 08	Fletcher Residential Limited	That the extent of the designation boundary of NOR D5 be reviewed; and Schedule 1 of the proposed conditions of NOR D5 be amended following review of using multi-lane roundabouts and the extent of the designation boundary	Refer to my response to NoR D1: 03 Kiwi Property No. 2 Limited.	

⁹ Memo: Information after Council Workshop 15 July 2021, received from Helen Hicks Helen.Hicks@supportinggrowth.nz, Mon 26/07/2021 10:06 PM

NoR D5: 09	Aaron Abercrombie	The significant changes being made need to fully considered in relation to the approved Masterplan Concept and our integrated development scheme. We specifically note that there is a proposed round-a-bout at the intersection of Bellfield Rd and the main entrance (Otuwairoa Esp) to our property at 131 Opāheke Road. We need to fully understand the design requirements of the proposal, impacts of timing of the works, construction methodology, ongoing accessibility the impact on our “Neighbourhood Centre” lot which borders Bellfield Rd/Otuwairoa Esp. The Neighbourhood Centre is a critical element in providing amenity to the Bellfield Estate Subdivision and as such any impacts will need top be fully understood and mitigated Furthermore, we note that there are proposed works to be carried out within Opāheke Park, these appear to be related to storm water works. Bellfield Estate Ltd has a Development Agreement with Auckland Council and we need to ensure that nothing from your proposed works, impacts the current approved design or the contracted legal obligations under the agreement. These obligations have significant financial, timing and legal implications as between ourselves and Auckland Council therefore we need to be fully consulted in respect to any matters that impact Opāheke Park.	The designation boundary appears to be limited to the existing legal road, however it is not clear how the design might affect access to the retail centre. From discussions with SG I understand that they have had direct discussions with the submitter, and that access to the future “Neighbourhood Centre” is not affected by NoR D5. I Flow raised similar queries about how affected land owners would have the opportunity for input once the designation was confirmed. Particularly where existing/planned/consented vehicle accesses might be affected by turning restrictions. I understand that SG has since had discussions with the submitter and that the submitter considers that the neighbourhood centre is not affected by the roundabout ¹⁰ .	Refer to my discussion in Section 3.3
NoR D5: 11	Gordon Mackay	I would object to any upgrade of Opāheke which purports to become a feeder road through Papakura residential areas for the benefit of the huge Drury/Ramarama developments. It would be inappropriate to denigrate the Papakura residential areas by directing large volumes of traffic through Papakura residential streets. The new developments should have their own access roads to the motorway and not through Papakura residential existing streets.	The Drury Opāheke Structure Plan ITA provides the background evidence for arterial roads.	No action for Council
NoR D5: 12	Kāinga Ora Homes and Communities	As per relief sought for submission 11 on NoR D3	Refer to my response to submission NoR D3: 11 Kāinga Ora Homes and Communities	
NoR D5: 14	Brian Park	As per relief sought for submission 05 on D4	Refer to my response to submission NoR D4: 05 Brian Park	

¹⁰ Memo: Information after Council Workshop 15 July 2021, received from Helen Hicks Helen.Hicks@supportinggrowth.nz, Mon 26/07/2021 10:06 PM

Table 2: Local Board feedback

Franklin Local Board feedback (Resolution number FR/2021/93)	Flow comment	Status
<p>The requirement area on State Highway 22 should include sufficient land area to facilitate future treatment of critical intersections including at Great South Road, the intersection of Burberry Road, Jesmond Road and Oira Road</p>	<p>Drawing SGA-DRG-STH-004_CI-6101 allows for the upgrade of the SH22/Great South Road intersection to a multi-lane signalised intersection. I consider that this addresses the Local Board's feedback.</p> <p>Drawing SGA-DRG-STH-004_CI-6103 allows for the upgrade of the SH22/Jesmond Road intersection to a multi-lane signalised intersection. I consider that this addresses the Local Board's feedback.</p> <p>Drawing SGA-DRG-STH-004_CI-6104 allows for the upgrade of the SH22/Oira Road intersection to a multi-lane roundabout. I consider that this addresses the Local Board's feedback.</p> <p>Drawing SGA-DRG-STH-004_CI-6102 shows the existing intersection of SH22/Burberry Road intersection being maintained. Section 6.2.1.1 of the Assessment of Transport Effects identifies that this intersection has a poor safety record, with one fatal crash and one serious injury crash within the ten year period between 2010 and 2019, despite Burberry Road only having approximately 100 vehicle movements per day.</p> <p>Plan Change 51 proposes to close Burberry Road intersection. As Plan Change 51 has not been approved it carries no statutory weight. Therefore, the NoR is not required to allow for the intersections to SH22 that are proposed as part of Plan Change 51.</p> <p>Should the existing Burberry Road intersection with SH22 remain at the time of construction of NoR:D1, I anticipate that Waka Kotahi will undertake a road safety audit of the project (as is common practice) and address any safety issues at the existing intersection.</p>	<p>No action for Council</p>
Papakura Local Board feedback (Resolution number PPK/2021/112)	Flow comment	Status
<p>The board believe if four lane arterials are proposed, plans should be put in place now for the designation to include slip roads for future developments similar to that on Te Irirangi Drive</p>	<p>I consider slip lanes do not need to be identified as part of the NoRs. Much of the future land uses adjacent to the NoR corridors are yet to undergo detailed planning, therefore access locations onto the corridors are yet to be determined. I consider that the NoRs do not preclude future access (refer to my discussion in Section 3.4). At the time of the future Outline Plan of Works, intersections to allow local access can be included where the location of these has been agreed between the requiring authority, Council and developers.</p>	<p>No action for Council</p>
<p>The board has concerns about the proposal to change the currently signalised Opāheke Road and Settlement Road intersection into a roundabout. The board believes the volumes of traffic on Settlement Road will not allow the Opāheke Road traffic to cross the intersection and vice versa once development occurs in Opāheke</p>	<p>My review of the traffic modelling used to support NoR D5 did not identify the issue raised by the Local Board. Further, the NoR does not lock in the final form of this intersection. I anticipate that Auckland Transport will further assess the appropriateness of a roundabout as part of the future Outline Plan of Works</p>	<p>No action for Council</p>
<p>The board requests Auckland Transport further investigate solutions for the Drury Domain car park. The board notes that the topography of this location is significantly higher than the rugby club, the library, the community hall and cenotaph. The board therefore requests that this also be taken into consideration at design stage in order to provide easy multi-modal access to these facilities</p>	<p>I support the Local Board's comments, refer to my discussion in Section 3.7.</p>	<p>Refer to my discussion in Section 3.7.</p>
<p>The board has concerns about the proposed left only turn when travelling south into Tui Street and left only out of Tui Street as many users of the Domain come from different directions and questions how these people will easily and safely access Tui Street. This would force people to do a u-turn manoeuvre if wishing to head north coming out of Tui Street.</p>		
<p>The board requests the Parks and Community Facilities staff explore potential mitigation options, taking into account that it would require relocating the existing playground to another location within the Drury Domain and that any costs for this relocation to be borne by the applicant</p>		

Drury Arterial Network


Review of Construction and Operational Noise and Vibration Assessments

Report No 20057.4

Prepared for:
Auckland Council

September 2021

Prepared by:



Rhys Hegley

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1. INTRODUCTION

Auckland Transport and Waka Kotahi New Zealand Transport Agency have lodged notices of requirements (NoRs) to alter an existing designation and to introduce new designations for future strategic transport corridors to support the planned urban growth in the Drury-Ōpāheke area of Auckland. Cumulatively, the NoRs are referred to as the Project which is proposed by the Supporting Growth Alliance (SGA).

The NoRs are outlined below:

- a) D1 Alteration to Waka Kotahi designation 6707 - SH22 (NZTA):
- b) D2 Jesmond to Waihoehoe West Frequent Transit Network (FTN) Upgrade (AT)
- c) D3 Waihoehoe Road East Upgrade (AT)
- d) D4 Ōpāheke North- South FTN Arterial (AT)
- e) D5 Ponga Road and Ōpāheke Road Upgrade (AT)

This report provides a technical review of the assessments that accompanied the NoRs for noise and vibration from the construction of the Project and its subsequent operation.

2. SCOPE OF REVIEW

This report provides a review of the noise and vibration assessments supplied by the applicant for the construction of, and subsequent operation of, each of the five proposed corridors. The review has considered:

1. The Construction Assessment (CA) 'SGA-004-AEE-RPT- Assessment of Construction Noise and Vibration Effects';

2. The Operational Assessment (OA) 'SGA-004-AEE-RPT- Assessment of Traffic Noise and Vibration Effects';
3. A virtual meeting with SGA to discuss the above two reports;
4. A 'Completeness Review' of the above documents prepared by Hegley Acoustics, dated February 2021;
5. The 'SGA Review Response' to the above, SGA-004-NOR-LET-Drury Arterial Network s92 Response;
6. A virtual meeting with SGA addressing the response;
7. The conditions proposed for the five designations, NOR D1 Form 18 through NOR D5 Form 18; and
8. A meeting with SGA to discuss the wording of conditions.

3. REVIEW OF CONSTRUCTION NOISE EFFECTS

SGA have applied a broad-brush to assess construction noise effects. After providing a description of the anticipated construction activities and associated plant for each of the designations, the analysis focuses on a plate compactor operating at the designation boundary. The resulting noise levels to the existing houses were first calculated without any mitigation and then re-calculated on the basis that a boundary noise wall would offer a 10dB reduction in level. The number of houses that are predicted to exceed the 70dB L_{Aeq} limit for construction noise were summed and the upper most level is also reported, as summarised below.

Table 1. Construction Noise Summary from the CA

NoR	CA Report section	Dwellings where construction noise exceeds 70dB L _{Aeq}	Upper Level of construction noise, dB L _{Aeq}
D1	6.2.1.2	22	75 - 80
D2	7.2.1.2	35	80 - 85
D3	8.2.1.2	7	75 - 80
D4	9.2.1.2	8	70 - 75
D5	10.2.1.2	57	75 - 80

Table 5-4 of the CA provides a description of noise effects that were prepared during mediation for the Northern Corridor Interchange. The relevant sections can be summarised as:

Table 2. Summary of Construction Noise Effects

Construction Noise Range, dB L _{Aeq}	Effect
70 to 75	Phone conversations would become difficult. Personal conversations would need slightly raised voices. Office work can generally continue, but 55 dB is considered by the experts to be a tipping point for offices. For residential activity, TV and radio sound levels would need to be raised.
75 to 80	Continuing office work would be extremely difficult and become unproductive. In a residential context, people would actively seek respite.

Construction Noise Range, dB L_{Aeq}	Effect
80 to 90	Untenable for both office and residential environments. Unlikely to be tolerated for any extent of time.

From the above it can be concluded that, across the various designations, up to 129 dwellings would expect adverse effects to some degree and that of those, significant effects (75 – 80dB L_{Aeq}) could be expected by the occupants of 86 dwellings with a further 35 dwellings experiencing levels that would be intolerable for any length of time (80 – 85dB L_{Aeq}).

Through Item 28(c) of the SGA Review Response¹, it is noted that no duration can be provided to these levels other than to note that each receiver would only be affected for part of the overall construction duration.

The above discussion relates to daytime activities only. Section 5.6.6 of the CA reports that night works are likely for each zone of the Project. However, no levels from this work are provided to neighbouring houses and, it follows, neither is an assessment of effects. In response to a Completeness Review query on this issue, SGA responded² that night works are expected to be rare and limited and that the majority of the works can take place during the daytime. It goes on to note that should night works be necessary they would be managed by an appropriate Schedule.

The CA provides no indication of what night works may be necessary, who might be affected and to what degree (level and duration). The approach being relied upon through the conditions is for the contractor to address later.

¹ Dated 7 April 2021

² Reference 16, SGA- 004-NOR-LET-Drury Arterial Network s92 Response Letter

As a minimum, I suggest a further condition that limits night work to that which cannot be undertaken during the daytime, to differentiate it from simply working at night. I suggest:

Night work that will result in noise levels in excess of those described in Table 18.1 shall be limited to activities where it can be demonstrated that, for traffic safety reasons, cannot be undertaken during the daytime.

In terms of assessing effects, it is necessary to understand the level of noise that those neighbouring the various designations could expect and the duration of those levels. SGA have, through the CA, the SGA Review Response and during our two meetings noted the difficulties in providing such detailed information due to the fact that the proposal is for the establishment of the designations rather than for the road construction. As a result, there is very little detail on how the Project will actually be constructed and, therefore, correspondingly little information on the resulting noise effects. In short, the noise effects from the construction of the Project have been assessed in general terms rather than in detail.

This issue is common to most assessments of construction effects as the noise effects are generally required during the consenting phase of the project and therefore precede the detailed design phase, which provides the information necessary for the assessment. It is reported that this Project suffers more than most, as it is for route protection only.

The CA satisfies its requirement to provide a general understanding of effects but does not provide the more detailed assessment that is needed to determine what the actual effects might be to neighbours. SGA are fully aware of this and throughout the CA, propose to address this matter by firstly reassessing the individual projects again at the time of construction (section 5 of the CA) and through the adoption of a Construction Noise and Vibration Management Plan

(CNVMP). I have reservations regarding this approach, as it would provide the Project with a designation on the basis that any noise issues could be addressed later without confirmation that this was in fact, likely to be the case.

The only manner in which I can foresee such an approach being successful is through relatively well-defined conditions. In reviewing those proposed by SGA, I note that:

1. Proposed Construction Noise Standards Conditions for NoRs D1-D5:
 - a. provide objective limits for construction noise to comply with, unless it is not practicable to do so; and
 - b. state that where it is not practicable to comply with the stated limits and the exceedance is not permitted by a Construction Noise and Vibration Management Plan (CNVMP), a Schedule to the CNVMP is required.
2. The CNVMP Schedule Condition for NoR D1 describes the requirements of the Schedule, calling for it to provide a description of the activity including a prediction of levels. There is, however, no requirement to assess the resulting effects. Further, the Schedule is only provided to the Manager (Resource Consents of the Auckland Council, or authorised delegate) for information, rather than approval.

When read together, the above approach in relation to NoR D1 provides little certainty as to what is being consented as it largely leaves the assessment of construction noise to the CNVMP stage. I note that this approach would remove the input from submitters.

If the WK approach for NoR D1 is to be adopted, I support a change to the CNVMP Schedule Condition for NoR D1 requiring Council certification of CNVMP Schedules.

On a separate matter, the proposed construction noise standards conditions for NoRs D1-D5 refer to 'activity sensitive to noise'. This term is not defined by NZS 6806 and have consequently included a definition at the beginning of the conditions which has been adopted in the Auckland Unitary Plan that states:

Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centres, lecture theatres in tertiary education facilities, classrooms in education facilities and healthcare facilities with an overnight stay facility.

4. REVIEW OF CONSTRUCTION VIBRATION EFFECTS

The CA assessment of construction vibration follows the same general approach as construction noise and my comments are therefore similar.

In total, the assessment predicts exceedance of the damage protection threshold of DIN 4150 for 83 sites. In section 29 of the SGA Review Response, it is noted that exceedance of the DIN limits does not necessarily mean that damage will occur, which I agree. It is also noted that serious effects (structural damage) are not anticipated.

Without repeating my comments of section 3 above in detail my concern with construction vibration is that the CA does not provide a reasonable level of certainty, either through an explanation of the likely effects on neighbours or through appropriate conditions to address this issue.

With respect to the Construction Vibration Standards and CNVMP Conditions for NoRs D1-D5, they do not not make it clear how the two criteria (A and B) are to be applied and the path to be followed should they be exceeded. Consequently, amendments have been recommended to the aforementioned Conditions and associated CNVMP Schedule Conditions for NoRs D1-D5 to provide the clarity sought.

The notified CNVMP Conditions for NoRs D1-D5 provided the requirement for pre and post condition surveys of buildings that could potentially be affected by vibration but there is no condition stating where the obligations to remediate any damage fall. I am unable to comment on the advice offer by SGA during a meeting on conditions that remediation was a civil matter rather than a RMA matter and therefore does not require conditioning.

5. REVIEW OF OPERATIONAL NOISE

The assessment of operational road traffic noise has been undertaken in accordance with NZS 6806: 2010 'Acoustics – Road-traffic Noise – New and Altered Roads' (NZS 6806). My view is that this generally represents current best practice and I support its use. Through my Completeness Review and subsequent meeting, I raised several points, which I complete below.

5.1 BPO

I queried SGA on their application of the Best Practical Option with regards to the mitigation of operational noise. The reason for this query was with respect to the reverse sensitivity issues that invariably arise between roads and the residential use that surrounding them which, for the Project is mainly an anticipated future use.

Reverse sensitivity in this case, has the potential to arise as a result of the difference between the criteria of NZS 6806 that SGA has adopted for its analysis and the levels that are generally considered to be appropriate for residential amenity. Section 4.1.2 of the OA sets of the criteria of NZS 6806 as follows. The criteria are graduated and NZS 6806 directs that where consistent with the BPO, that criteria be adopted.

Table 3. NZS 6806 Criteria (Measured at Dwelling Façade)

Category	Criterion	Altered Road	New Roads
A	Primary	64dB $L_{Aeq(24h)}$	57dB $L_{Aeq(24h)}$
B	Secondary	67dB $L_{Aeq(24h)}$	64dB $L_{Aeq(24h)}$
C	Internal	40dB $L_{Aeq(24h)}$	40dB $L_{Aeq(24h)}$

The reason for the altered road criteria being above those of new roads is given as existing roads were designed and constructed to the relevant standards of their time and there are often limited practicable opportunities to further mitigate adverse roar-traffic noise effects.

Recommended levels for residential amenity are provided within the NZTA 'Guide to management of effects on noise sensitive land use near to the state highway network' as:

- Internal limit of 40dB $L_{Aeq(24h)}$ in residential dwellings; and
- 57dB $L_{Aeq(24hr)}$ outdoors.

It is generally accepted that a typical house façade with windows open for ventilation provides up to 17dB reduction on noise. An internal level of 40dB therefore equates to an external level of 57dB $L_{Aeq(24h)}$, which exceeds the 64 and 67dB external criteria of Table 3.

The difference between the potential level of road traffic noise and level desirable for residential amenity is relatively common around roads and with the accepted response being one of shared responsibility. The roading authority provides reasonable controls of noise at source while those moving into the area accept the remaining burden.

The Do-minimum noise contours provided within the OA for the various designations show noise levels in excess of 57dB $L_{Aeq(24hr)}$ extending well beyond

the road designation. There would be obvious benefit to the future residential environment from reducing road traffic noise (over and above the requirements of NZS 6806), which would be consistent with the requirements of Section 16 of the RMA that:

Every occupier of land ... shall adopt the best practicable option to ensure that the emission of noise from that land ... does not exceed a reasonable level.

Road noise is typically controlled at source through the selection of a low noise road surface and the use of barriers. In terms of efficacy, section 5.3.1 notes that the use of a stone mastic asphalt surface instead of the two coat chip seal present on many of the existing roads will provide a 4dB reduction in noise. Reductions available from barriers vary considerably depending on their layout, but can be up to 10dB. When comparing changes in noise level, a 3dB change is typically considered the smallest that the average person can detect while a 5dB change is clearly noticeable. A 10dB change represents an apparent halving, or doubling, in level.

In their response to my initial review, SGA noted that low noise surfaces are already proposed for the majority of the arterial roads, which would satisfactorily address the BPO approach.

The SGA response to the use of barriers (section 34) notes that their performance can be adversely affected by topography and that barriers can conflict with urban design requirements. I agree with these comments but note that, by themselves, neither reason appears to rule out the use of barriers. SGA went on to note that the openings in a barrier for driveways reduce their efficacy. I also agree with this in principle but am not aware of the access requirements to the various proposed roads. I remain of the view that if barriers are both practicable and offer a noticeable level of mitigation, their use should be considered as part of

the BPO and seek confirmation from SGA on the appropriateness of barrier mitigation across the NoRs.

It is my view that it is appropriate that the design of noise mitigation from the future roads takes into account the BPO, and I have recommended amendments to the relevant operational traffic noise BPO condition below which is common to all the NoRs.

1.1. Future Receiving Environment

The OA adopts the NZS 6806 definition of PPFs (noise receivers), which limits assessment to dwellings that are either already built or which have building consent but are not yet built. In my Completeness Review, I noted that the proposed NoRs differ from most roading projects in that they are integral with the development of the land surrounding them (for which residential is the predominant intended use). I queried whether there was merit in deviating from NZS 6806 by considering noise to the future receiving environment given it will be residential if the road is to be developed. This query was integrated with that of whether the Project is satisfying the BPO, which is discussed above.

Sections 34 and 35 of the SGA Review provide a response. SGA favour the NZS 6806 approach by noting that those moving next to the future roads will be aware of the road and will design the dwellings for the expected level of noise. I note that the Auckland Unitary Plan would not require those building next to the road to design for traffic noise and that there is the potential for the subsequent Plan Changes to include such provisions.

An issue I see with the SGA approach is that the noise contours reported in Appendix 4 of the OA are limited to 5dB bandwidths making some form of estimation of traffic noise level necessary for any new dwelling built between designation and construction. Further, the last paragraph of the OA's executive summary for each of the NoRs notes that reassessment of the road traffic noise

should be carried out nearer to the time of construction to determine the mitigation necessary to achieve the design criteria and any necessary BPO mitigation. This indicates that the current predicted noise levels may change between designation and construction.

Essentially, the designation's purpose of route protection does not provide sufficient information to allow confidence that the design of any dwellings built between designation and construction would achieve the agreed internal levels (without significant factors of safety added). It would therefore be useful for SGA to provide an explanation on how they expect such future dwellings to take account of traffic noise.

One option would be for the requiring authority to address all dwellings present at the time of the detailed design rather than the currently proposed time of designation. Adopting this approach would be unlikely to affect the viability of the route as NZS 6806 essentially limits itself to what is considered practicable for a residence meaning there is no hard limit whereby the road could not progress due to the inability to control noise levels at a particular house, or houses.

My query on the BPO was, however, wider than simply the houses that may be constructed between designation and construction. Given the influence that traffic noise is predicted to have on the surrounding environment (the noise contours of Appendix 4 of the OA), the expected residential use of that land and, as a consequence, the potential reverse sensitivity, I query whether it would be appropriate for the designation to include mitigation for the effects that appear inevitable. In their response to this query, SGA note that their approach is in accordance with the standard assessment methodology (NZS 6806) which, I can confirm, is correct. I am not, however, convinced that this approach is consistent with the BPO. My question that remains is that if road noise can be reduced, why would it not be?

As a conclusion to sections 5.1 and 5.2, I suggest the following changes to the relevant operational traffic noise BPO condition below which is common to all the NoRs.:

- X. As part of the detailed design of the Project, a Suitably Qualified and Experienced Person shall ~~determine~~ develop the Selected Mitigation Options for the PPFs identified oin Schedule 4: Identified PPFs Noise Criteria Categories. The Best Practicable Option shall be determined from the Selected Mitigation Options, including noise barriers where practicable and low noise road surfaces on the carriageways of the Project, except where not practicable for engineering or safety reasons.

5.3 Ventilation

The OA identifies some dwellings as requiring building modification mitigation to control the effects of road traffic noise internally. This will necessitate closed windows which, in accordance with Clause 8.3.3 of NZS 6806, will require alternative ventilation in accordance with Clause G4 of the Building Code. Essentially, the fresh air that would otherwise be supplied via the open windows is to be supplied by some other means. The typical solution is to use a small fan to draw fresh air into the room and exhaust the stale air through the bathroom ventilation grilles.

WK's guidelines on mitigating operational noise effects through the acoustic treatment of buildings support the provision of mechanical ventilation for habitable rooms, and WK have usefully detailed their specific mechanical ventilation requirements in other statutory planning processes currently occurring in the Drury area (note that AT have also specified similar mechanical ventilation requirements during their participation in these statutory planning processes). These requirements are as follows:

Mechanical ventilation

If windows must be closed to achieve the design noise levels in clause 2(a), the building is designed, constructed and maintained with a mechanical ventilation system that:

- a. For habitable rooms for a residential activity, achieve the following requirements:*
 - i. Provide mechanical ventilation to satisfy clause G4 of the New Zealand Building Code; and*
 - ii. Is adjustable by the occupant to control the ventilation rate in increments up to a high air flow setting that provides at least 6 air changes per hour; and*
 - iii. Provides relief for equivalent volumes of spill air; and*
 - iv. Provides cooling and heating that is controllable by the occupant and can maintain the inside temperature between 18°C and 25°C; and*
 - v. Does not generate more than 35dB $L_{Aeq(30s)}$ when measured 1 metre away from any grille of diffuser.*
- b. For other spaces, is as determined by a suitably qualified and experienced person.*

Consequently, these mechanical ventilation requirements have been reflected in recommended amendments to the operational road traffic noise conditions for NoRs D1-D5.

5.4 Staged Construction

As the overall Project consists of five separate NoRs I queried the effect on the reported noise levels should one, or more, of the NoRs not proceed on the basis that the traffic carried by the incomplete road would have to go elsewhere. The

SGA Review Response 37 notes that should traffic flows increase by one third, the corresponding increase in noise level would be an unnoticeable 1dB. In a subsequent virtual meeting, SGA confirmed that regardless of which roads were constructed, noise levels would be within 1dB of those reported. Based on this, I am comfortable that the OA provides a good understanding as to the likely effects of the proposal.

5.5 Do-nothing/ Do-minimum

The approach of NZS 6806 is to, in part, compare the noise from the proposal with no mitigation (Do-minimum) to the noise from the current road alignment (Do-nothing) at the same future design year to determine the effect of the proposal.

My reading of section 4.1.4 of the OA was that the Do-nothing scenario represented full development of the area, that is with all the houses that are anticipated as a result of the development. In section 38 of the SGA Review Response, the clarification is made that it is the full residential development without the Project.

Both the OA and the SGA Review Response make the point that the Do-nothing scenario is theoretical only and could not happen in practice, as the current road network could not cope with the predicted traffic volumes. As such, I agree that the comparison between the Do-nothing and Do-minimum scenarios is in accordance with NZS 6806. I further note that no reliance should therefore be placed upon the comparison between the Do-nothing and the Do-minimum scenarios provided by Figures 7-2, 8-6, 9-2, 10-5 and 11-5, as the Do-nothing results could not eventuate in reality.

5.6 Consideration of Effects

Overall, I consider the OA shows that there are mitigation methods available to ensure that the noise from traffic using the proposed roads would be within appropriate limits to the existing dwellings.

5.7 Conditions

N.B. Condition numbers refer to those of NoR D1 with the intent that comments apply to the comparable conditions for NoRs D2-D5 (which sometimes have different numbers).

Condition 30

Condition 30 notes that 'Mitigation' has the same meaning as NZS 6806. NZS 6806 does not define the term meaning and has consequently been deleted from the condition.

Condition 34

Condition 34 allows the conditioned noise limits to be increased on the proviso that a suitably qualified and experienced person confirms with Council that the amended solution represents the BPO. Such a condition provides no certainty to stakeholders. I recommend that any such changes require certification by Council.

Condition 35

Condition 35 requires the Noise Mitigation Plan (which details the actual mitigation methods) be shown to Council for information. There is no reference of certification. I suggest:

35. *Prior to the Start of Construction for a Stage of Work, a Noise Mitigation Plan shall be prepared by a Suitably Qualified and Experienced Person ~~written~~ in accordance with P40 and shall be provided to the Manager for certification information.*

Condition 36

In situations where low road noise surfaces are proposed, Condition 36 allows the requiring authority to place chip seal down for the first year. This is acceptable, provided compliance with the noise limits are maintained. I therefore suggest:

36. *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 and the Identified Noise Criteria Category at any relevant PPF shall remain the same prior to implementation.*

Condition 43

Condition 43 uses P40 Specification for Noise Mitigation 2014 (P40) to describe what is necessary for a post construction review. For P40 to be used, there are several issues that would need to be addressed.

1. In section 8, P40 limits post construction review to projects with more than 50 PPFs, unless specified in the contract documents. As no specification exists in the conditions, there is the opportunity for no post construction review to be undertaken for Designations D1, D3 and D4, each of which has fewer than 50 PPFs.
2. Section 8 defines the scope of the post construction review as being to confirm that the BPO was achieved rather than compliance with the designation conditions.
3. Section 8.1 describes the approach of the review as modelled noise levels using as built drawings. No noise level measurements are proposed. The

modelling requires a modelled scenario to be three to nine months after opening. Presumably, this would be for relatively low traffic flows and a chip seal road surface. Should modelling also include a design year scenario?

4. If it is found that the modelled scenario does not comply with the conditions, P40 requires either modification to achieve the conditions or written approval from the Principal for the exceedance.

While P40 may well be of use as an internal document for the design team, it does not fulfil the function of a compliance document. If this was its intent, it will require modification, if not, its deletion should be considered.

To address the above concerns, the following amendments are proposed to the condition:

(a) Within twelve months of completion of construction of the Project, the Requiring Authority shall prepare and provide to the Manager a post-construction review report written in accordance with, taking into account P40 Specification for Noise Mitigation 2014, shall be provided to the Manager, which demonstrates compliance with conditions 28-42. The report shall be prepared and certified by a Suitably Qualified and Experienced Person and shall include:

(i) a description of, and the results from, a computer noise model of the Project as constructed; and

(ii) results of field measurements undertaken in accordance with NZS 6806 at a minimum of six representative PPFs identified in Schedule 4 Identified PPFs Noise Criteria Categories to verify the computer noise model.

(b) If the reports concludes that the sound levels exceed the Identified Noise Criteria Category at any relevant PPF, the Requiring Authority must, in consultation with the owners and occupiers of sites subject to the exceedance, provide further noise mitigation to reduce noise levels to meet the Identified

Noise Criteria Category (subject to reasonable access to allow any mitigation to be implemented), and the details of any mitigation shall be certified to the Manager.

Condition 44

Condition 44 requires the mitigation to remain in place only so long as it is practicable. The following amendment is therefore proposed:

The Detailed Mitigation Options shall be maintained so they retain the noise reduction performance as far as practicable.

6. REVIEW OF OPERATIONAL VIBRATION

The OA approach to road traffic vibration is described in section 4.2 as:

Traffic vibration from new or upgraded roading projects is not generally expected to create issues. A key factor with new roads is the uniformity of the basecourse/pavement and the absence of near surface services. This is due to new or upgraded roads being designed to be smooth and even and avoiding vibration generated from passing traffic over uneven surfaces. Therefore, traffic vibration effects arising from operation of the Projects has not been assessed.

The key points from this are:

1. With properly constructed and maintained roads, vibration should not be an issue to neighbouring properties; and
2. If there are issues, they stem from the construction of the road.

I generally agree with OA and, in principle, agree with the SGA approach of neither assessing operational vibration nor proposing conditions.

It is also relevant to consider the WK reverse sensitivity guidelines which identifies that vibration from roads can result in amenity issues to neighbouring

residences. The guidelines go on to recommend vibration levels that are suitable for amenity. Given that any noticeable vibration from the road would likely be a defect in the road, it seems inappropriate to require the dwelling owners to provide a remedy. Even if they did, those owners have no control over what may happen to the road in the future (such as road works or resealing) meaning they have no knowledge of the incident levels they should design for. As with all other effects, the only logical approach to addressing this issue would appear to be a further condition to the designation limiting operational vibration in the same way as the conditions proposed for noise. In this way, adjoining landowners would know what to expect and would, realistically, be able to demonstrate compliance.

If a condition is to be added to the NoR it could only contain levels that were reasonable for residential amenity, which the WK guidelines provide as 0.3mm/s v_{w95} . I have consequently recommended that the conditions for NoR D1 include following condition (Condition 45):

Vibration from road-traffic shall not exceed 0.3mm/s v_{w95} at any building.

7. SUBMISSIONS

The following addresses the various submissions that reference noise and/ or vibration.

7.1 Lomai Submission

The Lomai submission relates to NoR D1 with a same submission for NoR D2. It requests consultation with Waka Kotahi through the development of the Outline Plan of Works and the various construction management plans.

With respect to construction, the NoRs include a stakeholder engagement and communications management plan, the CNVMP conditions require consultation

with respect to developing the management plan and the CNVMP Schedule conditions require consultation with respect to developing the Schedules. This level of consultation should be ample for the submitter.

7.2 Joyce Submission

The Joyce submission relates to NoR D1. It makes the point that the construction noise and vibration conditions provide no certainty as to their outcome. I reached the same conclusion with respect to construction effects in my conclusion to section 3 above.

The submission goes on to note that, given the designation is to support residential growth, it is unrealistic to exclude the 'future potential environment'. It is assumed that this relates to operational noise. I discuss my views on this in section 5.2 above where, in principle, I agree with this approach. Based on the requiring authority developing the BPO, generally agree with the approach taken within the OA, noting that the purpose of the NoR is one of route protection.

7.3 Karaka and Drury Limited Submission

The submission by Karaka and Drury Limited (KDL) relates to NoR D1. It queries construction effects on the future environment, to which I have responded in 7.2 above.

7.4 Kāinga Ora Submission

Kāinga Ora have provided the same submission for all five designations. The submissions note that for the avoidance of doubt, the applicant should comply with the World Health Organisation's (WHO) community noise standards report in relation to Operational Noise Limits.

The WHO provide both internal and external limits for noise. Considering the internal levels first, the WHO Guidelines are generally lower than those of NZS 6806/ the proposed conditions. Regardless, I consider the proposed levels

reasonable as they provide a balance between the necessity of a roading network and its resulting effects.

The WHO set an external limit of 55dB L_{Aeq} for controlling serious annoyance to the majority of people. My view is that such a low level would make road building particularly difficult and, instead, favour the NZS 6806 approach as adopted by the SGA. The WHO level is similar to the 57dB limit proposed within the WK submission on Plan Changes within the Drury area. There is an obvious inconsistency therefore, between what the requiring authority seeks and what WK believe appropriate.

7.5 Oyster Capital Submission

The Oyster Capital submission on NoR D2, D3 and D4 seek to amend the limit of construction noise limits to prohibit construction work on Sundays and Public Holidays, noting that the condition permits construction 24 hours per day, seven days per week for up 2.5 years.

I do not support this part of the submission. While the construction noise standards conditions allow for work on Sundays and Public Holidays, the permitted levels (55dB L_{Aeq} day time and 45dB L_{Aeq} night time) are relatively low and would essentially stop intensive construction works. The limits are intended to enable quiet work, such as administrative activities. As a comparison, the noise limits of the condition are what is generally considered to be the upper end of appropriate for residential amenity.

It is noted that through the proposed CNVMP schedule conditions, construction noise could exceed the limits set by the preceding construction noise standards conditions, including on Sundays and Public Holidays. Presumably, this would remain the case even if works on Sundays and Public Holidays were prohibited.

The Oyster Capital submission on NoR D2 and D3 opposes the proposed operational noise conditions, noting it is unclear as to whether operational noise is to address dwellings built between the project being designated and the road being constructed. Oyster Capital make the same submission of NoR D3. For clarity, the application is limited to only those dwellings that currently exist and will exclude any dwellings built after the designation is gained. I respond to this issue in sections 5.1 and 5.2 above.

7.6 Fletcher Residential Limited

The Fletcher Residential submissions repeat those of Oyster Capital for NoR D2, D3 and D4, which I have addressed above.

7.7 Fulton Hogan Land Development

The Fulton Hogan Land Development submission on NoR D3 repeats that of Oyster Capital, which I have addressed above.

7.8 White Submission

The White submission seeks the reinstatement of the existing hedge on their road side boundary, or other provisions, for the control of noise. I note that a hedge is unlikely to have any noticeable effect on road traffic noise.

Memo

To: Sanjay Bangs - Senior Policy Planner, Planning Central and South, Plans and Places, Auckland Council

CC: Nicolas Lau - Senior Policy Planner, Planning Central and South, Plans and Places, Auckland Council

Date: 30 August 2021

Reference: Drury Arterials NoRs – Urban Design, Landscape and Visual Effects Review

1 Introduction

- 1.1 I have undertaken a review of the Drury Arterials NoRs 1 - 5, on behalf of Auckland Council, in relation to urban design, landscape and visual effects.
- 1.2 I am an Urban Designer and Landscape Architect. I am a director of the consultancy RA Skidmore Urban Design Limited and have held this position for approximately seventeen years.
- 1.3 I hold a Bachelor of Science degree from Canterbury University (1987), a Bachelor of Landscape Architecture (Hons) degree from Lincoln University (1990), and a Master of Built Environment (Urban Design) degree from Queensland University of Technology in Brisbane (1995).
- 1.4 I have approximately 25 years professional experience, practising in both local government and the private sector. In these positions I have assisted with district plan preparation and I have assessed and reviewed a wide range of resource consent applications throughout the country. These assessments relate to a range of rural, residential and commercial proposals. I have also reviewed a broad range of transport related notices of requirement.
- 1.5 I regularly assist councils with policy and district plan development in relation to growth management, urban design, landscape, character and amenity matters. I am currently providing review advice to Auckland Council in relation to a number of private Plan Change requests in the Drury area (PPC 48, 49, 50, 51 and 61).

- 1.6 I am an accredited independent hearing commissioner. I also regularly provide expert evidence in the Environment Court and I have appeared as the Court's witness in the past.
- 1.7 In writing this memo, I have reviewed the following documents:
- Urban Design Framework and Evaluation (January 2021) (“UDFE”);
 - Assessment of Landscape and Visual Effects (January 2021) (“ALVE”);
 - The proposed conditions for each NoR (as notified);
 - Submissions;
 - Responses to Section 92 requests for further information (dated 7th April 2021 and draft 25th June 2021)
- 1.8 My review has also been informed by reference to the AEE and indicative design drawings.
- 1.9 I attended a project-wide site visit on the 11th March 2020. I also attended meetings with the Supporting Growth alliance team on the 15th July 2021 (to discuss the Section 92 response) and on the 27th July 2021 (to discuss conditions).

2 Technical Reports Overview

- 2.1 While some of the land subject to the NoRs is currently rural, the wider area is earmarked for urbanisation. Section 4.1 of the AEE sets out the approach to assessing the NoRs in relation to the existing and likely future environment. Both the UDFE and the ALVE are appropriately made in the context of the anticipated urbanisation of these areas. This transformation from rural to urban has been signalled for some time and the project, led by the Supporting Growth alliance, is intended to support that transformation. While there are a number of factors that will determine the final zone distribution and ultimate pattern of urban development, Auckland Council's Drury-Opāheke Structure Plan (2019) provides a framework for broadly understanding the likely future pattern of urbanisation.

Urban Design Framework and Evaluation

- 2.2 The UDFE report sets out a clear and detailed analysis that, in my opinion, follows an appropriate methodology.
- 2.3 Section 2 of the report provides an overview of the project background and sets out the purpose and scope of the report. Section 3 sets out a number of factors that have

contributed to the overall evaluation framework. It describes the guidance and principles that have been established for the Supporting Growth programme-wide Te Tupu Ngātahi Design Framework (Design Framework or Design Framework Principles) document. The report describes the framework as taking a systems approach, identifying a number of layers including: environmental, social, built form, movement and land use, with cultural and sustainability values underpinning and spanning across these. Twenty design principles are identified within these layers. The report notes that the Design Framework sits within the context of a range of established strategic plans, policies and design guidance at both national and local levels.

2.4 The following chapters of the report relate to each of the five NoRs. For each NoR the report sets out the following:

- A description of the existing and likely future environment;
- A description of the form and function of the transport corridor;
- An evaluation against the Design Framework principles;
- A summary of the urban design evaluation and recommendations; and
- An annotated map spatially defining the design outcome recommendations made together with identified opportunities.

Assessment of Landscape and Visual Effects

2.5 The ALVE report also provides a clear and detailed analysis. In my opinion the assessment utilises an appropriate methodology.

2.6 In a similar vein to the UDFE, Section 3 of the report provides an overview of the project background and sets out the purpose and scope of the report.

2.7 Section 4 sets out the statutory and non-statutory guidance that has informed the assessment. In terms of relevant statutory documents, the report identifies the Resource Management Act (the “RMA”) and the New Zealand Coastal Policy Statement (2010). In my opinion, the policy framework of the Auckland Unitary Plan (the “AUP”) is also relevant. I note that the body of the assessment makes reference to relevant provisions of the AUP. I note that the relevant provisions of RMA planning documents is set out in Appendix B to the AEE. In relation to the Regional Policy Statement (the “RPS”) of the AUP, I consider Objectives B2.2.1(1), B3.2.1(3) and their supporting policies are of particular relevance. In Chapter E17 – Trees in roads, Objectives E17.2(1) and (3) and supporting Policy (E17.3(1) are relevant. In relation to Chapter B8 – Coastal environment, Objective B8.2.1(2), B8.3.1(1) and(2) and supporting policies are relevant. For Chapter E18 – Natural Character of the Coastal Environment, Objective E18.2(1) and supporting Policy E18.3(3) are relevant. In

relation to Chapter E19 Natural Features and Natural Landscapes in the Coastal Environment Objective E19.2(1) and supporting Policy E19.3(2) are relevant. Chapter B4 Te tiaki taonga tuku iho – Natural heritage also includes relevant objective and policies.

- 2.8 Section 5 outlines the assessment methodology and notes that this is in accordance with the NZ Institute of Landscape Architects' 'Landscape Assessment and Sustainable Management Practice Note 10.1'. I agree. Project assumptions are clearly set out in Section 5.10.
- 2.9 The following chapters of the report set out the assessment of each of the five NoRs. For each NoR the report sets out the following:
- A chapter summary;
 - A description of the project;
 - A description of the existing environment identifying defining characteristics of the project area and local landscape. This is followed by a description of the likely future environment, the viewing context, identification of landscape values and landscape sensitivity;
 - An assessment of landscape and visual effects including: positive effects; temporary effects; operational effects (natural character, visual amenity and landscape character effects) and recommendations to avoid remedy or mitigate identified effects; and
 - Conclusions.
- 2.10 Chapter 11 of the report identifies opportunities to enhance landscape character, natural character and visual amenity of the Project area and recommends that these are considered in future regional consent processes.
- 2.11 Appendix 1 to the report includes a number of helpful contextual maps and detailed aerial photographs with existing landscape features highlighted. The set of indicative design plans, annotated with recommended mitigation measures is also provided.
- 2.12 Appendices 2 - 6 contain photographs ('Streetview' generated) and accompanying descriptions of representative viewpoints that have informed the assessment.

3 Key Issues

- 3.1 As noted above, I generally consider the NoRs are supported by robust urban design, landscape and visual effects analysis. Having considered matters raised in submissions, I consider a limited number of matters require further consideration.

Extent of Designation and Integration with Adjacent Land-use

- 3.2 The NoRs provide route protection for the intended upgrading of the arterial network. Actual works may not occur for some considerable time. While indicative designs have been prepared to inform the NoR and the accompanying assessments of effects, they do not necessarily represent the final design solution. The additional extent of the NoR enables flexibility to accommodate the outcomes sought for the road corridors and to accommodate the construction process. At Section 3.4 (p.19) of the AEE, it is noted that once construction is complete, the designation area will be reviewed and will be removed from areas that are not required for the operation of the transport corridors. Condition 4 of each of the NoRs requires the extent of the designation to be reviewed.
- 3.3 Given the extended timeframe for completion of works within the NoRs, this could present issues around the timing of development of adjacent land and achieving good integration between the upgraded streets and adjacent properties. Development of adjacent land may precede the street upgrades. The UDFE generally finds that the cross section of the corridors facilitates an appropriate interface between place and movement e.g., for D1 “the corridor cross section also provides flexibility in supporting appropriate public private interfaces and connectivity at a fine grain (pedestrian level), for example from THAB or other high-density living is accommodated and encouraged by placing pedestrian circulation closest to the corridor boundary”¹
- 3.4 The UDFE report includes a number of indicative street cross sections that depict adjacent site development interfacing directly with the street corridor. This may be possible if development follows the amendment to the designation boundary. However, if development precedes this, there could well be a disconnect between the street and adjacent site development where the designation corridor is considerably wider than the final street. This would not deliver a compact, quality urban environment.
- 3.5 The designation does not preclude works occurring within its extent. The Supporting Growth alliance has noted Waka Kotahi (for NoR 1) and Auckland Transport’s (for NoRs 2 – 5) commitment to working with landowners and developers around development options where development is undertaken prior to the implementation of the Drury Arterial Network designations. Their draft Section 92 response (dated 25th June 2021) highlights the purpose of the designations, being to support growth in the

¹ NoR D1, p.18, UDFE

Drury - Opāheke Structure Plan area. However, I consider there remains some uncertainty that suitable urban interfaces will be created where development precedes the implementation of the street upgrades.

Intersection Design

- 3.6 Section 4.2.3 (p. 28) of the AEE describes the process for determining the preferred intersection forms across the network. It notes that in response to guidance provided, roundabouts are recommended as the ‘first choice’ for at-grade intersections due to the safety benefits for vehicular traffic resulting from slowing down through traffic and reducing the number of conflict points. The indicative designs provided for each of the NoRs extensively use roundabouts at intersections and the designation boundary location reflects this intersection design typology.
- 3.7 In response to a request for further information, further detail around the intersection type selection adopted for a ‘Safe System’ approach was set out in a memo from the Supporting Growth Alliance (dated 26th July 2021). The memo sets out a number of New Zealand and Australian references that support roundabouts being the first choice. The memo also notes that urban design considerations were a part of the collective inputs that informed the form and function process to determine the intersection forms for the Drury Arterial Network. The memo notes that the configuration of intersection designs was addressed in the UDFE in the evaluation table and the ‘Outcomes and Opportunities’ map for each NoR.
- 3.8 In terms of urban design considerations, I note that roundabouts and signalised intersections have different spatial requirements (not necessarily less spatial requirements for signalised intersections). I note that roundabouts tend to result in expansive intersections with angled or curved property boundaries around their periphery. This places constraints on the configuration of development at its margins, diminishing the way development can engage with and create enclosure to the street environment. Street intersections and their relationship to land-use and built form are particularly important in creating vibrant urban environments and good pedestrian amenity. In my opinion, the use of roundabouts in high density residential and town centre environments, where pedestrian amenity is critical, is not appropriate and will not contribute to the creation of a compact, quality urban environment. For example, for The D2 NoR, the dimension of the NoR boundary at the Fitzgerald Road – Opāheke North-South FTN arterial intersection is very broad, exacerbating the potential severance effect created by the wide street and will result in a poor urban form outcome at its margins. I note that Waihoehoe Road will provide an important pedestrian route to the Drury Central metropolitan centre (being sought by PPC48) and Drury Central rail station. For this intersection the UDFE ‘Outcomes and Opportunities’ map notes opportunities including:

- Opportunity to further define spatial requirements of two-lane roundabouts through specimen design; and
 - Opportunity for land integration post construction (applies to parcels within the final road alignment that are without road access or an inappropriate shape).
- 3.9 In my opinion, the specimen design depicted would create street environment that is challenging to enable an urban interface with buildings engaging with and providing suitable enclosure to the intersection.

Conditions

- 3.10 A draft set of conditions has been proposed for each of the NoRs. Conditions 9 - 11 (the same condition numbers for each NoR) set out the requirements for the preparation of an Urban and Landscape Design Management Plan (“ULDMP”). The conditions clearly set out the objective of the ULDMP and sets out detailed requirements relating to its content. The conditions are identical for each of the NoRs 2 – 5. As NoR 1 relates to a state highway, Condition 9 for that designation includes an additional requirement for the ULDMP to be prepared in general accordance with a number of Waka Kotahi design guidance documents, including:
- Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version;
 - Landscape Guidelines (2013) or any subsequent updated version; and
 - P39 Standard Specification for Highway Landscape Treatment (2013) or any subsequent updated version.
- 3.11 It also includes different requirements for preparation of a maintenance plan (Condition 11(iv), with reference to the Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013)(or any subsequent updated version). The other NoRs includes a requirement for a two year maintenance period in relation to the requirement for detailed planting specifications (Condition 11(iii)).
- 3.12 Section 2.1 of the UDFE sets out a summary of recommendations of what outcomes the ULDMP should achieve for each NoR. The main evaluation contained in Section 4.3 also includes a map for each NoR spatially defining the urban design outcomes and opportunities identified.
- 3.13 Chapters 6 – 10 of the ALVE sets out the assessment of each NoR. Following each assessment of construction effects and operational effects are a set of recommendations to ensure adverse landscape and visual effects are appropriately avoided, remedied or mitigated. These are also supported by a series of Landscape

Mitigation Plans contained in Appendix 1 of the report. I note that these plans are based on the specimen designs provided with the NoRs.

- 3.14 The NoRs are for route protection and the specimen designs are provided as an illustration of one design solution within the proposed corridor. The street upgrades may not be implemented for some time and elements of the surrounding context will change in that time. Therefore, the conditions requiring the preparation of ULDMs are generic and do not reflect the detailed location-specific recommendations set out in the UDFE and ALVE reports. However, the matters addressed in the conditions do require a consideration of matters addressed by the recommendations, without the place-based specificity. Given the flexibility that is sought to be retained due to the potentially long timeframe of the upgrade projects, I consider the generic nature of the condition requirements is generally appropriate.
- 3.15 In response to concerns raised about the urban form design implications of roundabouts at major intersections, I understand that the Supporting Growth alliance proposes to expand Condition 10(a)(iii)A to include 'intersection design'. I agree that this enables the consideration of urban design implication of intersection designs.
- 3.16 The ALVE has not identified the need for visual screening of construction and site compound areas in relation to the existing land-use pattern. However, given the uncertainty about the future land-use patterns adjoining the street corridors, I consider it would be appropriate for Condition 10(a)(iii) for each of the NoRs to include a requirement for details of any visual screening of temporary construction and site compound areas adjacent to urban properties.
- 3.17 The Waka Kotahi design guidance documents referenced in proposed Condition 9(c) of NoR 1 provides helpful guidance about the process and design response in relation to a range of street design matters. While the other NoRs do not relate to the State Highway network, I consider these documents, as they relate to urban arterial streets, provide helpful guidance. In my opinion, Condition 9 of NoR 2 – 5 should be expanded to include a clause as follows:

The ULDM shall be prepared with reference to the following documents as they relate to urban arterial streets:

- *Waka Kotahi Urban Design Guidelines: Bridging the Gap or any subsequent updated version;*
- *Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; and*
- *Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version.*

- 3.18 In my opinion, for NoRs 2 – 5, the 2 year maintenance period specified in Condition 11(a)(iii) is not adequate to ensure planting is well established. In my opinion, it would be preferable to include the same requirement as set out for NoR 1 in Condition 11(a)(iv) which states:
- *A maintenance plan in accordance with Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version.*
- 3.19 The P39 Standard Specification provides considerable detail in relation to the implementation and maintenance of planting.

4 Conclusions

- 4.1 The 5 NoRs are proposed to enable the upgrading of the arterial network in order to support urban growth in the Drury area. In my opinion, the NoRs are supported by clear and detailed urban design, landscape and visual effects analysis.
- 4.2 While the extent of the proposed NoRs for the route protection enables flexibility for delivery of the upgrade works that may occur some considerable time in the future, it does result in some uncertainty about the successful integration between streets and adjacent land-uses where development precedes the street upgrade work. The Supporting Growth alliance has advised that they are actively engaging with adjacent land-owners to facilitate development within the designation boundary to ensure a suitable integration is achieved.
- 4.3 The proposed designation footprints enable the extensive use of roundabouts at street intersections with the specimen designs provided depicting a predominance of roundabouts. The documentation supporting the NoRs notes that roundabouts are recommended as the ‘first choice’ for at-grade intersections. In my opinion, in some instances a roundabout configuration will result in poor urban form outcomes. In particular, I consider a roundabout configuration at the Fitzgerald Road – Opāheke North-South FTN arterial intersection would create a street environment that is challenging to enable an urban interface with buildings engaging with and providing suitable enclosure to the intersection. This would diminish the amenity and urban quality of the Waihoehoe Street corridor. This street will provide an important pedestrian route to the future metropolitan urban centre and Drury Central train station.
- 4.4 Given the route protection purpose of the NoRs for upgrading work that may not occur for some considerable time, I consider the generic nature of the conditions requiring the preparation of ULDMPs is generally appropriate. While not reflecting the specificity of the recommendations made the UDFE and ALVE reports, the requirements of the conditions enable the relevant matters to be addressed. I have recommended a

number of amendments to these conditions to ensure the ULDMPs are made in the context of suitable design guidance.



Rebecca Skidmore

Urban Designer/Landscape Architect

30 August 2021

Memorandum (technical specialist report to contribute towards Council's section 42A hearing report)

18 August 2021

To: Sanjay Bangs, Senior Policy Planner, Plans and Places, Auckland Council

From: Trent Sunich, Consultant Stormwater Technical Specialist

Cc: Paula Vincent, Danny Curtis, Healthy Waters

Subject: Drury Arterial Network Notices of Requirement – Stormwater Technical Assessment

1.0 Introduction

This memorandum summarises the findings of my review on behalf of Healthy Waters for the Drury Arterial Network Notices of Requirement (the NoRs). I note the review focuses on the flood hazard effects assessment of the project reflecting the role of Healthy Waters in the region who are responsible for flood protection and control¹ and includes input from Healthy Waters specialists who have reviewed the flood hazard modelling undertaken by the applicant's engineering consultants. Notably my assessment considers flood hazard effects during construction as well as the long-term effects of operating the arterial routes.

Where appropriate I have also commented on management of operational stormwater discharges from the project, however this matter is largely out of scope currently and will be subject to future resource consent applications and assessment reflecting the stormwater management related rule sets in the Auckland Unitary Plan (AUP). Notwithstanding this it is important to consider that suitable land area will be available within the designation to construct and operate the stormwater management devices receiving runoff from the carriageway impervious surfaces.

My involvement in the project has been from July 2021 where I have been commissioned to review the relevant reports for the NoRs, any information requests/responses, and review/assess the relevant submissions culminating in the findings of this memorandum.

I hold a Bachelor of Technology (Environmental) which I obtained from the Unitec Institute of Technology in 2001. I have approximately 20 years' experience in the field of natural resource management and environmental engineering. My expertise is in integrated catchment management planning, stormwater quality management, and assessing associated development related stormwater effects where previously I have held roles with the Auckland Regional Council and URS New Zealand Limited. I am currently employed by 4Sight Consulting as a Senior Environmental Consultant. Recently I have reviewed and reported on the Warkworth to Wellsford motorway project Notice of Requirement on behalf of Healthy Waters who the Auckland Council's stormwater network operator. I have also been the reporting stormwater technical specialist to Plan and Places of the Auckland Council for the proposed private plan changes 48, 49, 50 and 50 which are all in and around the Drury area.

In writing this memo, I have reviewed the following documents:

- Drury Arterial Network Assessment of Flooding Effects January 2021, Version 1.
- Drury Arterial Network Assessment of Ecological Effects January 2021, Version 1.
- Drury Arterial Network Appendix B – Relevant Statutory and Strategic Planning Documents, January 2021, Version 1.
- Drury Arterial Network Assessment of Effects on the Environment, Volume 2, January 2021, Version 1.
- NoR D1 – D5 Conditions (notified).
- Letter: Response to s92 Further Information Request for the Drury Arterial Network, 7 April 2021.

¹ Auckland Council Stormwater Asset Management Plan: 2015-2045

2.0 Proposed Projects and Flood Hazard Assessment

As described by the applicant (Auckland Transport and Waka Kotahi), five separate notices of requirement are sought to designate land for the purposes of constructing and operating arterial routes in and around the Drury area to service projected growth in that part of the Auckland Region and will include provision for general traffic, walking and cycling, and frequent public transport. The NORs are:

- NoR D1: Alteration to NZ Transport Agency designation 6707 - State Highway 22 (SH22) Upgrade.
- NoR D2: Jesmond to Waihoehoe West FTN Upgrade
- NoR D3: Waihoehoe Road East Upgrade
- NoR D4: Ōpāheke North-South FTN Arterial
- NoR D5: Ponga Road and Ōpāheke Road Upgrade

Assessment of flood hazard during construction and post development for each of the NoRs has been documented in the report entitled 'Drury Arterial Network Assessment of Flooding Effects' ('the Flood Hazard Report'). A precis of the local receiving environments, flood hazard assessment methodology and findings documented by the applicant's engineering consultant is detailed in the following subsections.

Catchment Overview

The NoRs are situated within three major stormwater catchments being Ōtūwairoa Stream (Slippery Creek), Hingaia and Ngakoroa Streams where the collective receiving environment is the estuarine Drury Creek of the Manukau Harbour.

Ōtūwairoa Stream (Slippery Creek) is a stream network covering an area of 46.3 km². The area is drained by four main watercourses, Ōtūwairoa Stream, Waipokapū (Hays) Stream, Mangapū (Symonds) Stream, and Waihoehoe Stream, with some having extensive flood plains like the one from Waihoehoe Stream which is ±690 m wide. The Hingaia Stream is a stream covering an area of 54.9 km² within the south-eastern corner of the Auckland region. The Hingaia catchment includes wide flood plains in Ramarama and Drury areas. The Ngakoroa Stream is a watercourse network covering an area of 40.15 km² in the south of the Auckland region with wide flood plains in Runciman and Karaka areas. Each of these streams have smaller streams and tributaries, and overland flow paths.

The NoR routes and respective catchments are listed in the following table:

Catchment	NoR Route
Ōtūwairoa Stream (Slippery Creek)	<ul style="list-style-type: none"> • Waihoehoe Road West FTN Upgrade (NoR D2) • Waihoehoe Road East Upgrade (NoR D3) • Ōpāheke N-S FTN Arterial (NoR D4) • Ponga Road and Ōpāheke Road Upgrade (NoR D5)
Hingaia Stream	Bremner Road FTN Upgrade sections (NoR D2)
Ngakoroa Stream	<ul style="list-style-type: none"> • SH22 Upgrade (NoR D1) • Jesmond Road and Bremner Road FTN Upgrade sections (NoR D2)

Flood Hazard Determination and Risk Assessment

In the context of constructing and operating each of the NoR routes, the applicant's engineering consultant has concluded that flood hazard effects may include changes to; the flood freeboard to habitable buildings, how overland flow paths operate, the ability to access property by residents and emergency vehicles, the depth of flooding to roads and flooding arising from the

blockage of stormwater drainage. The effects considered relate to existing habitable buildings / infrastructure and potential future effects on upstream and downstream properties.

In order to assess these flood hazard effects, a consistent methodology was applied for each NoR route where each step is summarised as follows:

- Desktop assessment to identify potential flooding locations from Auckland Council flood plains on Geomaps;
- Site visits with the project team and Auckland Council staff;
- Flood modelling of the pre-project development and post-project development terrain – both applying Maximum Probable Development (MPD) with 100-year Average Recurrence Interval (ARI) plus climate change (CC) rainfall;
- Flood depth maps production for the pre-project development and post-project development terrain and flood difference maps were produced to show the change in flood levels and extents (greater than 50mm) following construction of each route;
- Inspection and review of flood difference maps. At key cross drainage locations such as bridges and where there are noticeable changes in flood extents or flood levels, consideration was given to flood hazard issues; and
- Additional site visits to those locations that were identified as having potential flooding effects arising from the projects– i.e. viewing the extent of estimated flooding and its potential effect on buildings, considering property access effects and potential increases to flow velocity/depth.

The following flood hazard model scenarios were run for each of the NoR routes. In each case Auckland Council flood hazard models were utilised for the assessment and were considered by the applicant's engineering consultant to be appropriate for assessment of the relative or overall effects flood hazard effects of the NoR routes:

- For the pre-project development (without the project in place) scenarios:
 - Model the 10-year ARI rainfall event + Climate Change (CC) event with future land-use without the design terrain in place;
 - Model the 100-year ARI rainfall event + CC event with future land-use without the design terrain in place;
- For the post-project development (with the project in place) scenarios:
 - Model the 10-year ARI rainfall event + CC event with future land-use with the design terrain in place; and
 - Model the 100-year ARI rainfall event + CC event with future land-use with the design terrain in place culverts.

Each of flood model scenarios have adopted culverts as they exist in the Auckland Council models - with the addition of some new culverts/bridges to convey flows at existing overland flow paths and some extensions to existing culverts to convey flows across the new corridor/route terrain.

Climate change has been accounted for in the model runs in accordance with the current Auckland Council flood hazard modelling specification which uses 2.1 degrees of warming and a 16% increase on rainfall. This was based on MfE's 2008² guidance. Sea level rise is also accounted for in the model in accordance with MfE 2008, that is a 0.5m increase with consideration of a 0.8m change. Additional allowance has been made for storm surge.

Flood Hazard Model Outputs and Risk Assessment

The modelling output is used to identify flooding extents and areas where the post-project development terrain results in changes in flood levels and flooding extents. These are used as a guide to assessing flood hazards. Where it was considered there was a specific constriction effect due to the projects that might increase flood hazard, a review of water velocity was also carried out to identify if there an increased risk to the movement of people or vehicles through flood waters.

Flood hazard output maps were produced for:

² Climate change effects and impacts assessment A Guidance Manual for Local Government in New Zealand – 2nd Edition, Ministry for the Environment May 2008

- Flood levels for the 10-year ARI + CC rainfall event with future land use with existing terrain (10-year ARI pre-project development scenario);
- Flood levels for the 100-year ARI + CC rainfall event with future land use with existing terrain (100-year ARI pre-project development scenario);
- Flood levels for the 10-year ARI + CC rainfall event with future land use with design terrain (10-year ARI post-project development scenario);
- Flood levels for the 100-year ARI + CC rainfall event with future land use with design terrain (100-year ARI post-project development scenario);
- Flood level difference for the 10-year ARI + CC rainfall event with future land use (post minus pre-project development); and
- Flood level difference for the 100-year ARI + CC rainfall event flood level difference with future land use (post minus pre-project development).

In assessing the flood model results, the applicant's engineering consultant has developed a set of flooding effects assessment criteria using the terms positive, negligible, minor and moderate have been used for assessment by the applicant's engineering consultant. The table below copied from the Flood Hazard Report shows how these terms have been defined to relate to the flood model results. It is noted the assessment criteria is also used to define flood risk outcomes in the draft NoR conditions for each of the routes. This matter is discussed later in this report for each of the respective routes.

Effect	Change in depth of flooding on neighbouring property	Comment	Change in habitable building floor level freeboard and freeboard is still greater than 500mm	Change in habitable building floor level freeboard and freeboard is less than 500mm	Comment
Positive	A reduction in flood level		An increase in freeboard	An increase in freeboard	
Negligible	Less than 50mm	A change in depth of flooding on land (not considering a habitable building) usually relates to loss of use of the land and a reduction in the performance of drainage systems	Less than 50mm	Not applicable	500 mm is the standard freeboard required for habitable floors. Where less than this freeboard is available, effects are considered as a higher risk.
Minor	50 to 500mm		50 to 150mm	Less than 50mm	
Moderate	Greater than 500mm		Greater than 150mm	Greater than 50mm	

NoR D1: Alteration to Designation 6707 - State Highway 22 Upgrade

NoR D1 consists of the widening of SH22 to a four-lane arterial with separated walking and cycling facilities. The project extends approximately 3 km from the State Highway 1 (SH1) Drury Interchange in the east, and the extent of the future urban zone between Woodlyn Drive and slightly beyond Oira Road in the west. The intersections at Jesmond Road and Great South Road will be signalised and a roundabout is proposed at Oira Road.

Key features of the proposed upgrade include the following:

- Widening of SH22 from its current general width of 20m to enable a 30m wide four-lane road with separated walking and cycling facilities;
- Localised widening around the existing intersections to accommodate for vehicle stacking and tie-ins and walking and cycling facilities/crossings;
- Demolition and reconstruction of the existing Ngakoroa Stream Bridge;
- Proposed new and extended culverts;
- Three proposed stormwater wetlands;
- Batter slopes and retaining to enable widening of the corridor, and associated cut and fill

Activities;

- Vegetation removal along the existing road corridor; and
- Areas identified for construction related activities including site compounds, construction laydown, bridge works area, the re-grade of driveways and construction traffic manoeuvring.

Four stormwater sub-catchments are proposed to be created along the transport corridor which are summarised as follows:

- Catchment 1 is to be treated within the corridor designation;
- Catchment 2A (between chainage 1740-2900) will flow to stormwater Wetland 1 with an outflow into a tributary of the Ngakoroa Stream;
- Catchment 2B between chainage 2900 and 3480 is treated and attenuated in Wetland 2;
- Catchment 3 is collected at a low point (chainage 3980m) and conveyed via a pipe system to join with the flow in catchment 4; and
- Catchment 4 discharges into Wetland 3 with an outflow into Oira Creek.

Where discharge points are north of SH22, there are no existing flooding issues identified in either the Ngakoroa Stream or Oira Creek and no flood attenuation is proposed. Where the discharge is to the Ngakoroa Stream upstream of the Ngakoroa Bridge, existing flooding issues may be present and the increased surface runoff generated by the additional impervious surface due to the wider transport corridor, requires flood storage (e.g. Wetland 2) to attenuate and discharge at the 100-year ARI pre project development peak flow.

The existing cross drainage for this transport corridor consists of the Ngakoroa Stream Bridge and two culvert crossings. The existing bridge is an obstruction to flood flows with overtopping occurring on the western approach. It is proposed to upgrade the existing bridge to a new structure and upgrade the existing culvert with new extensions.

Flood Hazard Summary

In terms of flooding effects, the flood hazard model results consider the flooding extents at the existing and new culvert crossings, bridge structures and significant areas where the new road embankment encroaches existing flood plains. Pre and post development scenarios have been assessed for the 10-year and 100-year ARI rainfall events where the results are summarised as follows:

- The existing bridge over Ngakoroa Stream obstructs flow by 1.8m during a 100-year ARI rainfall event, i.e. the bridge has negative freeboard. The proposed SH22 upgrade concept has 1.08m freeboard between the 100-year flood level and bridge soffit which provides a significant increase to the bridge's resilience to flooding. Upstream of the bridge, the 100-year ARI flood difference shows there is a decrease in water levels. The likely future environment near the bridge crossing is urban and Open Space – Active and Recreation Zone.
- Both existing culverts head up water in the 100-year ARI rainfall event which leads to overtopping the road at the nearby low point. At all culvert inlets there is a risk of flooding from blockage from upstream debris. These could be addressed through overland flow paths, upsizing culverts and secondary inlets and should be considered further at detailed design.
- No existing private property is considered to be affected in more than a minor way by the SH22 upgrade works. At the Ngakoroa Reserve, a water level increase of 0.01 m was observed in the flood hazard modelling results. Based on the assessment criteria in the table above, this is considered a negligible effect.

Recommended Consent Condition

12 Flood Hazard

- (a) The Project shall be designed to achieve the following flood risk outcomes:
- (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding;
 - (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors;
 - (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no existing dwelling;

- (iv) no new flood prone areas; and
 - (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings.
- (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100-year ARI flood levels (for Maximum Probable Development land use and including climate change).
- (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.

NoR D2: Jesmond to Waihoehoe West FTN Upgrade

The Jesmond to Waihoehoe West Frequent Transport Network (FTN) Project (NoR D2) includes, an approximately 4.1 km long four lane FTN arterial route along Jesmond Road, through a new green field link between Jesmond Road and the existing Bremner Road, Bremner Road, Norrie Road and Waihoehoe Road West. It primarily involves upgrading and widening existing transport corridors with the exception of the new link between Jesmond Road and the existing Bremner Road and the new bridge connection over Hingaia Stream. The key features of this NoR route are as follows:

- A typically 30m wide road with four lanes and separated walking and cycling facilities;
- Localised widening around the existing intersections to accommodate for vehicle stacking and tie-ins and walking and cycling facilities/crossings;
- Batter slopes and retaining to enable widening of the corridor and/or wetland construction, and associated cut and fill activities;
- Vegetation removal along the existing road corridor; and
- Areas identified for construction related activities including site compounds, construction laydown, bridge works area, the re-grade of driveways and construction traffic manoeuvring.

The NoR D2 has been assessed in the Flood Hazard Report in three sections and the stormwater design, flood modelling results and proposed mitigation noted for each is discussed as follows:

Jesmond Road FTN Upgrade Section:

Stormwater from this section of the NoR is proposed to be managed in five sub catchments:

- Catchment 1 combines with flow from a catchment from the SH22 transport corridor, is treated and attenuated for 100-year ARI rainfall events the SH22 Wetland 2 and then discharges into an existing overland flow path south of SH22;
- Catchments 2 and 3 are treated and attenuated for 100-year ARI rainfall events in Wetland 1 and discharges into an existing overland flow path towards the un-named stream;
- Catchment 4 is treated, and if required, attenuated for 100-year ARI rainfall events in Wetland 2 into the un-named stream; and
- Catchment 5 is smaller than 5000 m² and it is proposed that the runoff discharges into the existing swales. There are no signs of existing flooding downstream therefore no flood mitigation was allowed for.

The existing cross drainage for this transport corridor consists of several culvert crossings. It is proposed that these will either be extended or be replaced with larger culverts for more flow capacity. The design of the drainage structures to be assessed through subsequent consenting and detailed design phases.

Bremner Road FTN Upgrade Section:

Four sub-catchments will be created. Runoff from Catchment 1 is collected at a low point (chainage 360m) and conveyed via a pipe system to discharge into the un-named stream at

chainage 560m. Runoff from the other three catchments are collected at their respective low points and discharged into either the Ngakoroa Stream or Hingaia Stream.

The transport corridor lies within the lower third of the stormwater catchment therefore no peak flow attenuation is proposed. Stormwater management devices within the corridor are proposed for retention/detention and water quality treatment. No wetlands are proposed this this section of NoR D2.

The Flood Hazard Report assess the potential flood effects of the new bridge structures over the Ngakoroa Stream and the new bridge over Hingaia Stream to replace the existing Norrie Road bridge. At chainage 600 both a bridge and a culvert were assessed. In all cases the type and size of cross drainage structures (culvers and bridges) is proposed to be assessed through subsequent consenting and design phases. It is noted culvert crossings at chainages 830 m and 980m are not shown as they are to be designed and constructed by the Auranga development prior to implementation of the NoR route design and construction.

Waihoehoe Road West FTN Upgrade Section:

Two road sub-catchments are proposed. The sub-catchment between chainage 0m-100m drains away from the project towards the Great South Road intersection and will connect to a stormwater network there. A sub catchment from Waihoehoe Road East (NoR D3) between chainage 620m - 960m drains towards, and combines with, Waihoehoe Road West Catchment 2 and discharges into an existing overland flow path. Further work is proposed to integrate the discharges from the two projects including consideration with the adjacent future urban development and Drury central rail station at the detailed design phase. Notably this section of the NoR lies on the ridge between the Ōtūwairoa and Hingaia catchments with no existing or proposed culverts or bridges.

Flood Hazard Summary

- Jesmond Road FTN Upgrade could have some effect on operational phase flood levels at the sag points where overland flow crosses the road transport corridor. With careful design of road levels and upsizing of culverts, flood levels can be managed to be no worse than they currently are and overland flow passed under the corridor. Construction of a formal overland flow path at 119, 125 and 131 Jesmond Road will direct overland flow away from the buildings on site, lower flood levels and could improve the existing situation.
- Both the Ngakoroa and Hingaia Stream bridges have improved freeboard - with benefits to the safe passage of flow, and safety of those using the bridges and reduced flood levels upstream – with improved safety for the public and properties.
- If a culvert is used, there is a potential increase in flood levels greater than 0.5m and creation of a flood prone area affecting future residential development upstream of the proposed transport corridor at chainage 600 m on Bremner Road. In addition, as the upstream catchment is 115 ha (generating large flows) and a culvert alternative would be long and large (with consequent ecological effects), a bridge is proposed. A stream diversion is required on the upstream side to keep the bridge length to a single span. With a bridge used, the effect on flood levels upstream will be less than minor and the risk of blockage mitigated.
- No specific measures are recommended for flood hazard mitigation during the operational phase. However, coordination is required to connect the proposed drainage system to the proposed stormwater network in the Drury Central Rail station area.

Recommended Consent Condition

12 Flood Hazard

- (a) Where relevant to the Stage of Work, the project shall be designed to demonstrate that:
- (i) the unnamed tributary of the Ngakoroa Stream generally located at NZTM 1772069,5891654 and shown in Schedule 1 is crossed by a bridge; and
 - (ii) the existing Norrie Road Bridge crossing the Hingaia Stream generally located at NZTM 1773201, 5891836 and shown in Schedule 1 is removed within 6 months of a new bridge crossing the Hingaia Stream becoming operational.

- (b) The project shall be designed to achieve the following flood risk outcomes:
- (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding;
 - (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors;
 - (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no existing dwelling;
 - (iv) no new flood prone areas; and
 - (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings.
- (c) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-project and post-project 100-year ARI flood levels (for Maximum Probable Development land use and including climate change).
- (d) 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, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.

NoR D3: Waihoehoe Road East Upgrade

The Waihoehoe Road East Upgrade (NoR D3) consists of the widening of Waihoehoe Road to a two-lane arterial with walking and cycling facilities from the proposed intersection with Ōpāheke North- South Arterial, to Drury Hills Road in the east. Key features of the proposed upgrade include the following:

- Widening of Waihoehoe Road from its current general width of 20m to enable a 24m wide two-lane cross-section including separated walking and cycling facilities;
- Localised widening around the existing intersections to accommodate the two proposed Roundabouts;
- Batter slopes to enable widening of the corridor, and associated cut and fill activities;
- Vegetation removal along the existing road corridor; and
- Areas identified for construction related activities including site compounds, construction laydown, the re-grading of driveways and construction traffic manoeuvring.

Four catchments are created along the transport corridor. Runoff from Catchment 1 drains west and combines with the Waihoehoe Road West (a section of NoR D2) and drains to the Hingaia Stream. Catchments 2, 3 and 4 are treated within the corridor and discharge into overland flow paths leading to the Hingaia Stream.

The discharges to the Hingaia Stream lie within the lower third of the stormwater catchment (with flows to be discharged prior to the main catchment peak arriving downstream) and therefore flood flow attenuation is not proposed consistent with a 'pass forward approach'.

Stormwater management such as swales or raingardens within the corridor is proposed for water quality treatment. Stormwater discharge locations from the proposed treatment devices will be decided at detailed design. Integration with future development plans with adjoining properties is required to coordinate the location of outfalls and construction.

Flood Hazard Summary

As was discussed in the Flood Hazard Report, no effects were identified with the applicant's engineering concluding flooding associated with the project works will be less than minor.

Recommended Consent Condition

12 Flood Hazard

- (a) The project shall be designed to achieve the following flood risk outcomes:
- (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding;
 - (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors;
 - (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no existing dwelling;
 - (iv) no new flood prone areas; and
- (b) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings. Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-project and post-project 100-year ARI flood levels (for Maximum Probable Development land use and including climate change).
- (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising existing authorised habitable floor level and new overland flow paths, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.

NoR D4: Ōpāheke North-South FTN Arterial

The Ōpāheke North-South FTN Arterial is a new 30m four-lane FTN arterial with separated walking and cycling facilities between Hunua Road in the north and Waihoehoe Road in the south. The road traverses green field zoned FUZ, crossing approximately seven streams (or tributaries of streams) and areas of flood plain, providing a new north-south connection between Drury and Papakura.

Key features of the proposal include the following:

- A new road to enable a 30m wide four-lane cross section including bus lanes and separate walking and cycling facilities;
- Localised widening around intersections with existing roads to accommodate vehicle stacking and tie-ins and walking and cycling facilities/crossings;
- Proposed new culverts;
- Four proposed stormwater wetlands;
- Two proposed bridges over Waipokapū Stream (approximately 120m long) and Waihoehoe Stream and floodplain (approximately 265m long);
- Batter slopes and retaining to enable construction of the corridor, and associated cut and fill Activities;
- Vegetation removal; and
- Areas identified for construction related activities including site compounds, construction laydown, bridge works area, the re-grade of driveways and construction traffic manoeuvring.

The transport corridor has seven sub-catchments:

- Catchment 1 drains north west towards the low point on Hunua Road where it is proposed to be managed by devices such as raingardens and swales within the designation with an outlet connected to the existing stormwater network
- Catchment 2 will be collected and discharged into Wetland 1 for treatment and attenuation and will be discharged into the Waipokapū Stream tributary.
- Catchments 3 and 4 will be collected and discharged into Wetland 2 for treatment and attenuation and from there into a Waihoehoe Stream tributary.
- Catchments 4 and 5 will be collected and discharged into Wetland 3 for treatment, retention and flood attenuation and discharge into the main stem of the Waihoehoe Stream.
- Catchments 6 and 7 will be collected into Wetland 4 and discharge into a Waihoehoe Stream tributary.

A potential set of cross drainage structures for this transport corridor including bridges and culvert crossings over Waipokapū and Waihoehoe Streams, while culvert crossings could be

used for a Waipokapū Stream tributary and several overland flow paths. The type and size of cross drainage structures has not yet been determined and will continue to be assessed through subsequent consenting and design phases.

Flood Hazard Summary

The operational effects refer to the existing (pre-project development) and future (post-project development) flood model results and considers the flooding extents at new culvert crossings, bridge crossings over Waipokapū Stream and Waihoehoe Stream and the flooding extents on existing properties due to the new transport corridor.

With regard to existing habitable buildings where potential flood effects have been identified – with all, the Flood Hazard Report concludes all these potential effects are considered to be minor or negligible with flood level increases ranging from 0 m to 0.09 m. These increases have been checked in accordance with the assessment criteria outlined earlier in this report where one property requires mitigation in the form of a diversion drain (105 Walker Road, Drury). No mitigation is required for remaining properties assessed.

In terms of culvert operation, several locations were identified where the increase in flood water height was greater than 500 mm on other property and is therefore potentially moderate. However all of these increases were contained to existing pasture areas, did not affect existing buildings and are considered potential effects which can be mitigated by; diversion drains, increasing culvert sizes and/or managing the potential for inlet blockage within the proposed designation extent, or integrating corridor and upstream development design requirements (e.g. building platform and road levels).

The risk of culvert blockage and the potential effects will need to be considered further at detailed design stage, however, it is considered mitigation measures will be able to be implemented within the proposed designation extent.

Recommended Consent Condition

12 Flood Hazard

- (a) Where relevant to the Stage of Work, the project shall be designed to demonstrate that the Mangapū Stream (Symonds Stream) generally located at NZTM 1775480, 5893662 and shown in Schedule 1 shall be crossed by a bridge.
- (b) The project shall be designed to achieve the following flood risk outcomes:
 - (i) no increase in flood levels for existing authorised habitable floors that are already subject to flooding;
 - (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors;
 - (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no existing dwelling;
 - (iv) no new flood prone areas; and
 - (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings.
- (c) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-project and post-project 100-year ARI flood levels (for Maximum Probable Development land use and including climate change).
- (d) 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, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.

NoR D5: Ponga Road and Ōpāheke Road Upgrade

The project proposes to upgrade a 4.15km section of Ponga Road and Ōpāheke Road, from Great South Road in the north, to Jack Paterson Road and the future Mill Road corridor (which forms a separate project) in the southeast, to a two-lane arterial with separated walking and cycling facilities. Key features of the proposed upgrade common to each Project section include the following:

- A typically 24m or 20m wide road with two lanes and separated walking and cycling facilities
- Likely posted speed of 50kph;
- Localised widening around the existing intersections to accommodate for vehicle stacking and tie-ins and walking and cycling facilities/crossings;
- Batter slopes and retaining to enable widening of the corridor and/or wetland construction, and associated cut and fill activities;
- Vegetation removal along the existing road corridor; and
- Areas identified for construction related activities including site compounds, construction laydown, bridge works area, the re-grade of driveways and construction traffic manoeuvring.

The NoR D5 has been assessed in the Flood Hazard Report in three sections and the stormwater design, flood modelling results and proposed mitigation noted for each discussed as follows:

Ponga Road Upgrade Section

Three sub catchments are proposed for this section of the project. Runoff from catchment 1 drains into catchment 2 and discharges at chainage 1440m from Wetland 1 into an existing overland flow path leading to Waipokapū Stream. Runoff from catchment 3 is collected at a low point (chainage 860 m) and discharges from Wetland 2 into Mangapū Stream. In addition to providing water quality treatment and hydrology mitigation (retention and detention), each wetland will provide flood mitigation to attenuate the post development 100 ARI peak flows to pre-project development peak flow rates.

The proposed route crosses Mangapū Stream at twin culverts. These culverts are proposed to be upgraded to a new bridge incorporating the new walking and cycling paths. There are two existing culverts along the route alignment. These will be assessed further as the detailed design stages of the project progress.

Ōpāheke Road Rural Upgrade Section

It is proposed to widen, and realign a portion of, the existing road within the Ōpāheke Road Rural Upgrade section to a 24m urban arterial. The Ōpāheke Road Rural Upgrade section extends 1.6km from the extent of the FUZ in the north to Ponga Road in the south.

Three sub-catchments are created along the transport corridor. It is proposed that the runoff from Catchment 1 discharges into Wetland 1 while Catchment 3 is diverted to join Catchment 2 and discharge into Wetland 2. The wetlands will discharge either directly or indirectly to the Ōtūwairoa Stream.

As is the case with the Ponga Road section, the wetlands will provide water quality treatment and hydrology mitigation (retention and detention), along with flood mitigation to attenuate the post development 100 ARI peak flows to pre-project development peak flow rates.

In terms of culverts and other structures, the existing Ōtūwairoa Stream Bridge is proposed to be replicated with active mode bridges, on either side of the existing bridge. There is also a single existing culvert and in both cases the design of the new and replacement structures will/may evolve as the designed design stages progress.

This section also includes a new road connection to Walker Road (and closure of a section of the existing Ōpāheke Road – replaced by the new North Island Main Trunk (NIMT) rail bridge).

Ōpāheke Road Urban Upgrade Section

This section of NoR D5 includes the regrading of nine driveways along Ōpāheke Road and the upgrade of the Ōpāheke Road / Settlement Road intersection to a roundabout. It is estimated that the upgrade of the intersection at Ōpāheke Road and Settlement Road increases the existing impervious area from approximately 2,880 m² to 3,600 m² due to the addition of the new cycle and pedestrian pathways on both sides of the corridor. Stormwater management, such as a raingarden, is proposed on the south eastern corner of the roundabout to attenuate and treat the surface runoff. Improved inlets are proposed north of the intersection to allow for overland flow to cross Settlement Road and not to increase the existing ponding and flood levels on the northern side of the road.

Flood Hazard Summary

The proposed Ponga Road vertical alignment is required to tie in with the proposed Mill Road corridor. Raising the vertical alignment improves flood resilience of the corridor but potentially obstructs flow and a bridge is required to mitigate this effect. The potential bridge span and abutments should be considered further at detailed design with their shape and location optimised within its general location to minimise potential flooding effects. There are no existing houses within the flood plain upstream of Ponga Road. There are no significant flooding issues expected with the proposed culverts or wetlands at Ponga Road.

With regard to the Opaheke Road rural section, flooding areas upstream of Ōtūwairoa Stream crossing and the Ōpāheke Road over rail crossing were identified as a potential risk to increased flooding. Following the flood hazard modelling (and incorporating the new walking and cycling bridges at the same level as the existing Ōpāheke Road Bridge), it was evident current road bridge is submerged during a 100-year flood and the new bridges are therefore also within the flood flow. Subsequently an increase in the the upstream flood level of up to 0.11 m occurs which will potentially affect several upstream properties. The most significant effect is to Property H at 156 Ōpāheke Road where the lower floor at ground level would be subject to increased flooding (increase of 0.11 m) noting existing flooding in the pre project scenario is to a depth of 0.7m. The remaining properties which were assessed experienced flood level increases of 30mm (0.03 m) or less. The Flood Hazard Report indicates Property H requires further assessment to respond to the moderate level of affect (consistent with the assessment criteria) along with corresponding mitigation methods to be determined during detailed design. An option presented in the Flood Hazard report is to increase the bridge span for the Ōpāheke Road Bridge to reduce the flood level at Property H. This is in accordance with the recommended consent condition listed below for NoR 5 (sub cause (a)).

The proposed NIMT rail overbridge is sited to the north of the existing Ōpāheke Road and will obstruct an existing overland flow path to the north of the eastern rail bridge abutment. Provided the existing drain within the existing road reserve is maintained and a new overland flow path past wetland 2 is provided to divert flow around the north side of the approach embankment, the Flood Hazard Report assessed effects to be minor.

Regarding the Ōpāheke Road Urban Upgrade Section, intersection arrangement will affect an overland flow path to the east. It is recommended to provide stormwater treatment and attenuation to manage the effect of increasing impervious area, intercept the overland flow path and connect this directly back to the pipe system to the east. If levels allow it is recommended to intercept the overland flow path and direct it east along Settlement Road and avoid exacerbating flooding on low lying properties to the south east of the intersection.

Recommended Consent Condition

12 Flood Hazard

- (a) Where relevant to the Stage of Work, the project shall be designed to demonstrate that the Mangapū Stream (Symonds Stream) generally located at NZTM 1775480, 5893662 and shown in Schedule 1 shall be crossed by a bridge.
- (b) The project shall be designed to achieve the following flood risk outcomes:
 - (i) no increase in flood levels for existing authorised habitable floors that are

- already subject to flooding;
- (ii) no more than a 10% reduction in freeboard for existing authorised habitable floors;
 - (iii) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no existing dwelling;
 - (iv) no new flood prone areas; and
 - (v) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings.
- (c) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-project and post-project 100-year ARI flood levels (for Maximum Probable Development land use and including climate change).
- (d) 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, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.

Flood Hazard Effects During Construction

In their Flood Hazard Report, the applicants acknowledge that there is the potential for construction phase flooding effects. Therefore for each NoR route an assessment of the potential flood hazard has been included based on the type of work that will be taking place (e.g. embankments, bridge and culvert construction) relative to the local flood characteristics. As detailed in the draft conditions of consent further detail is proposed to be provided in the Construction Environmental Management Plan (CEMP) for each NoR route including the form of any mitigation. Indicatively the issues that will be considered include the following:

- Siting construction yards and stockpiles outside the flood plain;
- Minimising the physical obstruction to flood flows at bridges due to temporary works;
- Diversion of overland flows away from any longer-term working areas within the flood plain;
- Staging and programming to carry out work when there is less risk of high flow events; and
- Methods to reduce the conveyance of sediment, or 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).

Recommended Condition

The Construction Environmental Management Plan (CEMP) condition common to each NoR is as follows, including provision for flood hazard assessment:

- (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work.
- (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) the proposed site layouts (including construction yards), 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) measures to mitigate flood hazard effects such as siting stockpiles out of

- floodplains, minimising obstruction to flood flows, actions to respond to warnings of heavy rain;
- (viii) procedures for incident management;
- (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to Watercourses;
- (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up;
- (xi) procedures for responding to complaints about Construction Works; and
- (xii) methods for amending and updating the CEMP as required.

(c) Any CEMP prepared for a Stage of Work shall be submitted to Council for information at least ten working days before the Start of Construction for a Stage of Work.

3.0 Assessment of Effects

The NoRs are proposed to be constructed and operated in the catchments of Ōtūwairoa Stream (Slippery Creek), Hingaia and Ngakoroa Streams where each is currently subject to varying degrees of flooding and in the case of Ōtūwairoa Stream operate extensive floodplain systems during the 100-year ARI rainfall event. In brief, each NoR proposes the construction of new or widening to existing carriageways and the inclusion of additional transport modes using cut and fill techniques and in several cases the construction of new bridges across stream systems. Each NoR will be served by drainage infrastructure owned and operated by each applicant (i.e. Waka Kotahi and Auckland Transport) generally comprising formed open drains culverts, bridges, swales, stream diversions, piped reticulation and stormwater management devices.

Was discussed earlier in this memorandum, this assessment focuses on the land use changes in flood hazard (positive and adverse) as a result of constructing and operating the arterial routes. The applicants have proposed a suite of stormwater management devices for each NoR route in line with current practice to address the effects of stormwater runoff from the impervious surfaces (e.g. contaminants, hydrology mitigation, flood peak flow attenuation). This has included provision within each designation boundary to construct and operate the management devices (e.g. treatment and attenuation wetlands). Effects assessment of the stormwater discharges will be assessed at a later date when regional consents are sought for each route and are therefore not assessed in further detail here.

Flood Hazard Assessment

As a result of constructing and operating each NoR route flood hazard effects may include changes to; the flood freeboard to habitable buildings, overland flow paths, the ability to access property by residents and emergency vehicles, the depth of flooding to roads and flooding arising from the blockage of stormwater drainage. In order to understand and assess the potential flood hazard effects, the applicants' engineering consultant applied a stepped assessment method using tools such as rapid flood hazard assessment (RFHA), verification site visits, pre and post development flood hazard modelling and mapping to gauge the difference in flood depth and extent post development.

This stepped approach has enabled a consistent and repeatable method for assessment of flood hazard risk, including implementation of the Auckland Council Modelling Specification ('Modelling Specification') which is an implementation guide for all green field and brown field development in the Auckland Region. The pre and post development flood hazard modelling has included current practice assumptions such as including Modelling Specification habitable floor freeboard assessment requirements, the influence of climate change using MfE guidance (rainfall frequency and intensity, sea level rise) along with allowance for future changes in land use within the catchments by applying maximum probable development (MPD) imperviousness. During project implementation the Flood Hazard Report also cites future coordination (in terms of adjacent/connecting stormwater infrastructure) with surrounding land use where development is occurring concurrently.

During the preliminary stages of the project, Healthy Waters specialists assessed the methods discussed in the Flood Hazard Report and determined there were no significant flaws in how the model results were derived or reported at this stage of the project design. Further, the findings for each NoR route are suitable to understand the quantum of flood hazard effects (adverse and positive), albeit being based on preliminary design and alignment of each route. This conclusion is reached on the basis that further detailed analysis would be carried out during the detailed design phase should the notices of requirement be approved. This is consistent with the approach taken for other similar scale motorway/arterial routes in the region (e.g. Penlink, northern motorway stages)

Working in combination the stepped assessment approach is the subsequent application of assessment criteria to the flood hazard modelling results to apply a classification of effects (positive, negligible, moderate, minor) to inform this current assessment on the context of the NoRs while also directing the requirement for future mitigation to be implemented during the detailed design phases for each stage of the NoRs. The assessment criteria has been reflected in each of the recommended consent conditions for the NoRs which has included input from Healthy Waters Specialists. Notably the classification of flood hazard risk and associated management through NoR/consent conditions for management of matters such as habitable floor flooding aligns with similar outcomes sought through recent projects such as the Warkworth to Wellsford motorway project.

Flood Hazard Assessment Results Summary and Proposed Mitigation

The above-mentioned steps to determine post development flood hazards and associated application of the assessment criteria has enabled results to be presented regarding flood freeboard to habitable buildings, overland flow paths, flood plain operations and current/future operation of structures such as culverts and bridges. For brevity, the summary of flood hazard effects discussed in Section 10 of the Flood Hazard Report is presented as follows.

Overall it is concluded that the potential flood hazard effects post development are understood and there is a provision for mitigation through the performance-based requirements stipulated in the respective NoR consent conditions. It is anticipated understanding of flood hazard effects will continue to be defined as detailed design progresses for each NoR and will include flexibility to capture the potential for the emergence of new flood hazards (e.g. due to concurrent land use change). Minor refinements to the NoR consent conditions are recommended in Section 5 of this memorandum.

NoR D1: Alterations to NZ Transport Agency designation 6706 – State Highway 22 (SH22) Upgrade

Overall effect of the upgrade on operational phase flood hazards is positive due to the greater conveyance capacity of the new Ngakoroa Stream Bridge. This results in much improved freeboard to the bridge (with benefits to the safe passage of flow safety of those using the bridge) and reduced flood levels upstream with improved safety for the public and properties.

NoR D2: Jesmond to Waihoehoe West FTN Upgrade – Jesmond Road Section

The Jesmond Road FTN Upgrade could have some effect on operational phase flood levels at the sag points where overland flow crosses the transport corridor. With careful design of road levels and upsizing of culverts, flood levels can be managed to be no worse than they currently are. Construction of a diversion drain at 119, 125 and 131 Jesmond Road will direct/formalise overland flow away from the sag at the corridor around nearby buildings and wetland 2 to the open stream channel north of 131 Jesmond Road.

NoR D2: Jesmond to Waihoehoe West FTN Upgrade – Bremner Road Section

The overall effect of the upgrade on operational phase flood hazards in the Hingaia Stream is positive due to the greater conveyance capacity of the new Hingaia Stream Bridge. This results in much improved freeboard to the bridge (with benefits to the safe passage of flow safety of those using the bridge) and reduced flood levels upstream with improved safety for the public and properties.

Using a culvert at the proposed crossing at chainage 600 on Bremner Road will cause an increase in flood levels upstream of the proposed transport corridor. The area of ponding upstream of the culvert would be relatively large and although the culvert is large, there is a risk of partial blockage which would increase flood hazards when future urban development is considered.

A bridge is proposed instead to mitigate the flooding upstream of the crossing. The flood effects at Ngakoroa Steam show an increase in flood levels upstream and due to the constraint of the overhead high voltage Transpower lines, the proposed bridge cannot achieve adequate freeboard and will continue to obstruct the flood flow. Ongoing coordination and integration with Waka Kotahi is required to set bridge levels to suit both the State Highway 1 Papakura to Drury South widening project and the Bremner Road FTN upgrade project.

NoR D2: Jesmond to Waihoehoe West FTN Upgrade – Waihoehoe Road West Section

No specific measures are recommended for flood hazard mitigation during the operational phase. Integration of the discharge points with adjoining development plans is needed.

NoR D3: Waihoehoe Road East Upgrade

No specific measures are recommended for flood hazard mitigation during the operational phase. Integration of the discharge points with adjoining development plans is needed.

NoR D4: Ōpāheke N-S FTN Arterial

There are several locations along the route where diversion drains are required on the upstream side of the embankment to prevent increases in flood levels, prevent flood prone areas being formed and mitigate the risk of culvert blockage.

NoR D5: Ponga Road and Ōpāheke Road Upgrade – Ponga Road Section

The height of Ponga Road at the new Mangapū Stream Bridge could cause flood waters upstream of the crossing to increase in depth and adversely affect access to a nearby property. The shape of abutments and span of the bridge should be shaped and optimised (within its general location) to minimise increases in flood levels approaching the bridge and changes to flood hazards.

The vertical alignment of Ponga Road over the Mangapū Stream increases to tie in with Mill Road. This will increase the resilience of the road to flooding as flows currently overtopping the road will be diverted under the new bridge.

NoR D5: Ponga Road and Ōpāheke Road Upgrade – Ōpāheke Road Rural Section

During the operational phase, there is an increase in flood level to an existing upstream dwelling at 156 Ōpāheke Road.

The rail widening and rail over bridge geometry is located to the south of the existing road alignment. Diversion of the overland flow paths nearby and confirmation of the outlet channel path under the rail is required at the detailed design phase. The existing drain south of the corridor is potentially obstructed by the new upgrade and should be diverted to the south to enable flow conveyance towards Ōtūwairoa Stream.

NoR D5: Ponga Road and Ōpāheke Road Upgrade – Ōpāheke Road Urban Section

Overland flows crossing Settlement Road should be improved by new inlets and discharged into the nearby underground stormwater network. There is an opportunity for stormwater treatment and flood attenuation to be provided within the south eastern corner of the designation sought.

Flood Hazard Effects During Construction

Throughout the Flood Hazard Report, the applicant's engineering consultant has discussed the potential location specific flood hazard effects associated with constructing the NoR sections. This is based on the type of work that is anticipated to be carried out (e.g. culvert and bridge abutment construction, cut and fill activities, diversions). Due to the dynamic nature of

construction staging it is not typical practice to assess potential flood hazard in the manner that has been completed for the permanent operational phase of the arterial routes. Therefore a consent condition has been recommended by the applicants requiring flood hazard assessment during construction (and associated mitigation) is addressed as part of the Construction Environmental Management Plan (CEMP). This proposed approach is considered satisfactory to assess and or mitigate any temporary flood hazard effects associated with the construction activities. No edits are recommended to the CEMP conditions.

4.0 Submissions

D1 NoR

9 - Anthony and Jennifer Joyce, 15 Burberry Road

Submission:

- The Submitter is concerned at the lack of integration with the Auranga B2 area including the potential co-location (and use of) of stormwater infrastructure which may have the potential to reduce land requirements on the Submitters land.
- Furthermore, the Submitter does not consider that appropriate alternatives for location of pond/wetland treatment devices (or the option to utilise less land intensive options) have been considered.
- For example, there are large areas of land located on the southern side of SH22 which are already "Council owned" which would be better suited to be set aside for treatment of stormwater runoff.
- Condition 12 is also considered to be inappropriate for the developing urban context as it only requires flood risks to be managed on "existing authorised habitable floors". Existing authorised habitable floors is not a defined term and it is unclear if this refers to "existing" at the time of the NoR being confirmed or at the time of the outline plan of works.
- The uncertainty around this condition means that there is a potential for future development on the Submitters land being placed at risk of being inundated to an unknown degree by the future works to implement the designation.

Relief sought:

The NoR be updated to take into account the urbanisation of the Drury West area, and necessary changes to address the concerns of the submitter raised above.

Assessment:

- Healthy Waters does not have a view on the exact location of the ponds/wetland and is a matter to be addressed through detailed design of the route and requirements to manage stormwater runoff. There may be a functional requirement for it to be constructed at the proposed location. For example the wetland appears to be located out of the floodplain which is typical practice to avoid inundation or damage and mobilisation of contaminants. Land on the southern side of SH22 appears to be in the flood plain.
- It is agreed the term 'existing authorised habitable floors' used in NoR consent conditions presents some complexities in its implementation and interpretation. In this regard I have recommended an edit in Section 5.

11 – Karaka and Drury Limited

Submission:

NoR D1 must appropriately recognise that all associated stormwater management/conveyance proposed for the State Highway 22 works should integrate with the development anticipated to occur on the surrounding land. In that regard, NoR D1 must ensure that all stormwater infrastructure required for the State Highway 22 works:

- a) Recognises and integrates with the Stormwater Management Plan that KDL has already prepared for the PC51 land; and

- b) Avoids any risk of development on land adjacent to State Highway 22 (including within the PC51 area) being inundated to an unknown degree by the future works to implement the designation.

Relief sought:

That the Council recommend that NoR D1 be approved as notified, subject to such amendments as are necessary to address KDL's concerns as outlined above.

Assessment:

Healthy Waters support the concept of integration of land use development and construction of the NoR arterial routes and is a matter echoed in the Flood Hazard Report. The recommended flood hazard consent conditions are performance based to avoid increases in flood level on urban or future urban zoned land.

D2 NoR

15 – Soco Homes Limited, 224 Jesmond Road

Submission:

Except for the pond and extended area, we support the Road corridor carriage way NoR. 2. It is unsure whether the pond is to service road network or wider development catchment, what is the minimum size and capacity requirement. Whether there is other alternative options. The extended area is significant to impact the future MHU zoning development capacity of the site.

Relief sought:

We seek to decline this part of NoR, and give more consideration to relocate the pond and extended area of this designation to an alternative location or larger landholdings.

Assessment:

Healthy Waters supports retaining size of pond at the present time and does not have a view on the exact location of the ponds/wetland until further detailed design can be done on route design and the associated requirements to manage stormwater runoff through the regional consent process to authorise the stormwater discharges.

17 – Elly Pan, 341 Jesmond Road, 38 Burberry Road

Submission:

The preliminary design proposals for the provision of the bridge crossing of the no name stream anticipate an increase in the upstream floodwater depth of approximately 500mm. There is no reason for this to occur and any design parameter should require that there is no change to any upstream floodwater depth.

Relief sought:

Ensure that the design of the bridge crossing over no name stream will have no increased upstream flooding effects.

Assessment:

The Flood Hazard Report has commented on this flood level increase and has proposed a potential mitigation measure to be addressed during detailed design. This will also be required through the performance-based condition to avoid increases in flood levels greater than 50mm for urban or future urban zoned land.

D4 NoR

10 – Mr Ken Davidson and Mr Aaron Davidson, 168 Walker Road

Submission:

The currently proposed north-south orientation of the wetland would reduce the direct road frontage and therefore potential for access off the new arterial road to the site. The pond orientation would also decrease the commercial visibility of the corner site to passers-by.

Relief sought:

We request that the adverse effects of Wetland 1 are mitigated by changing the orientation from north-south to a more east-west orientation, as indicated in the hand sketched pond footprint above, in yellow. The requirement for the wetland location outside any floodplain could still be retained while the length of the site frontage to the arterial road would be approximately doubled.

Assessment:

This is a matter to be addressed during the detailed design phase of the route and stormwater management system.

D5 NoR

9 - Aaron Abercrombie, Bellfield Road

Submission:

We need to fully understand the design requirements of the proposal, impacts of timing of the works, construction methodology, ongoing accessibility the impact on our "Neighbourhood Centre" lot which borders Bellfield Rd/Otuwairoa Esp. The Neighbourhood Centre is a critical element in providing amenity to the Bellfield Estate Subdivision and as such any impacts will need to be fully understood and mitigated Furthermore, we note that there are proposed works to be carried out within Opaheke Park, these appear to be related to storm water works. Bellfield Estate Ltd has a Development Agreement with Auckland Council and we need to ensure that nothing from your proposed works, impacts the current approved design or the contracted legal obligations under the agreement

Relief sought:

We request that we are kept fully informed, consulted and provided information as it is available with sufficient time to be able to review fully and provide feedback.

Assessment:

This is a matter being considered by Healthy Waters and the related Development Agreement.

5.0 Conditions

I have reviewed the conditions and have the following recommendations indicated in **bold** (additions), with deletions (~~striketrough~~). The recommended edits are common to all NoR Flood Hazard conditions as sub clauses a, b and c are duplicated. Consequential edits to selected definitions are also recommended, which are also common to all NoR condition sets.

12 Flood Hazard.

- (a) The Project shall be designed to achieve the following flood risk outcomes:
 - (i) no increase in flood levels for ~~existing authorised~~ habitable floors that are already subject to flooding;
 - (ii) **no additional habitable floors flooded;**
 - (iii) no more than a 10% reduction in freeboard for ~~existing authorised~~ habitable floors;
 - (iv) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no existing dwelling;
 - (v) no new flood prone areas; and
 - (vi) no more than a 10% average increase of flood hazard (defined as flow

depth times velocity) for main access to ~~authorised~~ habitable dwellings.

- (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100-year ARI flood levels (for Maximum Probable Development land use and including climate change).
- (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising ~~existing authorised~~ habitable floor level and new overland flow paths, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.

Definitions:

Habitable floor	Any room (floor) in an authorised building existing at the start of detailed design for a Stage of Work used for residential living activity, excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Habitable floor level that has existing flooding	Where the flood level using the pre Project model scenario is above the existing authorised habitable floor level.

Commentary:

- Deletion of the terms 'authorised' and 'existing authorised' in the conditions is suggested to be replaced by clarification of the habitable floor definitions section of each NoR.
- The Flood Hazard Report does not indicate any new habitable floors being flooded as a result of the project, however a performance-based condition is recommended as a potential scenario.

6.0 Objective and Policies

The natural hazards and flooding related Auckland Unitary Plan objectives and policies relevant to the NoRs are listed as follows:

- B10 Environmental Risk:
- B10.2.1 Objectives (3), (4) and (6).
- B10.2.2 Policies (1), (3), (4), (5), (7) (8) (11) and (12).
- E36 Natural Hazards and Flooding:
- E36.2 Objectives (1), (2) and (4).
- E36.2 Policies (1), (2), (4), (18), (20), (21), (23), (27), (29), (30) and (35).

The applicants have identified and assessed current and future flood risk associated with the NoR route and has sought to incorporate the influence of climate change projections consistent with Policy B10.2.2. Although limitations in the flood hazard modelling are acknowledged (being based on preliminary designs), the quantum of flood hazard changes are able to be assessed inform the level of risk with a corresponding pathway through the consent conditions for mitigation.

Further assessment is required during detailed design of the NoR routes where suitable performance requirements will need to be met as conditions of consent contributing to overall consistency with the B10 and E36 objectives and policies.

7.0 Conclusions and recommendations

The assessment in this memorandum does not identify any reasons to withhold the NoRs. The flood hazard effects of the proposals considered by this memorandum that could be granted subject to recommended conditions, are for the following reasons:

- The applicant has used a robust assessment method using a series of steps with associated assessment criteria to assign a level of risk.
- The flood hazard modelling accounts for the effects of climate change by adjusting for changes in temperature and rainfall patterns in accordance with MfE guidance.
- The flood hazard modelling and reporting of the results is suitable to inform the quantum of flood hazard effects, indicating exacerbation of flood risk with mitigation of effects outside the designation through the performance related conditions. Further flood hazard modelling of the detailed design is proposed accordance with flooding related consent conditions and associated performance requirements.
- Subject to the imposition of consent conditions the proposal is not inconsistent with the flood hazard related objectives and policies in the Auckland Unitary Plan.
- Subject to the imposition of consent conditions and the edits to the conditions recommended in Section 5, it is considered that the any exacerbation of flood hazard as a result of constructing the NoR routes will be minor.



Trent Sunich
Consultant Stormwater Technical Specialist

Memo (technical specialist report to contribute towards Council’s section 42A hearing report)

1 September 2021

To: Nicholas Lau and Sanjay Bangs – Senior Policy Planners, Auckland Council

From: Carl Tutt – Ecologist, Auckland Council

Subject: Notice of Requirement – Drury Arterial Network – Ecological Assessment

1.0 Introduction

- 1.1 I have undertaken a review of the notice of requirement, on behalf of Auckland Council in relation to ecological effects.
- 1.2 I hold the qualifications of Bachelor of Science in Biology and Post Graduate Diploma in Environmental Management from Auckland. I have 9 years’ experience working as an ecologist in private and public sectors.
- 1.3 I have completed the Auckland Council Stream Ecological Valuation (SEV) training (2015).
- 1.4 I am a professional member of the New Zealand Ecological Society, Environment Institute of Australia and New Zealand, New Zealand Freshwater Sciences Society and New Zealand Herpetological Society.
- 1.5 In writing this memo, I have reviewed the application material in full. The following documents specifically address ecological matters:

Application material (as notified):

- ‘*Assessment of Effects on the Environment*’ by Te Tupu Ngātahi Supporting Growth, rev.1, dated January 2021.
- ‘*Assessment of Ecological Effects*’ by Te Tupu Ngātahi Supporting Growth, rev.1, dated January 2021. (hereafter referred to as ecological report)
- ‘*Assessment of Arboricultural Effects*’ by Te Tupu Ngātahi Supporting Growth, rev.1, dated January 2021.
- ‘Assessment of Alternatives’ by Te Tupu Ngātahi Supporting Growth, dated January 2021.
- Form 18: ‘*NOR D1*’, by Waka Kotahi, dated 28 January 2021.
- Form 18: ‘*NOR D2*’, by Auckland Transport, dated 28 January 2021.
- Form 18: ‘*NOR D3*’, by Auckland Transport, dated 28 January 2021.
- Form 18: ‘*NOR D4*’, by Auckland Transport, dated 28 January 2021.
- Form 18: ‘*NOR D5*’, by Auckland Transport, dated 28 January 2021.
- Conditions as notified for NoR D1, NoR D2, NoR D3, NoR D4, NoR D5.

Clause 23 response:

- ‘*Response to s92 Further Information Request for the Drury Arterial Network*’, by Te Tupu Ngātahi Supporting Growth, dated 7 April 2021

2.0 Key ecological Issues

This section provides an overview of the key terrestrial and freshwater ecological concerns that arise from the review of the application material. While there are impacts proposed on terrestrial and freshwater ecology, many of these matters are regional and therefore their inclusion in this application has been to help inform project design.

The EIANZ Ecological Impact Assessment Guidelines¹ have been used to inform the assessment of effects in the Ecology Report provide nationally consistent direction on the approach to be adopted when assessing ecological impacts. It provides a standardised approach to determining ecological values and magnitudes of effects, which combined provides an overall level of ecological effect.

Wetlands

- 2.1 I recognise that many of the ecological matters will be addressed in more detail at the regional consenting stage, outside of this current NoR process. The National Policy Statement on Freshwater Management 2020 (NPS:FM 2020) and National Environmental Standards on Freshwater (NES:FW) set strong direction on what is required in relation to wetlands. One key consideration is there is a functional need when it comes to impacts on wetlands from specified infrastructure (NPS:FM 2020 section 3.21).
- 2.2 Section 13.3.3.2 of the Assessment of Alternatives along with several preferred options sections (10.3.3, 11.1.3.3, 12.3.3, 14.1.3.3) provide comment of the proposals in relation to the NPS:FM 2020. Specifically, the requirement to avoid or minimise impacts on natural inland wetlands unless there is a functional need. It then indicates that further opportunities to minimise impacts within the project alignment will be provided at detailed design stage. I disagree with the above. Simply because these roads are classified as 'specified infrastructure' and there is a consenting pathway that allows for wetlands to be modified, there still needs to be a demonstrated functional need for the activity. While there will be opportunities to minimise impacts during the detailed design stage, the final designation alignment should make the avoidance of wetlands a priority as to not pre-emptively dictate the outcomes of future consents.
- 2.3 2021-NZEnvC-027 Director General of Conservation vs Taranaki Regional Council contains discussion around functional vs operational need of specified infrastructure in relation to impacts on wetlands. Outcomes of this case are semi-applicable to some, but not all, of these current applications. The 2021-NZEnvC-027 case is similar to any application that involves the widening of existing designations or existing road carriageways. Such as there is a functional need for widening an existing road, and avoidance can be applied depending on which side of the road the wetland is, and subsequent widening on the other side of the road.
- 2.4 It is not comparable to NOR D4. There is no existing designation or existing road on this alignment. There is no apparent functional requirement to have the road in this exact alignment nor any requirement to reclaim or drain existing wetlands.

Specific wetlands of concern have been identified below.

2.5 NOR D2

This new designation traversing from is widening and extending Jesmond and Bremner Roads. Wetlands are identified as named in the Assessment of Ecological Effects.

- (i). D2W4 – This wetland will be partially bridged. A section of it is proposed to be reclaimed and the main flow path through this area will be diverted. Bremner Road upgrade alignment will connect to a new road as part of the Auranga development, drawing SGA-DRG-STH-04-CI-2201, rev.F. It is understood that this road alignment was agreed through mediation as part of Private Plan Change 6.

¹ Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., Ussher, G.T. 2018. Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd edition.

2.6 NOR D4

This new designation traversing from Hunua Road in the north to Waihoehoe Road to the south crosses through a rural landscape. Wetlands are identified as named in the Assessment of Ecological Effects. All plans referred to are SGA-DRG-STH-04-CI-5201 rev.E to SGA-DRG-STH-04-CI-5206 rev. E. Specific impacts as depicted in the plans are described below.

- (i). D4W1 – this wetland is present immediately upstream of a pond and it is likely that the presence of this wetland is dependent on the pond. Design drawings indicate that this pond will be piped which and surrounding land filled will alter the hydrology of the area and potentially drain the wetland depending on final contours.
- (ii). D4W2 – this wetland is partially within the proposed designation at the head of a stream. The upper portion of this wetland is proposed to be reclaimed as it is under the new road and fill batters.
- (iii). D4W3 – This wetland is similar to D4W2 above in that it is along the boundary of the proposed designation at the head of a stream. The indicative design drawings show the road alignment and fill batters avoiding this wetland, chainage 3000-3200.
- (iv). D4W4 – This wetland is within the floodplain of the Waihoehoe stream. The presence of kahikatea forest (MF4), a critically endangered ecosystem immediately downstream indicates that this area was likely part of a larger wetland sequence. This wetland is also depicted at different extents in different sections of the application material. The section of this wetland east of the MF4 is proposed to be reclaimed by the road and fill batters. While there are direct impacts on this wetland shown there could be indirect impacts on the kahikatea forest from alterations to the upstream hydrology.
- (v). D4W5 – A narrow linear wetland which appears to have been channelised in the past, limiting the its extent. This one originates from within the proposed designation, extends east outside of the designation before bending to the south and west, entering and crossing the designation. While parts of this wetland will be directly reclaimed, the entire wetland both inside and outside the designation will likely be impacted by the road construction due to alterations to the hydrological regime.
- (vi). D4W6 – This wetland is partially within the designation and appears to have been influenced by the construction of farm ponds which have altered the surrounding hydrology. The largest of these ponds, downstream of the wetland is proposed to be piped. This could lead to the drainage of the wetland, a similar situation to D4W1.
- (vii). D4W7 – This wetland is associated with a steam D4S12 and has been influenced by the construction of farm dams/weirs which have increased water retention in some locations. This wetland traverses the proposed designation in a generally east-west orientation. Plans indicate that a section of this wetland within the designation will be reclaimed by construction of the road and batters.

2.7 Table 83 of the ecological report notes where some of these wetlands along the NOR D4 alignment could be avoided during detailed design, retained and in other cases where an offset would be required.

- (i). *“At the detailed design stage, options to avoid or reduce the level of impact (including hydrological effects) to stream and wetlands could be considered e.g. bridges, reduction of embankments, reduction in the length of culverts, type of culvert etc”.*

Aquatic Ecology (streams and wetlands)

- 2.8 A high-level assessment of effects associated with streams; culverting, reclamation and diversions has been provided which fed into the MCA process. The ecological report speculates on what may quantum of offsetting may be required in for stream impacts. Stream offset ratios are variable, the inclusion of speculative ratio's (3:1) should not be relied on.
- 2.9 The applicant has also speculated by using the same ratio for wetland offset even though there is not yet a widely tested and adopted model to calculate a wetland offset. Again, the inclusion of speculative ratio's (3:1) should not be relied on.

Terrestrial Ecology

- 2.10 Effects associated with terrestrial ecological matters; riparian vegetation removal, SEA vegetation removal and wetland buffer vegetation removal area are all regional plan considerations. Potential effects within the proposed alignment have been identified, highlighting the need for these to be further addressed at the regional consenting stage. Higher quality areas of vegetation, or those composing rarer ecosystem types have been identified and avoided through the MCA process.
- 2.11 I agree with the assessment and findings in relation to terrestrial ecological matters.

3.0 Assessment of ecological effects and management methods

- 3.1 The NPS:FM 2020 directs no net loss of extent or values of wetlands, providing further direction that additional measures will be required to address the effects (objective 2.1 and policy 6). Some impacts on wetlands along the five proposed designations will be unavoidable, especially where there is an existing road or designation that is proposed to be widened. In the event that wetlands are lost, mitigation is unlikely to be possible, so offset or compensation measures will need to be considered.
- 3.2 Where there is a new designation proposed in a location where there is no existing road, further emphasis should be placed on avoiding impacts on wetlands. NPS:FM 2020 section 3.22(b)(i-iv), contains the information that must be satisfied when considering wetland impacts associated with specified infrastructure.
- 3.3 The NPS:FM 2020 requires consideration of current and potential values of wetlands (section 3.21 and 3.22(3)(a)). While an ecological value of 'moderate' has been assigned to many wetlands across the proposed designations, it is not clear if this ecological value is the current state of the wetlands or the potential value. In relation to wetlands, 'loss of value' includes the loss of potential value (NPS:FM 2020, Section 3.21).
- 3.4 The magnitude of effects associated with terrestrial habitat loss has been applied whereas effects associated with wetland habitat loss have not. If the loss of wetlands cannot be avoided by the future project works, the magnitude of effect would likely be 'Very High', and the overall level of effect would be 'High' (given a moderate ecological value). This typically requires that further measures to offset or compensate are undertaken.
- 3.5 I believe it is not appropriate to speculate on potential ratios for effects management through the NOR process. The quantum of offset or compensation required should be calculated once a full understanding of the quality and extent of wetlands and streams is known, this should be at the regional plan consenting phase. A robust and transparent biodiversity accounting framework would need to be applied to determine the quantum of offset required.
- 3.6 Auckland Unitary Plan: Operative in Part Regional Policy Statement B7.2 (Indigenous Biodiversity) and 7.3 (Freshwater Systems) are applicable to this assessment.

- 3.7 The proposal is largely consistent with B7.2. Where significant ecological areas are unable to be avoided due to a functional requirement of the proposed road upgrade (Bremner Road bridge), efforts to reduce the effects can be achieved by increasing bridge spans, with any residual adverse effects to be offset or compensated.
- 3.8 Auckland Unitary Plan: Operative in Part Regional Policy Statement B7.3 centres around avoiding loss and significant modification of freshwater systems long with enhancing degraded freshwater systems. Specific policies have been added into chapter E3 of the Auckland Unitary Plan: Operative in Part in relation to natural inland wetlands. As this section is part of regional consenting and not the regional policy statement, E3 is not applicable to this NOR application, however it is captured due to it being in the NES:FW as detailed in section 3.1 above.

Further alternatives to avoid wetland habitat have been explored below.

- 3.9 The applicant has stated that there are opportunities to minimise impacts on wetlands by adjustments in the alignment, crossing/bridging and/or reducing the cross-section width of the road. This should be reflected in the NOR conditions. Specific comments around avoidance of wetlands of concern are further detailed below.

3.10 NOR D2

- (i). While the road alignment was agreed through mediation, there is an alternative option which avoids diverting the stream and wetland which does not appear to have been discussed. The proposed bridge in this location can be extended west to approximately chainage 550. This maintains the agreed road alignment and avoids direct impacts on the wetland D2W4.

3.11 NOR D4

- (i). The assessment of alternatives provides a wide view of the alignment options, however finer detail of the alignment in relation to ecological features has not been provided as it has for the other designations.
- (ii). Some wetlands along this alignment are able to be avoided by refining the designation boundaries to ensure the entire wetland are located outside of the designation (D4W2, D4W3, D4W6).
- (iii). Alternatively, if there is no scope to refine the designation boundaries, conditions have been recommended in section 5.0 below to ensure that the effects on the wetlands are avoided at detailed design.
- (iv). There are ponded areas downstream of wetlands D4W1, D4W4 and D4W7. It is unknown how the removal and piping of these ponds will impact the wetlands immediately upstream. If at the regional consenting stage, it is determined that removal of the ponded areas downstream of the wetlands will lead to partial or full drainage of the wetlands the alternatives such as increasing bridge spans or the inclusion of additional bridged sections of road would need to be explored.
- (v). D4W4 could be avoided entirely by extending the bridge span north to approximately chainage 2550.
- (vi). D4W1 and D4W7 could also be completely avoided by bridging the ponded areas immediately downstream.
- (vii). Auckland Transport has already proposed to bridge some wetland areas therefore, bridging all wetlands is potentially a practicable solution.

3.12 Designation conditions

- (i). Recommended conditions to ensure that the above have been detailed in section 5 below.
- (ii). Current designation conditions in relation to ecological restoration are missing some key information regarding current best practice. Specifically, requirements around eco-sourcing native species and replacement planting of failed plants. Alternative condition wording has been recommended in section 5 below.

4.0 Submissions

- 4.1 Submissions on the proposed plan change were reviewed for each proposed designation. Only submissions in designation 4 expressed concerns in ecology. Submissions 2 (Oyster capital) and 7 (Fletcher Residential). These submission concerns are carbon copies of one another, this is evident as submission 7 mistakenly forgot to remove references to Oyster. These submissions are summarised in the table below.

Submission Number	Submitter's Name	Issues Raised	Relief Sought (From Submitter)	Technical Assessment
4	Oyster Capital	Oyster opposes the alignment of the Opaheke North-South Road within its landholding as it proposes the removal of a National Policy Statement for Freshwater Management ("NPSFM") qualifying natural wetland (northern wetland within 116 Waihoehoe Road, referred to as an artificial pond in NOR D4). There are options to avoid works and protect this wetland, for example, by designing the road to slightly divert around this. Oyster considers that it is necessary to maintain and protect NPSFM qualifying natural wetlands.	Amend the alignment of the Opaheke North-South Road as per the Oyster design to avoid the northern wetland as far as practicable.	From an ecological perspective this amendment is supported.
4	Oyster Capital	Oyster opposes the location of the proposed Temporary Sediment Retention Pond 5 ("SRP 5") and Permanent Stormwater Wetland 4 ("Wetland 4") as these conflict with a NPSFM qualifying wetland within 76 Waihoehoe Road identified by Oyster's Ecologist (Freshwater Solutions) (see Attachment 2). Oyster considers that these should be located further north, so as to avoid adverse environmental effects and any further loss of wetland.	Relocate SRP 5 and Wetland 4 further north to avoid the NPSFM qualifying wetland and amend the extent of the proposed designation boundary accordingly.	The stormwater wetland could be shifted further north or designed in a way that it is integrated into the surrounding wetland where stormwater and ecological outcomes are achieved.
7	Fletcher Residential	Fletcher Living opposes the alignment of the Opaheke North-South Road within its landholding as it proposes the removal of a National Policy Statement for Freshwater Management ("NPSFM") qualifying natural wetland (northern wetland within 116 Waihoehoe Road, referred to as an artificial pond in NOR D4). There are options to avoid works and protect this wetland, for example, by designing the road to slightly divert around this. Oyster considers that it is necessary to maintain and protect NPSFM qualifying natural wetlands.	Amend the alignment of the Opaheke North-South Road as per the Oyster design to avoid the northern wetland.	From an ecological perspective this amendment is supported.
7	Fletcher Residential	Fletcher Living opposes the location of the proposed Temporary Sediment Retention Pond 5 ("SRP 5") and Permanent Stormwater Wetland 4 ("Wetland 4") as these conflict with a NPSFM qualifying wetland within 76 Waihoehoe Road identified by Fletcher Living's Ecologist (Freshwater Solutions) (see Attachment 3). Fletcher Living considers that these should be located further north, so as to avoid adverse environmental effects and any further loss of wetland.	Relocate SRP 5 and Wetland 4 further north to avoid the NPSFM qualifying wetland and amend the extent of the proposed designation boundary accordingly.	The stormwater wetland could be shifted further north or designed in a way that it is integrated into the surrounding wetland where stormwater and ecological outcomes are achieved.

5.0 Conclusions and recommendations

- 5.1 I have recommended conditions for NoRs D2 and D4 to ensure that the ecological value of wetlands are recognised prior to any works commencing and in advance of regional consents being sought. With this information available, better decisions can be made about how roading design can address or manage adverse ecological effects.
- 5.2 Additional Conditions (NoR D2 Condition 17 and NoR D4 Condition 13)

17. Design response to wetland within designation

The Outline Plan shall demonstrate how the Project and associated Construction Works will avoid adverse effects on wetland D2W4 within the designation (as shown on Drawing No. SGA-EC-DL-010.08 submitted with the application and included in Schedule 2), particularly in relation to the proposed design of the road carriageway and bridge referred to in Condition 12(a)(i).

13. Design response to wetlands within designation

The Outline Plan shall demonstrate how the Project and associated Construction Works will avoid adverse effects on wetlands within the designation, particularly in relation to the proposed alignment and design of the road carriageway, including the provision of bridges within the carriageway design.

- 5.3 Additions to Condition 11(a)(iii) of NORs D1-D5.

- (iii). Detailed specifications relating to the following:
- A. weed control and clearance;
 - B. pest animal management (to support plant establishment);
 - C. ground preparation (topsoiling and decompaction);
 - D. mulching; ~~and~~
 - E. plant sourcing and planting, including hydroseeding and grassing, and use of eco-sourced species for restoration purposes; and
 - F. restoration planting which remedies the loss of ecosystem services provided by vegetation identified for removal, including the replacement of planting which fails to establish.

Technical specialist report to contribute towards Council's section 42A hearing report

3 August 2021

Subject: Notice of Requirement (NoR): Drury Arterials Network. D2 Jesmond to Waihoehoe West Frequent Transit Network (FTN) Upgrade (Auckland Transport) and D4 Ōpāheke North-South FTN Arterial (Auckland Transport)

1. Introduction

- 1.1. This report provides a specialist review of the Notices of Requirement (NoR) lodged by Auckland Transport (AT) to introduce new designations for future strategic transport corridors to support the planned urban growth in Drury-Ōpāheke.
- 1.2. NoRs covered by this report are D2 - Jesmond to Waihoehoe West FTN Upgrade and D4 - Ōpāheke North-South FTN Arterial.

2. Experience and qualifications

- 2.1. I hold the position of Principal Specialist Built Heritage. I have worked for Auckland Council in historic heritage policy for approximately ten years. In this time, I have undertaken projects such as, historic heritage evaluations, geographic heritage surveys, built heritage condition assessments and have inputted into area spatial planning projects. I provided inputs into the development of the Unitary Plan in relation to scheduled historic heritage places. I have also inputted into heritage related plan changes. I oversaw the development of updates to the Methodology and guidance document for evaluating Auckland's historic heritage.
- 2.2. Relevant to this NoR, I provided built heritage input into the Drury-Ōpāheke Structure Plan and am currently providing inputs into Private Plan Change 48: Drury Centre Precinct.
- 2.3. I have a Bachelor of Planning (First Class Honours) from The University of Auckland.

3. Purpose and scope of this report

- 3.1. The purpose of this report is to review whether effects on built historic heritage have been adequately assessed for NoRs D2 and D4.
- 3.2. My review is focused specifically on NoR D2: Jesmond to Waihoehoe West FTN and D4: Ōpāheke North-South FTN Arterial. While there are five NoRs (the others being D1, D3, and D4) that have been simultaneously lodged, based on the known information, I do not consider the other three to have built heritage matters of substance that require commenting on.
- 3.3. General historic heritage matters across the five NoRs are addressed in a separate report by my colleague Mr Robert Brassey. Mr Brassey also specifically addresses matters relating to archaeology across the five NoRs.
- 3.4. This report provides:

- An overall review of information provided by the applicant relevant to built historic heritage, including any further information provided
- A final assessment as it relates to built historic heritage effects. This includes the appropriateness of the applicants recommended conditions to manage these effects, and whether modified conditions are required
- Confirmation of recommendations on the NoR, including any modifications sought and
- A final assessment of submissions relating to the matters raised, and relief sought.

3.5. This report does not contain any recommendation on whether or not the proposal should be approved or declined by the decision-maker.

4. Key information sources

I have reviewed the following NoR D2 and D4 related documents to inform preparing this report:

- Attachment A – Assessment of Alternatives, January 2021, version 1
- Attachment C – Proposed Conditions for the Designation
- Drury Arterial Network Assessment of Effects on Historic Heritage. Executive summary for Auckland Council discussion. Draft, September 2020
- Drury Arterial Network. Assessment of Construction Noise and Vibration Effects, January 2021, version 1
- Drury Arterial Network Assessment of Effects on Historic Heritage. January 2021, version 1, prepared by Trilford, D
- Drury Arterials Network Overall Layout Plan, Rev E, Issued for NoR Lodgement, 28 January 2021
- Indicative Design Drawings – Jesmond to Waihoehoe West FTN Upgrade
- Response to section 92 request for the Drury Arterial Network Supporting Growth
- Relevant submissions: Heritage New Zealand Pouhere Taonga (**Heritage NZ**) (#26 and #12); Katherine de Courcy, Greg Smith and Robert Smith (#22) and
- Section 92 Request for Further Information, - Appendix 1, 22 March 2021, Auckland Council.

5. Information provided by the applicant

5.1 The Applicant's archaeologist has undertaken an Assessment of Environment Effects (**AEE**) on historic heritage. Much of the report focuses on archaeology. Matters relating to built heritage, however, are also addressed where relevant. The built heritage sites identified and addressed relate to:

- Aroha Cottage (D2) – 201 Jesmond Road, Drury
- Former Drury Creamery and Casein Factory (D2) – 12 Norrie Road, Drury
- Former railway worker's residence (D2) – 18 Waihoehoe Road, Drury
- St John's Church and graveyard (D2) – 9 Cameron Place, Drury, and
- Brick utility building (D4) – 31 Ponga Road, Drury.

5.2 The Assessment of Construction Noise and Vibration Effects also addresses built heritage in relation to the two scheduled built heritage sites within the area, being the Aroha Cottage and St John's Church and graveyard.

Former Drury Creamery and Casein Factory

- 5.3 I concur with the findings in the historic heritage AEE that the origins of the former factory may slightly predate 1900. The title for the site on which the dairy factory is situated was in dairy industry ownership from September 1900.
- 5.4 Based on the rooflines and stylistic features, it appears likely different portions of the factory date to different earlier dates in my opinion (and subsequent later accretions). The ventilator, exposed rafter eaves and roof pitch of the main core of the building are bungalow style features. These features are generally seen in buildings dating from c.1915 into the 1920s. The directly adjoining western portion of the factory, may potentially be earlier, in my opinion.
- 5.5 In my opinion, the former Drury Creamery and Casein Factory on Norrie Road potentially has rarity value as one of a small collection of known extant early twentieth century dairy factories within the Auckland region. The closest comparisons in terms of construction style and materials (timber), are the former Buckland dairy factory near Pukekohe (unscheduled), thought to date to sometime between 1913 and 1917. While in the north, the former Matakana dairy factory, opening in 1902 (scheduled in the Auckland Unitary Plan Operative in Part). An extant example of a concrete construction dairy factory in southern Auckland is the former Waiuku dairy factory, dating to 1915 (unscheduled).
- 5.6 Due to the proximity of the building to the St John's Church and graveyard, it is recognised that it would not be practicable to avoid the former Drury Creamery and Casein factory altogether. This will, however, result in adverse effects that in my opinion warrant mitigation.
- 5.7 Page 78 of the historic heritage AEE assesses the place as having moderate values overall. I consider based on what is currently known the former factory has at least moderate overall historic heritage significance. I support the recommendation that the applicant undertake a built heritage assessment. I also support that this needs to be reflected in the designation conditions. I consider for mitigation to be sufficient, however, this should include a further condition that requires efforts to relocate historic portions of the building within the local area. Only if this is not possible should demolition, via archaeological deconstruction and recording take place, in my opinion. It would also be desirable to salvage historic fabric remaining in good condition, where possible.

Aroha Cottage

- 5.8 The historic heritage AEE notes that widening is proposed to generally be to the west of Jesmond Road to minimise impacts on the scheduled Aroha Cottage. The AEE also notes only the driveway of the site is proposed to be designated to enable driveway regrading.
- 5.9 The Assessment of Alternatives consider project options A, B and C. Page 70 notes that "all options impact upon the Aroha Cottage extent of place. However, option A is recommended to avoid the Aroha Cottage Extent of Place and building as much as possible."
- 5.10 I concur options B and C appear to result in more impacts on the Aroha Cottage. I, therefore, consider option A is the preferable of the three as it avoids encroaching on the scheduled site to the least extent.
- 5.11 According to the Assessment of Construction Noise and Vibration Effects, the vibration levels will exceed the DIN¹ criteria. The assessment recommends that to control and minimise vibration levels, the use of smaller or low vibration equipment should be considered as part of the Construction Noise and Vibration Management Plan (**CNVMP**). I consider this needs to be reflected through the conditions in the designation for D2. Furthermore, it is recommended that a revised condition requiring that a suitability qualified specialist heritage

¹ Deutsches Institut Fur Normung E.V. (German Institute for Standardisation)

conservator shall also be engaged to provide recommendations in relation to vibration effects pertaining to the Aroha Cottage, not just for St Johns Church and graveyard, as currently set out in the notified conditions.

- 5.12 The Assessment of Construction Noise and Vibration Effects also sets out that a building condition survey should be carried out before (during detailed design) and after construction works at properties where predictions indicate the relevant building damage criteria may be approached. This will be to determine if any damage is shown to have been caused by construction by the Project Team. The assessment recommends a detailed building precondition survey should be undertaken by a suitably qualified engineer at all buildings where the Project building damage criteria may be exceeded prior to the start of construction. This will be important for the Aroha Cottage (and St John's Church and graveyard).

St John's Church and graveyard

- 5.13 The St John's Church and graveyard at 9 Cameron Place is not directly spatially covered by the proposed D2 designation route. The designation does, however, directly abut to the road frontage of the site.
- 5.14 The Assessment of Construction Noise and Vibration Effects indicates St John's Church (and graveyard, which was not mentioned) are predicted to exceed the DIN criteria. It will potentially experience vibration levels above 2.5 mm/s PPV, exceeding the building damage criteria to 'historical / sensitive' properties. The assessment recommends that to control and minimise vibration levels, the use of smaller or low vibration equipment should be considered as part of the CNVMP. I consider this needs to be reflected through the conditions of the designation for D2, alongside other conditions relating to managing vibration.
- 5.15 Concerns were raised through the section 92 request in terms of impacts resulting from vibration effects on the 1860s origin church which includes potentially fragile stained-glass windows, that are difficult to repair or replace. The site also includes a graveyard which contains unreinforced stone and masonry grave markers, tablets and obelisks, some of which are very close to the existing road. The applicant proposes that a suitably qualified conservator will be consulted to recommend methods of mitigation for the Scheduled St Johns Church and associated surface grave structures. This will include the stained-glass windows and other vulnerable elements of the building and surrounds.
- 5.16 This approach is supported. I consider that significant care will need to be taken in relation to physical works near the St John's Church and graveyard site. I consider it to be a high-risk site due to the unreinforced historic grave markers and features such as stain glass windows on the church.
- 5.17 The applicant is proposing a condition that the Historic Heritage Management Plan addressing "*methods to protect or minimise damage to the St Johns Anglican Church and Cemetery (AUP Scheduled Site 707) during project works as far as practicable based on pre-construction advise from a specialist heritage conservator*". I support this in principle but recommend amending and expanding the wording within the conditions pertaining to the Historic Heritage Management Plan for D2.
- 5.18 The applicant has also recognised in their section 92 response that there is potential for some grave markers to need to be temporarily moved off site. It is recommended that there is a condition that any works requiring temporary removal or relocation of grave markers or building fabric from the site needs to be notified to council in writing at least 10 days prior. I consider it paramount that all steps are taken to avoid as much as possible the need for headstones to require temporary removal. Options to assist in avoiding damage to headstones may include considering propping of headstones and grave markers, for example. If the need for temporary relocation arises, it is critical that reinstatement follows appropriate

conservation principles. Such works in my opinion would likely trigger the requirement for resource consent for activities within table D17.4.1.

Former railway worker's residence

5.19 The former railway worker's residence at 18 Waihoehoe Road is proposed to be fully within the D2 designation area and is proposed to be demolished. A condition is proposed in the notified conditions that a built heritage assessment is undertaken of the building and works are undertaken in accordance with Heritage NZ guidelines for the investigation and recording of buildings and standing structures. This is supported.

Brick utility building

5.20 The brick utility building at 31 Ponga Road is proposed to be fully within the D4 designation area and is proposed to be demolished. A condition is proposed in the notified conditions that a built heritage assessment is undertaken of the building and works are undertaken in accordance with Heritage NZ guidelines for the investigation and recording of buildings and standing structures. This is supported.

6. Overall findings

- 6.1. Overall, the information that has been provided by the applicant in relation to built historic heritage for NoRs D2 and D4 is generally satisfactory.
- 6.2. Subject to amendment to the designation conditions relating to historic heritage I am generally able to support the findings made by the applicant. Much of this requires subsequent built historic heritage assessment for subsequent stages of these projects, which will be managed through the proposed conditions. The notified conditions, in my opinion, provide a useful starting point, but warrant expansion and refinement.

7. Conditions

7.1 Amendments are recommended to section 23 of the notified conditions (Attachment C of the notified material) relating to historic heritage. As these conditions relate to both built heritage and archaeology, Mr Brassey and I have jointly developed revised recommended conditions. The revised conditions employ terminology used in the Auckland Unitary Plan Operative in Part where relevant and draw upon several existing or proposed suites of NoR conditions. These are:

- The notified Attachment C heritage related conditions for the D1-5 Drury NoRs
- The recently approved NoR designation conditions for the Ara Tūhono – Warkworth to Wellsford
- Condition amendments proposed in the submissions of Heritage New Zealand, and
- Proposed draft Waka Kotahi generic condition template for NoRs (and resource consents).

7.2 The revised conditions have been tailored to the specific requirements, environment and historic heritage places affected by the Drury FTNS, and in our view, represent current best practice. It is recommended that these are adopted instead of the heritage conditions in the notified NoRs. Those matters set out in the notified NoR conditions are considered to be contained in the recommended revised conditions, but have been refined and in some cases expanded.

7.3 The revised recommended condition wording for D2 and D4 is set out in Attachment 1 this report.

8 Submissions

There are two submitters addressing matters relating to built historic heritage. Submissions have been received from the landowners of the Aroha Cottage at 201 Jesmond Road, and from central government heritage agency, Heritage New Zealand.

8.1 Submission 22 - Katherine de Courcy, Greg Smith and Robert Smith (D2)

- 8.1.1 The submitter (Katherine de Courcy, Greg Smith and Robert Smith) raises that the Historic Heritage Extent of Place (**HHEP**) relating to the scheduled Aroha Cottage² at 201 Jesmond Road is not extensive enough relative to the changes for the general area which will be facilitated by the new road designation.
- 8.1.2 The submitter raises that a caretaker's house will be required nearby to the cottage and that this needs to be constructed within the HHEP, however, the present area does not make this feasible.
- 8.1.3 The submitter also raises that the Aroha Cottage is not a habitable dwelling, with the lavatory building provided in a separate outbuilding. The submitter also notes that the lavatory building was the original Bombay Post Office, relocated to the site. The submitter considers this should not be separate from the house it serves and should be included within the HHEP, as well as the septic tank system. The submitter also raises that the current HHEP does not include the northern driveway which also is currently used to access the cottage. The submitter notes that including these within the HHEP will require the line of the designation to be redrawn.
- 8.1.4 The submitter raises that any new dwelling within the HHEP need to be allowed to access Jesmond Road. As it stands only the historic Aroha Cottage has this guarantee of access. The submitter raises that they have been advised other new builds will not have this right. The submitter seeks this is rectified and a caretaker access provided for.

Responses:

- 8.1.5 It is my understanding that the NoR process does not provide scope for amendments to Auckland Unitary Plan overlays such as the HHEP.³ Changes to the HHEP would require being undertaken through a plan modification process (i.e.: a council initiated or private plan change). The HHEP matter raised in the submission will be recorded in the internal 'issues log register'. The submitter may wish to engage in dialogue outside of this NoR process with the Auckland Council, Heritage Policy team.
- 8.1.6 The submitter has also raised that a caretaker's residence needs to be constructed within the current HHEP. The HHEP does not have any requirement for associated buildings or structures to a scheduled building to be located within the HHEP. It does, however, provide a framework to consider the merits of proposed new buildings which may be entirely or partly within the HHEP.
- 8.1.7 I do not concur that inclusion of additional areas to the HHEP would necessarily have any impact on the delineation of the designation area, in terms of heritage effects.

² Schedule 14 of the Auckland Unitary Plan, UID704, Aroha Cottage, 201 Jesmond Road, Drury

³ There are currently no notified private or council-initiated plan changes applying to 201 Jesmond Road, as of 27 July 2021

- 8.1.8 The submission raises concern that new buildings will not have access from Jesmond Road. In my opinion, it is not clear whether or how this is directly a historic heritage matter based on the information supplied in the submission.
- 8.1.9 As set out above in this report, I consider that the proposed designation extent as it relates to 201 Jesmond Road provides an option that will minimise the degree of impacts on the values of the Aroha Cottage as much as practicable. The extent of the designation will be limited to a portion of the driveway area adjoining the road reserve to enable surface re-grading if necessary. Furthermore, matters relating to vibration impacts, will also be addressed through the CNVMP. An amended condition is recommended that a suitability qualified specialist heritage conservator provide recommendations in relation to vibration effects pertaining to the Aroha Cottage (not just St John's Church and graveyard, as worded in the notified conditions for D2).



Figure 1. Auckland Council Geomaps, 2017 aerial base map, Historic Heritage Extent of Place and notified NoR spatial extent for 201 Jesmond Road, Drury.

8.2 **Submission 26 – Heritage NZ (D2)**

- 8.2.1 Heritage NZ sets out broader general comments relating to historic heritage within NoR D2. These are addressed in the report of Mr Robert Brassey.
- 8.2.2 The Heritage NZ submissions addresses the former Drury Creamery and Casein Factory. Their submission supports the proposed condition that a built heritage assessment is completed of the former Drury Creamery and Casein Factory to further determine the historic heritage significance and current condition of the building.
- 8.2.3 Heritage NZ also goes on to note that it supports relocation of the factory on the property if following assessment, it is found to have sufficient (as opposed to significant) heritage values in the first instance, and should its condition permits, or otherwise to an appropriate location elsewhere in Drury.
- 8.2.4 Should relocation not be achievable, Heritage NZ supports the proposal for a suitably qualified and experienced buildings archaeologist to undertake archaeological deconstruction of the building and to archaeologically record and further investigate the building. The submission also notes that the appropriate reuse of materials of heritage value is further supported.

- 8.2.5 Wording reflecting the above relief is set out in proposed track change amendments to the conditions included as part of their submission.
- 8.2.6 Heritage New Zealand notes that additional research into the chronology of the factory is needed and will be undertaken at the detailed design stage by the built heritage specialist to determine whether the building and site date to pre-1900.

Responses:

- 8.2.7 I support the inclusion of the condition requiring a built heritage assessment of the former Drury Creamery and Casein Factory at 12 Norrie Road (and of the former railway worker's residence at 18 Waihoehoe Road).
- 8.2.8 The former factory has a reasonably large footprint relative to the size and shape of the site, directly adjoins the Maketu Stream and is within its riparian margin. This may pose issues for realistic retention of all or part of the building on 12 Norrie Road if the proposed road widening works were to take place, in my opinion. I, however, concur with the subsequent relief sought by Heritage NZ that relocation within the local area is preferable to demolition. As well as that relocation should be considered if it is found to have sufficient (as opposed to significant) heritage values. In my opinion, overall moderate local values would suffice.
- 8.2.9 I also concur that failing relocation, the demolition should follow formal buildings archaeology deconstruction and recording. This is regardless of whether it is determined to have pre-1900 origins or not. I also concur that salvaging of historic fabric that is in a re-useable condition is desirable, and thus should be included within the conditions.

9. Submission 12 – Heritage New Zealand Pouhere Taonga (D4)

- 9.1 Heritage NZ supports the proposed condition requiring a built heritage assessment to be completed of the brick utility building at 31 Ponga Road, and further that it is relocated to an appropriate site within the locality.
- 9.2 The brick utility building at 31 Ponga Road is proposed to be fully within the D4 designation area and is proposed to be demolished. A condition is proposed in the notified conditions that a built heritage assessment is undertaken of the building and works are undertaken in accordance with the most up to date Heritage New Zealand guidelines regarding the investigation and recording of buildings and standing structures. This is supported. It is noted that as a brick building, relocation does not appear likely to be a viable option, however.

10. Conclusions and recommendations

- 10.1 The applicant has generally satisfactorily assessed the effects in relation to built heritage places within the NoR area. These assessed effects rely on relevant conditions being carried through, such as built heritage assessments of the former Drury Creamery and Casein Factory (D2), the former railway worker's residence (D2) and the brick utility building (D4). As well as a specialist heritage conservator advise on methods to protect or minimise damage to the St Johns Anglican Church and graveyard at the pre-construction stage (and in my opinion, to advise also for Aroha Cottage as well).
- 10.2 I do not consider further information needs to be provided by the applicant in relation to this stage of the project.
- 10.3 I can support NoR D2 and D4 as it relates to built heritage matters, subject to modifications to the conditions of the proposed designations. These recommended condition amendments are set out in Attachment 1 of this report.

Attachment 1: Recommended amended designation conditions for NoRs D2 and D4

Drury Arterial Network – Technical specialist report to contribute towards Council’s section 42A hearing report

Applicant: Auckland Transport and Waka Kotahi New Zealand Transport Agency

Proposal: Five notices of requirement are proposed to alter an existing designation for State Highway 22 (SH22) in Drury and to introduce new designations for future strategic transport corridors to support the planned urban growth in the Drury-Ōpāheke area of Auckland.

Date and Author of Report: Robert Brassey, Principal Specialist Cultural Heritage
3 August 2021

Introduction

1. This report provides a specialist review of the notices of requirement (NoRs) lodged by Auckland Transport and Waka Kotahi New Zealand Transport Agency to alter an existing designation and to introduce new designations for future strategic transport corridors to support the planned urban growth in the Drury-Ōpāheke area of Auckland.
2. The NoRs are outlined below:
 - a. D1 Alteration to Waka Kotahi designation 6707 - SH22 (**NZTA**):
 - b. D2 Jesmond to Waihoehoe West Frequent Transit Network (FTN) Upgrade (**AT**)
 - c. D3 Waihoehoe Road East Upgrade (**AT**)
 - d. D4 Ōpāheke North- South FTN Arterial (**AT**)
 - e. D5 Ponga Road and Ōpāheke Road Upgrade (**AT**)

Qualifications and experience

3. I have a Master of Philosophy degree with First Class Honours in anthropology specializing in New Zealand and Pacific archaeology and a Bachelor of Science degree in geology. I have worked in the fields of archaeology and historic heritage management for nearly 40 years, including more than 20 years for Auckland councils. My experience spans archaeology, built and maritime heritage and heritage policy and planning.

In my current role I contributed to the development of Auckland Unitary Plan heritage provisions, including leading the development of the historic heritage significance criteria and non-statutory evaluation methodology. I represent Auckland Council as a subject matter expert reviewing

private plan requests and have assessed eight proposed private plan changes in the Drury area in the last two years.

Purpose and scope of this report

4. The purpose of this report is to review whether effects on historic heritage have been adequately assessed in the NoRs.
5. This report addresses matters that relate to archaeological sites. My colleague Cara Francesco has provided a separate historic heritage report that addresses matters relating to standing buildings and structures.

This (archaeology) report provides:

- A final assessment of submissions, including further information provided by submitters in support of submissions prior to the hearing
 - A final assessment of effects for each NoR- relevant to historic heritage (archaeology), including the appropriateness of the applicants recommended conditions to manage these effects, and whether modified conditions are required to achieve this outcome
 - An overall review of information provided by the applicants relevant to historic heritage (archaeology) including further information provided by the applicants before and after notification of the NoRs
 - Confirmation of recommendations on the NoRs, including any modifications sought.
6. This report does not contain any recommendation on whether or not the proposal should be approved or declined by the decision-maker.

Key information sources

Drury Arterial Network Assessment of Effects on Historic Heritage. Executive summary for Auckland Council discussion. Draft, September 2020
Drury Arterial Network Assessment of Effects on Historic Heritage. January 2021

Drury Arterial Network Draft Project Overview and Description for Auckland Council Discussion. Draft, September 2021

Response to s92 Request for Further Information April 2021

Relevant submissions.

Submissions seeking relief

Heritage New Zealand Pouhere Taonga (#13)

All NoRs (D1-D5)

7. Heritage New Zealand considers that:
 - Minor amendments to the proposed HAMP conditions should be made to ensure historic heritage matters are considered and addressed in accordance with the RMA

definition of historic heritage, and that archaeological resources are not split out as a separate consideration (whilst acknowledging the need to identify those places that have specific requirements as pre-1900 archaeological sites in accordance with HNZPTA), but are considered in the context of all historic heritage resources that contribute to an understanding and appreciation of New Zealand's history and culture.

- The conditions should include provision for mitigation of adverse effects on historic heritage across the designation via interpretation of the heritage sites and landscapes that will be lost and/or altered by the project works, (including via incorporation into detailed design), to enable increased public awareness and amenity of the historic heritage of the area.
- Interpretation should be inclusive of all layers of histories/narratives represented across the designation relating to the historic heritage of the area, in accordance with the principles of the ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value, 2010, specifically Principle 2. 'Understanding cultural heritage value'.

8. Heritage New Zealand has provided a marked-up version of the notified conditions for each Notice of Requirement, identifying proposed amendments to the wording.¹

Response

9. I have reviewed the amendments proposed by Heritage NZ. I support the intent of the proposed amendments but consider that in some cases more appropriate wording and/or additional amendments to the conditions would better achieve the relief sought and provide for the outcomes supported by Heritage NZ in the submissions. I have included an amended version of the historic heritage conditions for each NoR as Attachment A. This has been jointly prepared with Cara Francesco.

Assessment of effects of NoRs

NOR D1

10. There are no recorded archaeological sites or other historic heritage places within the footprint of NoR D1 and no identified effects on historic heritage. However, there are environmental and historical factors that increase the potential for unidentified sites to be present. The authors of the heritage assessment have recommended that a Heritage Asset Management Plan (**HAMP**) is prepared, further research and field survey be undertaken, and that a precautionary HNZPTA authority is obtained.

¹ As Attachment A to each submission.

11. I agree with the assessment and recommendations and have proposed an amendment to the proposed Designation conditions to provide more specific reference to particular environments within the footprint requiring further survey and assessment.

NOR D2

12. There are fourteen recorded historic heritage places recorded within NoR D2. Of these eleven are archaeological sites or have archaeological potential. The others are buildings of actual or potential heritage value that are located within the NoR. The scheduled extent of St Johns Church and graveyard lies immediately adjacent to the proposed designation. Ms Francesco has addressed the assessment of effects on the buildings, church and grave markers/furniture.

13. The assessment concludes that there is potential for additional unidentified historic era or pre-European Māori archaeological sites to be present within, or to extend into the NoR.²

14. The historic heritage places that are located partly or wholly within, or are adjacent to D2, include some that are, in my opinion, of considerable significance to the Drury locality and beyond. They include:

- The site of the Commissariat Redoubt, which played an important role in the military invasion of the Waikato during the New Zealand Wars of the 1860s
- The site of the house and outbuildings of the first European settler in the Drury/Runciman area
- The scheduled St Johns Church and graveyard. The later includes several graves from the New Zealand Wars.

15. I note that the assessment of effects includes a brief values/significance assessment against the Proposed Auckland Unitary Plan Historic Heritage RPS criteria for all identified historic heritage places within the proposed designations.³ In my opinion the significance attributed to the Commissariat Redoubt and Runciman house/farm buildings sites⁴ is understated in relation to several criteria.

16. It is apparent from comments in the historic heritage assessment of effects that this has, in part, resulted from misinterpretation or misreading of the Auckland Council non-statutory methodology and guidance for evaluating Auckland's historic heritage. Specifically:

- The inclusion and exclusion indicators have been treated as criteria. They are not criteria. The criteria are set out in the AUP historic heritage RPS
- Some indicators have been applied to places for which they are not relevant and,

² Drury Arterial Network Assessment of Effects on Historic Heritage, p. 101

³ Ibid, p. 16

⁴ Ibid, p. 72-4

- Guidance regarding intangible heritage values has not been followed.

The net result is that both places have been attributed with only moderate significance.

17. In my opinion both places meet the AUPOIP criteria for considerable significance in relation to one or more criteria, potentially including historical, social, and in the case of the redoubt site, Mana Whenua significance. The Runciman farmstead site may also have Mana Whenua significance as it is immediately adjacent to an apparent waka landing site (tauranga waka).
18. This has potential consequences, since Wherever avoidance cannot be achieved, it is recommended that sites of a higher significance are prioritised.⁵ The assessment further states that the redoubt site does not warrant any special protections and any loss of heritage values can be mitigated.⁶
19. The assessment states that impacts on known historic heritage places have been minimised during the alternatives' assessment of the projects. In the Bremner/Norrie Road sections of the proposed designation, measures have included generally widening to the south of the existing road to minimise impacts on scheduled heritage places. I support these measures.
20. The assessment recommends that, in areas where the full archaeological site extent and locations are unknown, such as the Runciman homestead site, non-invasive investigation techniques such as ground penetrating radar and /or magnetometer survey is undertaken before construction works, to identify if there are any surviving subsurface features. Final construction and design should, as much as reasonable, avoid any features identified by non-invasive investigation. Following this, an exploratory investigation authority may be obtained.
21. A further recommendation is that any areas of the site that will be used for construction laydown, but not otherwise earth worked, should be isolated with geotechnical cloth and 250 mm of GAP 25 or similar, and that an authority should be obtained from HNZPT to destroy or damage those parts of the site that cannot be avoided by construction under section 44 of the HNZPT Act. I support these recommendations and have proposed that they be specifically included as amendments to the designation conditions (Attachment A).
22. One of the consequences of the values of some of the historic places in D2 not being fully identified is that management of adverse effects is focussed primarily on scheduled places and on tangible archaeological features that are or may be present in others. In relation to the Runciman house/farm buildings site (which appears to include part of the Commissariat redoubt), it is my view that the setting of the place, including the (since-reclaimed) embayment identified as a

⁵ Ibid, p. 3

⁶ Ibid, p. 72

tauranga waka (canoe landing site), should be protected from further avoidable modification wherever possible, and the laydown area reinstated after construction has been completed to the extent practical. Accordingly, I have proposed an amendment to the designation conditions to include this condition.

23. The assessment identifies several other archaeological sites associated with 19th century settlement at Drury will be affected by the proposed Designation. It is highly likely that other unidentified sites, potentially including sites of Māori origin, will be present. In general sites or parts of sites that fall within proposed ground disturbance areas will be damaged and/or destroyed during the construction phase of the works. It is proposed that effects on these sites be managed by mitigation, primarily through recording, archaeological excavation and recovery of information. I support this approach.
24. I note that there are sites (bridges, wharves, tauranga waka) within the designation that extend into the Ngākorua and Hingaia streams or are peripheral to these streams.
25. The existing Ngākorua bridge occupies the site of a series of earlier bridges dating back to (at least) Runcimans bridge of the 1850s. The bridge site is recorded as R12_1171. The effects on this site are not specifically addressed in the historic heritage AEE. They will potentially include modification or destruction of structural elements of earlier bridges or abutments and of earlier road/track approaches, both of which appear to exist beneath the existing bridge. There is also potential for assemblages of artefacts (including waterlogged organic materials) lost or dropped from the bridge to be present in stream bed deposits at this site and that of the Hingaia Stream bridge (R12_1152).
26. Both bridges were extensively used during the New Zealand Wars. The Ngākorua Stream bridge is close to the site of the Commissariat redoubt and wharves, Runciman's homestead and wharf (which was also used to ship coal from Drury) and a tauranga waka (Māori canoe landing site). In my opinion, the effects on the Ngākorua and Hingaia bridge sites including potential artefact finds and how they will be managed are not fully addressed in the application.
27. It is likely, in my opinion, that there are artefacts or features associated with the wharf and bridge sites in waterlogged environments or on the stream beds. Where works are required to be undertaken in the vicinity of such sites, bespoke methodologies and equipment will be required to recover information and finds prior to construction activities taking place. Recovered artefacts and materials may require interim treatment to minimize deterioration and/or conservation. Accordingly, I have recommended amendments to the designation conditions to provide for these matters.

NoR D3

28. There are no recorded archaeological sites or other historic heritage places within the footprint of NoR D1, and no identified effects on historic heritage. However, there are environmental and historical factors that increase the potential for unidentified sites to be present. The assessment notes that the route of this road is likely the same route that an early (pre-1900) bullock track associated with the transportation of coal from nearby coal mines, and that archaeological sites or material may be present within the proposed designation relating to either the track, or to pre-European Māori occupation. I concur with this conclusion and further note that due to the previous existence of extensive wetlands and watercourses in this general vicinity, there is the potential for finds of organic materials such as the remains of timber bridges or fascines, or artefact findspots.

29. Accordingly, I have proposed amendments to the designation conditions to include specific reference to the likely presence of early transport routes, and to provide for the management of artefacts requiring interim treatment and/or conservation.

NoR D4

30. There are no recorded archaeological sites within the footprint of NoR D4. The historic heritage assessment concludes that there is reasonable cause to suspect previously unrecorded deposits may be present in areas near the original roading route. I concur with this conclusion and have proposed an amendment to the historic heritage conditions for NoR D4 to acknowledge this and provide for further assessment.

NoR D5

31. The historic heritage assessment concludes that there are several subsurface sites adjacent to the NoR footprint, and two historic heritage places within it. The latter are the site of the Ōpāheke railway station, and a portion of the Presbyterian section of the Papakura Cemetery. There are no marked or recorded graves in this portion of the cemetery.

32. I note that impacts on known historic heritage have been minimised where possible, through the alternatives assessment of alignment options.

33. The historic heritage assessment recommends that a precautionary archaeological authority is obtained before works commence, and that non-invasive techniques are used to determine if any potential subsurface archaeological remains (or graves) are present in the Presbyterian section of the cemetery. While it would appear very unlikely that any graves will be impacted, I consider that this possibility should be addressed since it is not uncommon in historic cemeteries to find unrecorded burials such as pauper graves in unexpected locations.

34. A stone and memorial marking the WWII US forces Ōpāheke camp east is located within the road reserve in NoR D5. The assessment recommends that the removal, storage, and relocation of the memorial stone should be built into the HAMP requirements for D5.

35. I support the recommendations included in the historic heritage assessment and have proposed amendments to the NoR heritage conditions to give effect to them.

Conclusions

36. In general, the applicant has, in my opinion, provided sufficient information in relation effects on archaeological sites arising from the proposed designations. Gaps in the assessment are identified above.

37. I consider that the proposed historic heritage conditions require amendment to ensure that the recommendations of the historic heritage report, and further conditions are clearly articulated, and to include further conditions that I have proposed above.

38. Accordingly, Ms Francesco and myself have jointly prepared amended conditions for each NoR, These amended conditions:

- Give effect to the relief sought by Heritage NZ
- Include changes recommended above to better provide for the avoidance, remedying or mitigation of effects on archaeological sites and to address gaps that I have identified
- Incorporate specific recommendations included in the historic heritage assessment
- Use terminology aligned with that in the Auckland Unitary Plan Operative in Part
- Are in accordance with current best practice as exemplified by NZTA designation 6769 (Ara Tūhono - Pūhoi to Wellsford Road) and the draft NZTA template for historic heritage conditions.

Consequential amendments will be required to the wider NoR document where there are cross-references to the historic heritage conditions, and vice-versa (for example references to cultural conditions).

Attachment C Proposed Designation Conditions Drury Arterial Network (D2)

Historic Heritage

Design and Pre-Construction Phase

- 1) The Requiring Authority shall design and implement the Project Works to achieve the following historic heritage outcomes:
 - a. To deliver positive historic heritage opportunities and outcomes.
 - b. To avoid as far as practicable, adverse effects on historic heritage sites and places.
 - c. Where avoidance of adverse effects cannot be achieved; remedy or mitigate all adverse effects on historic heritage places.
- 2) The Requiring Authority shall engage a suitably qualified and experienced heritage specialist or team of specialists (**the nominated heritage specialist/s**) to supervise all heritage related works related to historic heritage places, to ensure that the Project Works are carried out in accordance with these conditions. The name and qualifications of this specialist(s) shall be provided to the Council (Team Leader Compliance Monitoring South in consultation with the Manager Heritage) prior to construction commencing.
- 3) A Historic Heritage Management Plan (**HHMP**) shall be prepared with up-to-date information. This additional information shall be provided to council prior to the lodgement of the HHMP to streamline the certification process. This includes:
 - a. Any archaeological assessments, heritage impact or cultural assessments, granted authorities, final archaeological reports and updated site record forms (Cultural Heritage Inventory (CHI) and New Zealand Archaeological Association (NZAA) ArchSite) prepared/submitted since time of the granting of any designation and;
 - b. Additional areas of survey and investigation undertaken as part of the project.
 - c. Further assessment and field survey of historic heritage by the nominated heritage specialist(s) shall include (but not be limited to) the following:
 - Definition of the extent of the site of the Runciman homestead and farm buildings (NZAA R12/1131, CHI 22177) using non-invasive techniques or exploratory investigation
 - Historic tauranga waka site (NZAA R12/1131, 22177)
 - Ngākorua Stream bridge site (NZAA R12/1171, CHI 23172)
 - Commissariat redoubt site, wharf and related features (NZAA R12/756, CHI 319, 14072, AUPOIP UID 2173,)
 - Norrie Road Hingaia Stream bridge site (NZAA R12/1152, CHI 23078)
 - Norrie Road Shops (Post Office etc) (NZAA R12/1143, CHI 23071; NZAA R12/1149, CHI 23075)

- St John's Church and graveyard (NZAA R12/1129, CHI 2458, HNZPT list 2596, AUPOIP UID 707)
- Aroha Cottage/Paymaster's House (CHI 2455, HNZPT list 692, AUPOIP UID 704)
- Former Drury creamery and casein factory (CHI 15102)
- Former railway worker's residence (CHI 22288)

Vibration Management

4) A Construction, Noise and Vibration Management Plan (**CNVMP**) shall be prepared in accordance with section 21 (**OR AS AMENDED**). A suitability qualified specialist heritage conservator shall be engaged to provide recommendations on historic heritage places including:

- Aroha Cottage/Paymaster's House (CHI 2455, HNZPT list 692, AUPOIP UID 704) and
- St John's Church and graveyard (NZAA R12/1129, CHI 2458, HNZPT list 2596, AUPOIP UID 707)

The plan shall include methods to avoid or minimise adverse physical effects during Project Works as far as practicable based on pre-construction advice from the specialist heritage conservator. This shall include (but not limited to) methods to avoid or minimise structural or other damage, cracking, slumping, subsidence, collapse or breakage.

The council shall be advised in writing at least 10 days prior to removal or relocation of grave markers or building fabric from the St John's Church and graveyard site.

Historic Heritage Management Plan (HHMP)

5) Prior to the commencement of Project Works, the Requiring Authority shall prepare a HHMP in partnership with Mana Whenua and in consultation with Auckland Council and Heritage New Zealand Pouhere Taonga (**HNZPT**).

The overall objective of the HHMP is to establish the methods and procedures that will be adopted to ensure compliance with the designation and to achieve the Heritage Outcomes referenced in Condition xxx. To achieve this objective, the HHMP shall meet the following minimum standards. The HHMP shall identify:

- a. methods for the identification and assessment of potential built heritage and archaeological sites within the Designation to inform detailed design
- b. known heritage places and archaeological sites and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted
- c. any unrecorded archaeological sites or post-1900 historic heritage places within the Designation, which shall be documented and recorded
- d. roles, responsibilities and contact details of project personnel, Auckland Council, HNZPT, Mana Whenua representatives, and other relevant agencies involved with historic heritage

- matters including surveys, monitoring project works, compliance with the AUP accidental discovery rule, and monitoring of conditions
- e. methods to achieve positive effects on historic heritage sites and places. Measures may include, but not be limited to increased public awareness and amenity of historic heritage sites and places, interpretation, repatriation, and donation of historic heritage material to suitable repositories, publication of heritage stories, and active conservation/restoration of heritage features
 - f. methods to avoid, remedy or mitigate adverse effects on historic heritage sites and places adopted during the detailed design phase
 - g. methods for investigating and recording historic heritage places that need to be destroyed, demolished, modified, or relocated because of the Project Works
 - h. methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve Ngā Taonga Tuku Iho (treasures handed down by our ancestors) and where feasible and practicable to do so;
 - i. methods to avoid, remedy or mitigate adverse effects on historic heritage places during the construction phase including, but not limited to:
 - Security fencing or hoardings around historic heritage places to protect them from construction damage or unauthorized access;
 - Use of geotextile fabric and aggregate in construction compound areas not being earthworked;
 - Using construction methods that minimise vibration or other potentially adverse effects.
 - j. operational triggers for the ongoing use and maintenance or disposal of land containing historic heritage places following completion of Project Works
 - k. the methodology for investigating and recording post-1900 historic heritage that needs to be destroyed, demolished or relocated, including details of condition, measures to mitigate adverse effects and timeline for implementing the proposed methodology in accordance with the HNZPT Archaeological Guidelines Series No. 1 (AGS 1): Investigation and recording of buildings and standing structures (November 2018), or any subsequent version; and in relation to built heritage, the International Council on Monuments and Sites New Zealand Charter 2010.with the International Council on Monuments and Sites (ICOMOS) New Zealand Charter 2010 or any subsequent version
 - l. training requirements to ensure all contractors and subcontractors are aware of all statutory requirements relevant to historic heritage places, including HNZPT archaeological authorities, the AUP accidental discovery rule, accidental discovery protocols (condition XXX) and the methods and procedures set out in the HHMP. The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified and Experienced Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 8)
 - m. reporting requirements for historic heritage places during the construction phase of the Project Works and at the completion of projects works. This includes a plan for dissemination of those reports
 - n. provision of adequate measures for the interim stabilisation/conservation (where necessary), storage and curation of objects and artefacts (including taonga tūturu) and

- any other physical or documentary material that forms part of the wider historic heritage sites and places archive
- o. provision of an accidental discovery protocol for any accidental historic heritage discoveries which occur during project work.
- 6) If the former Drury creamery and casein factory building cannot be avoided at the detailed design stage, then:
- a. In the first instance, options for relocation of parts or all of the building within the local area should be investigated
 - b. If relocation options can be shown to have been exhausted, only then should the building be demolished and recorded to Level I of HNZPT guideline Archaeological Guidelines Series No. 1 (AGS 1): Investigation and recording of buildings and standing structures (November 2018), (November 2018) or any subsequent version. Archaeological deconstruction of the building shall be undertaken by a suitably qualified and experienced buildings archaeologist
 - c. If demolished, historic materials in re-useable condition should be salvaged where possible
 - d. Auckland Council shall be advised in writing at least 10 days prior to the relocation or demolition of the building with accompanying records demonstrating compliance with a, b and c above and condition xxx.
- 7) The HHMP shall be prepared by the nominated historic heritage specialist(s).
- 8) The HHMP shall:
- a. Be prepared using the most up-to-date historic heritage information sources as identified in Condition xxx. This information can include (but not be limited to) all historic heritage technical reports, site record forms from the CHI and / or ArchSite database, any additional statutory approval granted or Cultural Values Assessment. This includes any additional information prepared or submitted since the time the designation/consent was granted.
 - b. Include definitions of heritage terms. Where practical HHMP definitions should align with relevant statutory definitions.
 - c. Provide a matrix of all positive and adverse effects on all historic heritage sites and places, and all required mitigation.
 - d. Include any other relevant matter.
- 9) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring etc.), including interim reports, shall be submitted to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) within 12 months of being produced.
- 10) A suitably qualified and experienced person shall record and log any heritage discovery and on-going compliance with the conditions of this Designation. This log shall be provided to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) quarterly.

11) In the event that any unrecorded historic heritage sites are exposed as a result of the work, these shall be recorded and documented by a suitably qualified and experienced person for inclusion in the CHI. The information and documentation shall be forwarded to the Manager: Heritage (heritageconsents@aucklandcouncil.govt.nz) or other address nominated by the Manager: Heritage within twelve months of the works being completed on site.

Advice notes

- a) For the HHMP the term “effect” is defined in section 3 of the RMA 1991.
- b) The historic heritage places archive consists of the records and finds made during the Project Works, including written or drawn documentation, digital files, and artefacts and materials such as taonga tūturu.

Certification of Historic Heritage Management Plan

- 12) The HHMP shall be provided to the Manager: Monitoring (in consultation with the Manager: Heritage) for certification to confirm that the activities undertaken in accordance with the HHMP will achieve the objectives of the HHMP and compliance with the relevant designation / consent conditions. No activity authorised by this designation / consent shall be carried out until the HHMP has been certified.
- 13) The Requiring Authority may make changes (either following a request from the council or on its own volition) to the HHMP at any time prior to, or after the commencement of the Project Works on the historic heritage site and place authorised by this designation / consent. Any subsequent review of the HHMP shall be submitted to the Team Leader: Monitoring (in consultation with the Manager: Heritage) for re-certification. Work on the activity in question shall not be carried out until the amended HHMP has been re-certified.
- 14) The Requiring Authority shall meet the costs of the production, certification, monitoring, and any review of the HHMP.
- 15) The implementation of the HHMP shall be consistent with all other statutory requirements, in particular the HNZPTA and the conditions of any Archaeological Authority granted by HNZPT for the Project Works.

Advice notes

- a. The council acknowledges that the HHMP is intended to provide flexibility both for the Requiring Authority and the council for the management of historic heritage places. Accordingly, the HHMP may need to be reviewed over time. Any reviews should be in accordance with the stated objectives of the HHMP and limited to the scope of this designation / consent.
- b. Certification of the HHMP 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 Heritage New Zealand Pouhere Taonga Act 2014 (**HNZPTA**)

Accidental discovery during construction

- 16) Prior to the start of Project Works, the Requiring Authority shall prepare an accidental discovery protocol for any accidental historic heritage discoveries which occur during Project Works. The accidental discovery protocol:
- a. Shall be consistent with the Auckland Unitary Plan Accidental Discovery Rule (E11 Land disturbance regional – E11.6.1) or any amended version of this rule;
 - b. Shall be prepared in engagement with Mana Whenua and consultation with Auckland Council and HNZPT and modified as necessary to reflect the site-specific project detail. The Requiring Authority shall undertake engagement and consultation for a period of not less than 30 days;
 - c. Shall be implemented throughout the Project Works.

During Construction

- 17) The nominated heritage specialist(s) shall record and log any heritage discovery and on-going compliance with the conditions of this designation / consent. This log shall be provided to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) according to the reporting schedule in the certified HHMP, or upon request.

Post-Construction

- 18) At completion of the Project Works, the Requiring Authority shall submit a report to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) that includes the log required by Condition xxx and certifies that all works that have been completed in accordance with the requirements of this designation / consent. The report shall be prepared by the nominated heritage specialist(s).
- 19) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring etc.), including interim reports, shall be submitted to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) according to the reporting schedule in the certified HHMP.

Attachment C Proposed Designation Conditions Drury Arterial Network (D5)

Historic Heritage

Design and Pre-Construction Phase

1. The Requiring Authority shall design and implement the Project Works to achieve the following historic heritage outcomes:
 - a. To deliver positive historic heritage opportunities and outcomes.
 - b. To avoid as far as practicable, adverse effects on historic heritage sites and places.
 - c. Where avoidance of adverse effects cannot be achieved; remedy or mitigate all adverse effects on historic heritage places.
2. The Requiring Authority shall engage a suitably qualified and experienced heritage specialist or team of specialists (**the nominated heritage specialist/s**) to supervise all heritage related works related to historic heritage places, to ensure that the Project Works are carried out in accordance with these conditions. The name and qualifications of this specialist(s) shall be provided to the Team Leader Compliance Monitoring South (in consultation with the Manager Heritage) prior to construction commencing.
3. A Historic Heritage Management Plan (**HHMP**) shall be prepared with up-to-date information. This additional information shall be provided to council prior to the lodgement of the HHMP to streamline the certification process. This includes:
 - a. Any archaeological assessments, heritage impact or cultural assessments, granted authorities, final archaeological reports and updated site record forms (Cultural Heritage Inventory (**CHI**) and New Zealand Archaeological Association (**NZAA**) ArchSite) prepared/submitted since time of the granting of any designation and;
 - b. Additional areas of survey and investigation undertaken as part of the project
 - c. Further assessment and field survey of historic heritage by the nominated heritage specialist(s) shall include (but not be limited to) the following:
 - The site of the Ōpaheke railway station
 - Opaheke East and West WWII camps CHI 17016 and 17017
 - Non-invasive techniques to determine if any graves or other features associated with the Presbyterian section of the Papakura Cemetery are present within the extent of the Designation and are affected by Project Works.

Historic Heritage Management Plan (HHMP)

4. Prior to the commencement of Project Works, the Requiring Authority shall prepare a HHMP in partnership with Mana Whenua and in consultation with Auckland Council and Heritage New Zealand Pouhere Taonga (HNZPT).

The overall objective of the HHMP is to establish the methods and procedures that will be adopted to ensure compliance with the designation and to achieve the Heritage Outcomes referenced in Condition xxx. To achieve this objective, the HHMP shall meet the following minimum standards. The HHMP shall identify:

- a. methods for the identification and assessment of potential built heritage and archaeological sites within the Designation to inform detailed design
- b. known heritage places and archaeological sites and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted
- c. any unrecorded archaeological sites or post-1900 historic heritage places within the Designation, which shall be documented and recorded
- d. roles, responsibilities and contact details of project personnel, Auckland Council, HNZPT, Mana Whenua representatives, and other relevant agencies involved with historic heritage matters including surveys, monitoring project works, compliance with the AUP accidental discovery rule, and monitoring of conditions
- e. methods to achieve positive effects on historic heritage sites and places. Measures may include, but not be limited to increased public awareness and amenity of historic heritage sites and places, interpretation, repatriation, and donation of historic heritage material to suitable repositories, publication of heritage stories, and active conservation/restoration of heritage features
- f. methods to avoid, remedy or mitigate adverse effects on historic heritage sites and places adopted during the detailed design phase
- g. methods for investigating and recording historic heritage places that need to be destroyed, demolished, modified, or relocated because of the Project Works
- h. methods for the removal and storage of the stone marking of the World War II Ōpaheke East Camp during project works and identification of a suitable location to place it once project works are complete;
- i. methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve Ngā Taonga Tuku Iho (treasures handed down by our ancestors) and where feasible and practicable to do so;
- j. methods to avoid, remedy or mitigate adverse effects on historic heritage places during the construction phase including, but not limited to:
 - Security fencing or hoardings around historic heritage places to protect them from construction damage or unauthorized access
 - Using construction methods that minimise vibration or other potentially adverse effects.
- k. operational triggers for the ongoing use and maintenance or disposal of land containing historic heritage places following completion of Project Works
- l. the methodology for investigating and recording post-1900 historic heritage that needs to be destroyed, demolished or relocated, including details of condition, measures to

mitigate adverse effects and timeline for implementing the proposed methodology in accordance with the HNZPT Archaeological Guidelines Series No. 1 (AGS 1): Investigation and recording of buildings and standing structures (November 2018), or any subsequent version; and in relation to built heritage, the International Council on Monuments and Sites New Zealand Charter 2010.with the International Council on Monuments and Sites (ICOMOS) New Zealand Charter 2010 or any subsequent version

- m. training requirements to ensure all contractors and subcontractors are aware of all statutory requirements relevant to historic heritage places, including HNZPT archaeological authorities, the AUP accidental discovery rule, accidental discovery protocols (condition XXX) and the methods and procedures set out in the HHMP. The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified and Experienced Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 8)
- n. reporting requirements for historic heritage places during the construction phase of the Project Works and at the completion of projects works. This includes a plan for dissemination of those reports
- o. provision of adequate measures for the interim stabilisation/conservation (where necessary), storage and curation of objects and artefacts (including taonga tūturu) and any other physical or documentary material that forms part of the wider historic heritage sites and places archive
- ~~p.~~ provision of an accidental discovery protocol for any accidental historic heritage discoveries which occur during project work.

~~p.~~

- 5. The HHMP shall be prepared by the nominated historic heritage specialist(s).
- 6. The HHMP shall:
 - a. Be prepared using the most up-to-date historic heritage information sources as identified in Condition xxx. This information can include (but not be limited to) all historic heritage technical reports, site record forms from the CHI and / or ArchSite database, any additional statutory approval granted or Cultural Values Assessment. This includes any additional information prepared or submitted since the time the designation/consent was granted.
 - b. Include definitions of heritage terms. Where practical HHMP definitions should align with relevant statutory definitions.
 - c. Provide a matrix of all positive and adverse effects on all historic heritage sites and places, and all required mitigation.
 - d. Include any other relevant matter.
- 7. Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring etc.), including interim reports, shall be submitted to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) within 12 months of being produced.

8. A suitably qualified and experienced person shall record and log any heritage discovery and on-going compliance with the conditions of this Designation. This log shall be provided to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) quarterly.
9. In the event that any unrecorded historic heritage sites are exposed as a result of the work, these shall be recorded and documented by a suitably qualified and experienced person for inclusion in the CHI. The information and documentation shall be forwarded to the Manager: Heritage (heritageconsents@aucklandcouncil.govt.nz) or other address nominated by the Manager: Heritage within twelve months of the works being completed on site.

Advice notes

- a. For the HHMP the term “effect” is defined in section 3 of the RMA 1991.
- b. The historic heritage places archive consists of the records and finds made during the Project Works, including written or drawn documentation, digital files, and artefacts and materials such as taonga tūturu.

Certification of Historic Heritage Management Plan

10. The HHMP shall be provided to the Manager: Monitoring (in consultation with the Manager: Heritage) for certification to confirm that the activities undertaken in accordance with the HHMP will achieve the objectives of the HHMP and compliance with the relevant designation / consent conditions. No activity authorised by this designation / consent shall be carried out until the HHMP has been certified.
11. The Requiring Authority may make changes (either following a request from the council or on its own volition) to the HHMP at any time prior to, or after the commencement of the Project Works on the historic heritage site and place authorised by this designation / consent. Any subsequent review of the HHMP shall be submitted to the Team Leader: Monitoring (in consultation with the Manager: Heritage) for re-certification. Work on the activity in question shall not be carried out until the amended HHMP has been re-certified.
12. The Requiring Authority shall meet the costs of the production, certification, monitoring, and any review of the HHMP.
13. The implementation of the HHMP shall be consistent with all other statutory requirements, in particular the HNZPTA and the conditions of any Archaeological Authority granted by HNZPT for the Project Works.

Advice notes

- a. The council acknowledges that the HHMP is intended to provide flexibility both for the Requiring Authority and the council for the management of historic heritage places. Accordingly, the HHMP may need to be reviewed over time. Any reviews should be in

accordance with the stated objectives of the HHMP and limited to the scope of this designation / consent.

- b. Certification of the HHMP 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 Heritage New Zealand Pouhere Taonga Act 2014 (**HNZPTA**)

Accidental discovery during construction

14. Prior to the start of Project Works, the Requiring Authority shall prepare an accidental discovery protocol for any accidental historic heritage discoveries which occur during Project Works. The accidental discovery protocol:
 - a. Shall be consistent with the Auckland Unitary Plan Accidental Discovery Rule (E11 Land disturbance regional – E11.6.1) or any amended version of this rule;
 - b. Shall be prepared in engagement with Mana Whenua and consultation with Auckland Council and HNZPT and modified as necessary to reflect the site-specific project detail. The Requiring Authority shall undertake engagement and consultation for a period of not less than 30 days;
 - c. Shall be implemented throughout the Project Works.

During Construction

15. The nominated heritage specialist(s) shall record and log any heritage discovery and on-going compliance with the conditions of this designation / consent. This log shall be provided to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) according to the reporting schedule in the certified HHMP, or upon request.

Post-Construction

16. At completion of the Project Works, the Requiring Authority shall submit a report to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) that includes the log required by Condition **xxx** and certifies that all works that have been completed in accordance with the requirements of this designation / consent. The report shall be prepared by the nominated heritage specialist(s).
17. Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring etc.), including interim reports, shall be submitted to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage) according to the reporting schedule in the certified HHMP.

Memorandum

Date: 18th August 2021

To: Sanjay Bangs - Auckland Council Planner
From: Gavin Donaldson - Specialist Unit Senior Arborist

Applications: D.002213.01 and D.002214.01

Subject: **Drury Arterial Networks – Notice of Requirements.**

The Application

The Applicant, (Supporting Growth Alliance) is seeking a ‘package’ of Designations in Drury to facilitate future growth over next 20-30 years. The proposal is supported by an Arboricultural Tree Assessment report compiled by Craig Webb, dated January 2021, which states that “tree removal within the proposed designations will be required where road widening and associated batter slopes/retaining structures extend over these areas. Work in the vicinity of trees, including network utility installation or diversion, may also require work within the rootzone and pruning of trees.”

The vast majority (approximately 70%) of the trees and groups of trees identified within the proposed designations are protected by Regional Plan rules only. Of the remaining trees or groups of trees, only approximately 8% of the total trees are protected by District Plan rules. The tree report notes that “the assessment of effects for the purposes of the NoRs has considered only the status of trees protected by the District Plan provisions of the AUPOIP, as the Regional Plan considerations will be addressed via a regional consent application prior to construction of works within each project area.”

A Tree Management Plan is proposed (but not yet provided) for the NoRs, which will identify any protected trees, confirm the construction methods and impacts on each tree, and detail methods for all work within the root zone of trees that are to be retained. This TMP will be limited to the identification of trees protected under the District Plan only, as trees protected under Regional Plan provisions will be addressed as part of a future resource consent process.

The Tree Assessment report confirms that the trees within the proposed designations “currently provide a range of cultural, amenity, landscape and ecological values that contribute environmental benefits to the location. These values will generally increase over the medium term, (10-20 years) and long term (20+ years) timeframes that may apply to the NoR for road corridor designation.”

The application provides a check list of values that the trees contribute to the environment from a pre-defined list that includes Visual amenity, Carbon sink, Community identity, Screening, Soil / erosion protection, Storm-water reduction, and Wildlife Habitat.

The tree assessment includes a consideration of the relative vitality of the tree/group as to whether the tree will increase or decrease in size/vitality over given time periods (0-10, 10-20

and 20+ years), plus a consideration of the values of the tree/group as to whether their environmental contribution will increase or decrease in size/vitality over given time periods (0-10, 10-20 and 20+ years).

The tree report recommends that a Tree Management Plan (TMP) should be developed prior to construction to identify existing trees protected under the District Plan, confirm the construction methods and impacts on each tree, and detail methods for all work within the rootzone of trees that are to be retained. The TMP is to include the following:

- Advice on how the design and location of works can avoid, remedy or mitigate effects on the existing trees;
- Establishing tree protection zones and specifying tree protection measures such as protective fencing, ground protection and physical protection of roots, trunks and branches;
- Detailing methods for all work within the rootzone of trees that are to be retained in line with appropriate arboricultural standards.

It is also recommended in the tree report that a “detailed appraisal of the trees with removal requirements be undertaken during detailed design, and for each tree which needs to be removed, an appropriate planting specification be developed, based on lost future benefits.”

The Applicant has offered to undertake replanting as mitigation for the proposed tree removals, through the development of an Urban and Landscape and Design Management Plan (ULDMP) and this is proposed by the Applicant as a condition of the proposed designation.

While the Applicant has offered to provide ‘mitigation’ for the proposed tree removals, by definition, mitigation acknowledges that there is a lasting negative effect, and it is preferred that an approach which remedies the impact of tree removals is adopted, where the remedial planting accounts for lost future environmental benefits, including the eco-system services of soil / erosion protection, storm-water reduction, wildlife habitat, and sequestered carbon as outlined in the Applicant’s tree values checklist.

In consideration of the ecosystem services provided by the trees proposed to be removed for these designations, their loss will require appropriate remedial planting to achieve the stated objective of central government to be ‘carbon neutral’ by 2050 and also to align with the sustainability goals of the Auckland Council’s ‘Low Carbon Strategic Action Plan’.

In regard to the loss of eco-system services, the remedial planting needs to match or exceed these attributes and values which would have been achieved by the existing tree asset at the end of the forecast period. In this instance the forecast period is for 30 years, which was chosen as this is a realistic average life span for the trees proposed for removal, and 2050 is the goal that has been set by the government for carbon neutrality under the Climate Change Response (Zero Carbon) Amendment Act.

The ecosystem services calculation can be achieved by using the i-Tree Development Team 2020 forecasting tool to estimate the lost future benefits arising from the proposed tree removals, and the remedial planting will need to achieve this same value by 2050 if carbon neutrality is to be achieved, and the actual effects of tree removal are to be addressed in a sustainable fashion.

The i-Tree software quantifies ecosystem services provided by trees based on input dimensions, known species characteristics and growth rates. It has been developed through

peer-reviewed science over the last 20 years with international collaborations, and there are Arboricultural Consultants in New Zealand who are familiar with the use of this tool. Please refer to this link provided for your assistance <https://www.itreetools.org/>

Further information request (s92)

The Applicant was requested to provide a commitment that the proposed replanting will include a calculation for replacing the ecosystem services loss that will result from the proposed tree removals, using a recognised tree format such as iTree.

s92 response received

The Applicant has replied that...

“No, we are not proposing a calculation at this time. This is because the majority of any vegetation removal required to facilitate the Projects and therefore any replanting works will need to be authorised through the regional resource consents for the Projects, which will be sought in the future at detailed design (i.e. 10-20 years from now). We consider it is more appropriate to consider replanting matters holistically at that time.”

Conclusion

While the majority of vegetation removal will take place in 10-20 years from now and the Applicant prefers to “consider replanting matters holistically at that time”, it is likely that in 20 years from now the need to account for the loss of ecosystem services provided by trees will be a more pressing issue and/or legal requirement.

It is my conclusion that the conditions of consent for the Designations sought for this project should include a requirement for the Urban and Landscape and Design Management Plan (ULDMP) to provide for appropriate levels of replacement planting to account for the loss of environmental benefits and eco-system services provided by the trees and vegetation being removed, including the eco-system services of soil / erosion protection, storm-water reduction, wildlife habitat, and carbon sequestration - in order to achieve carbon neutrality throughout the project.

Recommendation

It is my recommendation that an addition be made to the ULDMP replanting condition (condition 11(a)(iii) ‘detailed specifications relating to the following:’ with the specific requirement for

Restoration planting which remedies the loss of ecosystem services provided by vegetation identified for removal, including the replacement of planting that fails to establish.



Gavin Donaldson - Senior Specialist Arborist - Earth Stream & Trees Unit

Regulatory Services - Auckland Council

To: Sanjay Bangs | Senior Policy Planner
Planning Central and South, Plans & Places cc:

From: James Hendra
Consultant Parks Planner

Cc: Lea van Heerden | Senior Parks Planner
Parks Planning | Parks Sport and Recreation | Auckland Council

Subject: **PARKS PLANNING INPUT FOR NOTICE OF REQUIREMENT DRURY SUPPORTING GROWTH PROGRAMME – WAKA KOTAHĪ NEW ZEALAND TRANSPORT AGENCY AND AUCKLAND TRANSPORT [SGA-004-NOR]**

1. Introduction

1. My name is James Anthony Hendra. I hold the qualifications of Master of Planning Practice (hons) from the University of Auckland and Bachelor of Business from Auckland University of Technology. I am a member of the New Zealand Planning Institute.
2. I have over 15 years’ professional planning experience, including 9 years’ in resource management, open space planning and policy analysis in public and private sector roles. I am a director and principal planner at Walker Landscape Architecture Ltd., a planning, landscape architecture and project management practice.
3. My involvement in the application has been to consider the potential effects of the Drury Arterial Network Notice of Requirement (NoR) on public land which includes parks and reserves and the facilities these contain, on behalf of Parks Planning, Auckland Council.
4. The information reviewed includes the assessment of effects (AEE), drawings, expert assessments, section 92 responses, and conditions of consent, as relevant.
5. The purpose of this report is to consider the NoR and assess the potential effects of the project on public open spaces. Recommendations are provided regarding the proposed conditions to address potential adverse effects.

2. The Proposal

6. The overall proposal is described in detail by others, and I do not repeat that here. The application identifies that the proposal will affect the following open space land:

Open Space Name	Legal Description	Zone	NoR stage
Ngakaroa Reserve	ALLOT 405 Parish OF ŌPĀHEKE, ALLOT 406 Parish OF ŌPĀHEKE	Open Space - Conservation Zone	NoR D1 – SH22

Drury Sports Complex	ALLOT 390 Parish ŌPĀHEKE, PT ALLOT 37 Parish ŌPĀHEKE	Open Space - Sport and Active Recreation Zone	NoR D1 – SH22
Hingaia Stream Esplanade Reserve	Lot 1 DP 168929, Pt Lot 3 DP 96414, Lot 6 DP 119244, Lot 7 DP 119244, Lot 16 DP 68708 and SO 200	Open Space - Informal Recreation Zone, and Business - Light Industry Zone	NoR D2 Jesmond- Bremner and Waihoehoe East
Ōpāheke Reserve	Lot 1 DP 65192, PT ALLOT 17 Parish OF ŌPĀHEKE, PT ALLOT 52 Parish OF ŌPĀHEKE	Open Space - Sport and Active Recreation Zone	NoR D5 Ponga Road, Ōpāheke Road (Rural) Upgrade
Drury Domain / Tui Street	LOT 1 DP 41336, ALLOT 297 PARISH OF ŌPĀHEKE, LOT 3 DP 31548, LOT 2 DP 45472	Open Space - Sport and Active Recreation Zone	NoR D2 Bremner Road and Waihoehoe Road Upgrade

3. Discussion

Landowner Approval for works on Open Space Land

7. A designation provides approval for works from a resource consent landuse perspective; however, this is not an approval for use or changes to the land that is outside the ownership of the requiring authority. Works upon public open space land (Parks land) are subject to landowner approval (LOA) processes, whereby the requiring authority must gain approval for works from the landowner, in this case, Auckland Council.
8. This process provides the ability for Auckland Council, and in particular, the Parks department and political representation of the day, to have some say over the implementation of the projects on Park's land. Notwithstanding this, the Notice of Requirement (NoR) conditions and subsequent outline plans have a significant bearing on expectations for how a designation will be given effect on Park's land. Therefore, the consideration of likely impacts upon Park's land, and the adoption of reasonable conditions to address specific effects at the NoR stage is important to ensure that those effects are appropriately addressed.

Parks land

9. The conditions proposed in the NoR are overarching and do not make reference to specific Parks land. Limited refence is made to open space land which may be interpreted as a zone classification. Parks land is different to private land as it often has a function of community, social and/or recreational wellbeing. As such, in some instances, specific conditions may be warranted to ensure that effects are appropriately addressed specific to Parks land. In this report instances where I consider specific conditions are warranted are set out.

Ngakaroa Reserve – NoR D1

10. Ngakaroa Reserve¹ is located on the western side of the KiwiRail corridor, bound by Great South Road and Karaka Road on the western side, McPherson Road on the south, and bisected by Great South Road which veers east through the reserve.
11. The land is zoned Open Space - Conservation Zone.
12. The reserve comprises 7.3 hectares and is contained in two areas of land located at the north and south. The Ngakaroa Stream meanders through the reserve in a south to north direction.
13. The eastern part of the northern block is leased to “Riding for the Disabled” and contains buildings and facilities which support this activity. The remainder of the reserve contains open grassed areas and vegetation which is generally located alongside the stream.



Figure 1 – Aerial of Ngakaroa Reserve and access points

14. The proposal involves an expansion of the existing SH22 designation (also known as Karaka Road) into Ngakaroa Reserve along the western side of the reserve and adjacent to Great South Road where it cuts through the reserve. A site compound is also proposed within the proposed designated area on the northern side of Great South Road.

¹ Also spelled Ngakoroa

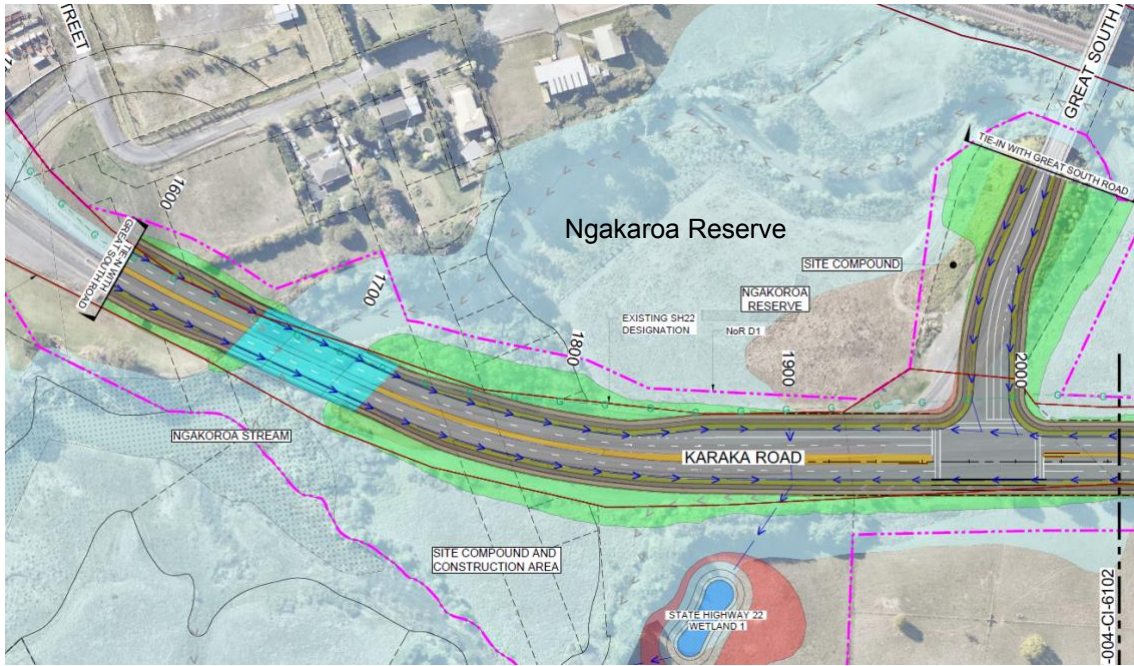


Figure 2 – Excerpt from NoR D1 - Drawing SGA-DRG-STH-004-CI-6201 Rev E

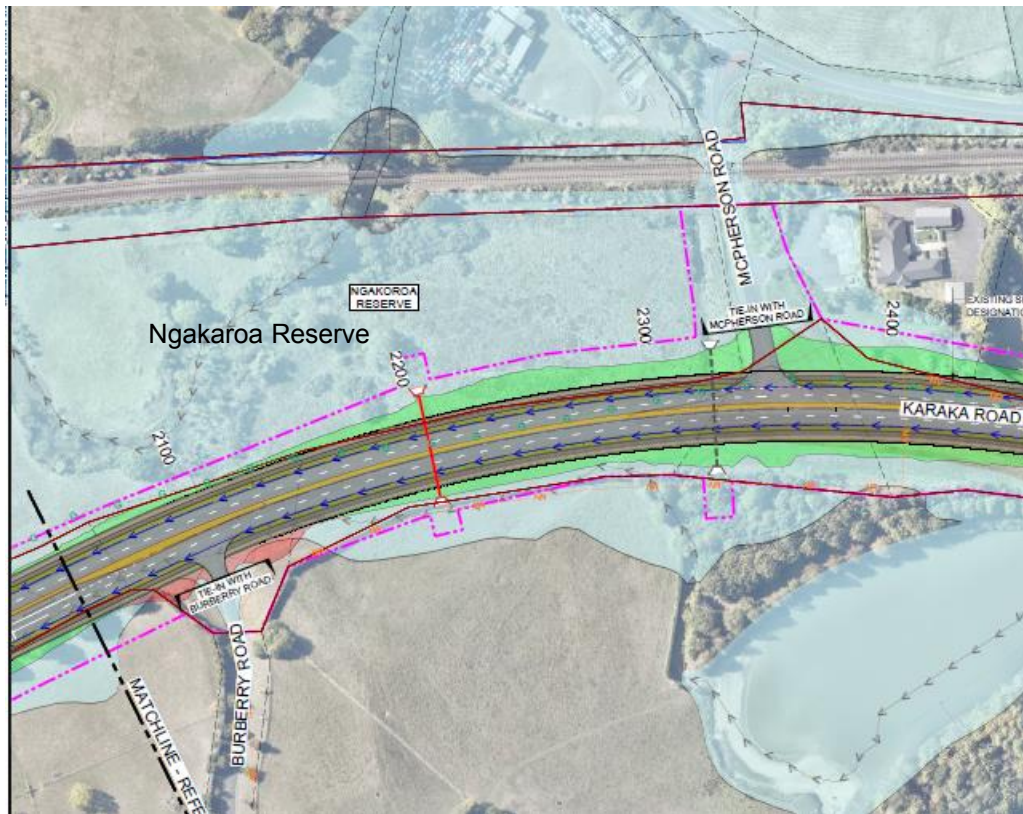


Figure 3 – Excerpt from NoR D1 - Drawing SGA-DRG-STH-004-CI-6202 Rev E

Ngakaroa Reserve – Key Open Space Considerations

- Permanent occupation within Ngakaroa Reserve with batter slopes.
- Effects within Ngakaroa Reserve and on reserve users during construction.

- Effects on the reserve caused by the site compound off Great South Road.
- Potential temporary loss of vehicle access from Great South Road during construction and permanently.

Ngakaroa Reserve - Assessment

15. Batter slopes are shown on the drawings in green. Due to the proposed road alignment and level changes, it would appear that batter slopes into Parks land are unavoidable. In this case, battering onto Parks land is preferred to retaining at the boundary because the interface is more naturalistic, and the appearance of landforms and the roading infrastructure can be mitigated with planting.
16. The land permanently affected at Ngakaroa Reserve, and therefore no longer available for conservation or recreation purposes is not quantified but will be a relatively small proportion of the western flank of both parts of the reserve. The Great South Road tie-in areas are already battered to a lesser extent than proposed and contain grass or re-vegetation.
17. Proposed conditions 7 (Management Plans), 9 and 10 (Urban and Landscape Design Management Plan (ULDMP)) will adequately provide for visual integration of the permanent works into the reserve landform and landscape. Condition 10 provides for walking and cycling connections, should these be appropriate in the future to provide access into this part of the reserve.
18. The proposal is not clear if it will retain the existing and only vehicle access at the northern side of Great South Road. It is important to keep a vehicle access for maintenance purposes and enable ongoing accessibility for park users. In this case, the subject area of land is otherwise inaccessible due to being bisected by the Ngakaroa Stream. Therefore, a condition to require this access to be retained and tied into Great South Road post-construction is recommended.
19. During construction, condition 17(b)(vi) (Construction Traffic Management Plan (CTMP)), requires *“methods to maintain vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be;”*. This condition is acceptable to ensure that maintenance or user (if applicable) access is maintained, or if an alternative is provided, at the Great North Road vehicle access during the construction period. For certainty, an additional clause in the relevant conditions which references the specifically required access is recommended.
20. The southern-most access to the southern part of the reserve appears unaffected by the project, however, it is located within the proposed designated area. Therefore, for certainty, conditions that require preservation of access function at this location during construction are also recommended.
21. The proposed construction yard within the reserve will be temporary and require reinstatement. This will be addressed by the ULDMP conditions and any LOAs required.

Drury Sports Complex – NoR D1

22. The Drury Sports Complex is an 8.37-hectare active sports park located west of Victoria Street and Great South Road. Car parking and facilities are located centrally and are accessed from Victoria Street.
23. The reserve is zoned Open Space - Sport and Active Recreation Zone.



Figure 4 – Aerial of Drury Sports Complex

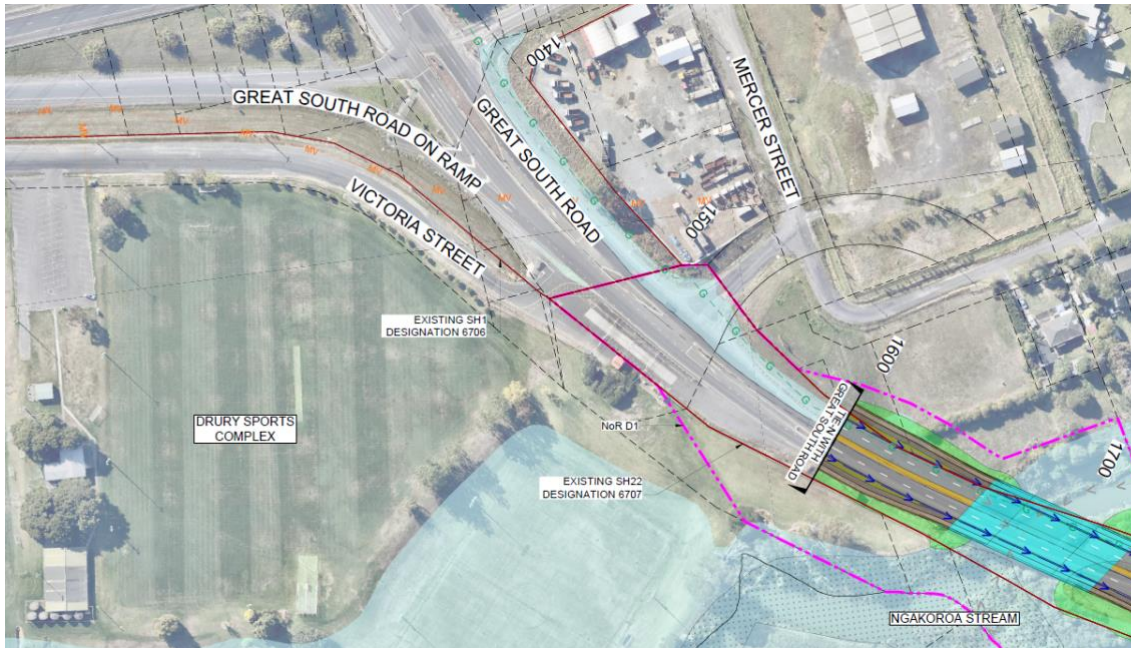


Figure 5 – NoR D1 - Excerpt from Drawing SGA-DRG-STH-004-CI-6101 Rev E

24. The proposal involves a designated area and works on Great South Road and within the southern-most part of the Drury Sports Complex. Existing SH1 designation 6706 is located near the northern boundary of the reserve.
25. The reason why the proposed designation area extends onto this part of the Drury Sports Complex is unclear as the proposed carriageway and associated land batter appear well removed from the subject land. It is presumed that this area may be required for construction works associated with the replacement of the Great South Road bridge, although it is not labelled on the drawings as a construction area.

Drury Sports Complex – Key Open Space Considerations

- Land disturbance and potential removal of a group of trees located within the Parks land. These trees are protected under regional and district rules.
- Access during construction.

Drury Sports Complex - Assessment

26. The proposed designated and potential works area at the Drury Sports Complex is within an area that is not used for active recreation or access. Therefore, no direct effects on the function of the reserve are expected.
27. The works on Great South Road may affect access for vehicles travelling north to the Drury Sports Complex. The CTMP condition should adequately address this matter and ensure that access to the reserve is maintained during construction.

28. Trees potentially affected are assessed in the application arboricultural report. Proposed condition 25 (Tree Management Plan) in conjunction with the ULDMP condition will ensure protection and/or replacement planting as required.

Hingaia Stream Esplanade Reserve – NoR D2

29. The relevant part of the Hingaia Stream Esplanade Reserve is located along the banks of the Hingaia Stream where it is crossed by Norrie Road. The land is zoned Open Space - Informal Recreation Zone. The esplanade reserve is unusually limited in extent with some land that would be expected to be esplanade reserve being road reserve or private land.

30. A public path is located within the northern esplanade reserve and continues north for approximately 1.5 kilometres along the stream edge.

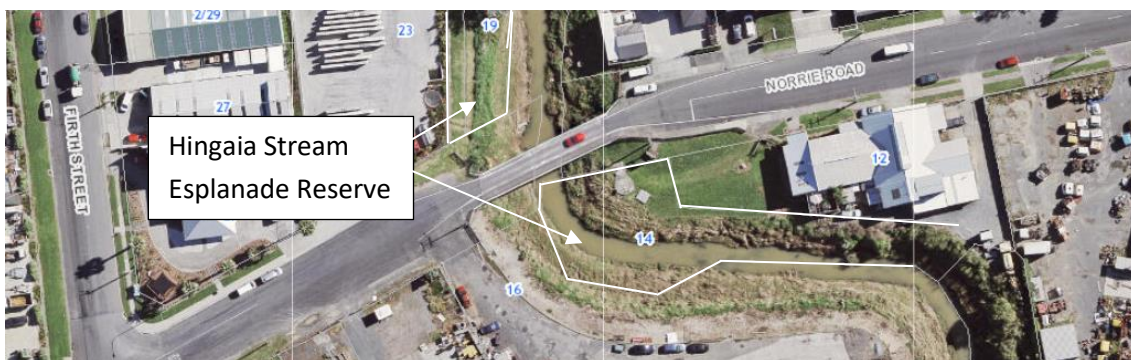


Figure 6 – Aerial of Hingaia Stream Esplanade Reserve

31. The proposal involves an extension of Bremner Road, realignment of Norrie Road and construction of a bridge over the Hingaia Stream and within the esplanade reserve. The existing bridge will be removed.

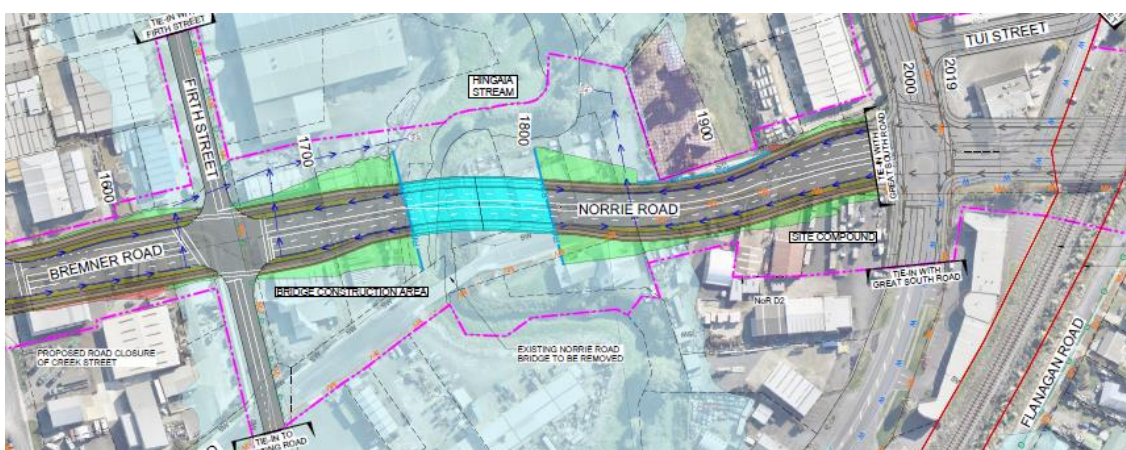


Figure 7 – NoR D2 - Excerpt from Drawing SGA-DRG-STH-04-CI-2103 Rev G

Hingaia Stream Esplanade Reserve – Key Considerations

- Integration of pedestrian and cycle connections from realigned Norrie Road into the Hingaia Stream esplanade reserve, at both the southern and northern sides.

Hingaia Stream Esplanade Reserve – Assessment

32. The ULDMP conditions 9, 10 and 11 should provide for the cycle/walkway connections into Hingaia Stream esplanade reserve. Given the degree of change proposed with the realignment of Norrie Road, it is recommended that the outcome be assured by a specific reference in the NoR-D2 conditions.

Ōpāheke Reserve – NoR D5

33. Ōpāheke Reserve is a 41.35-hectare active sports park that also includes passive recreation uses. The land is zoned Open Space - Sport and Active Recreation Zone. The western side of the park is bordered by Slippery Creek, esplanade reserves and private land. The south-eastern boundary is bordered by an unformed paper road (Gatland Road). The eastern side of the park is bordered by the KiwiRail corridor, and the north-eastern boundary is bordered by Ōpāheke Road.
34. A two-way vehicle entrance is provided from Ōpāheke Road and provides internal access to car parking and facilities. Sports fields located on the eastern side have been upgraded and are supported with floodlighting. The reserve has eight rugby fields and five cricket ovals. Ōpāheke Reserve is a significant public recreation resource and supports active use training during evenings and competition on weekends, and other times, all year round.
35. One hundred metres north of the main entrance is another vehicle entrance, from Ōpāheke Road, which provides access to a large area currently used for equestrian activities. This entrance appears to be required to avoid crossing the internal stream network which would require a circuitous and impractical route from the main entrance and car parking area. In addition, the equestrian access allows separation of horse floats and horses from the active sports area which is at times intensively used.
36. A further 100 metres north is another vehicle entrance near the north-eastern corner of the reserve. This entrance appears to be used as a service entrance and would have utility for maintenance access when people are using the more formal entrances.

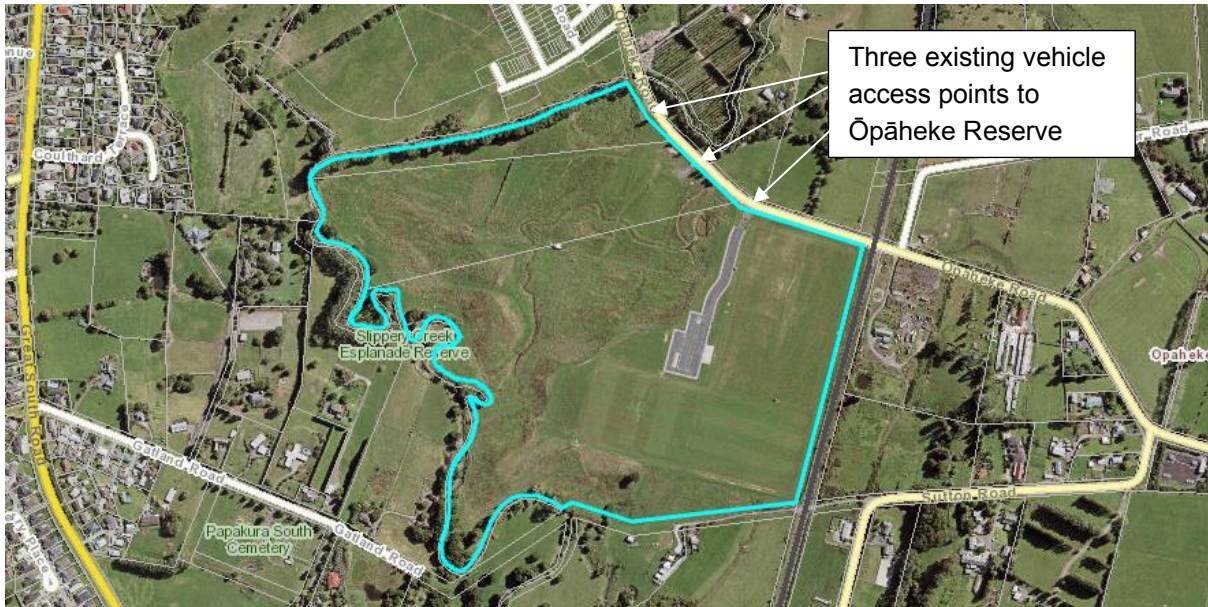


Figure 8 - Aerial of Ōpāheke Reserve

37. The northern half of the reserve is recorded in the council's GIS as subject to an extensive flood plain and subject to a major earthworks consent.
38. Auckland Council has adopted a Concept Plan for Ōpāheke Reserve (2019). The plan retains the existing active sports activities and seeks to develop the park with extensive planting, walking trails, passive destination areas, outdoor furniture, dog exercise, playgrounds and features, toilets and wetlands.
39. The demand for active and passive recreation will increase with the intensive planned development of the adjacent area (over 1,100 hectares of Future Urban zoned land east of SH1). Along with the established active recreation function, Ōpāheke Reserve will become a destination park that will serve the passive recreation needs of the surrounding urbanised area.
40. The Concept Plan retains the main centrally located vehicle entrance and develops the northernmost entrance into a formal entrance to provide access to the range of passive recreation areas to be located at the northern end of the reserve.



Figure 9 - Ōpāheke Reserve Concept Plan 2019 (Papakura Local Board)

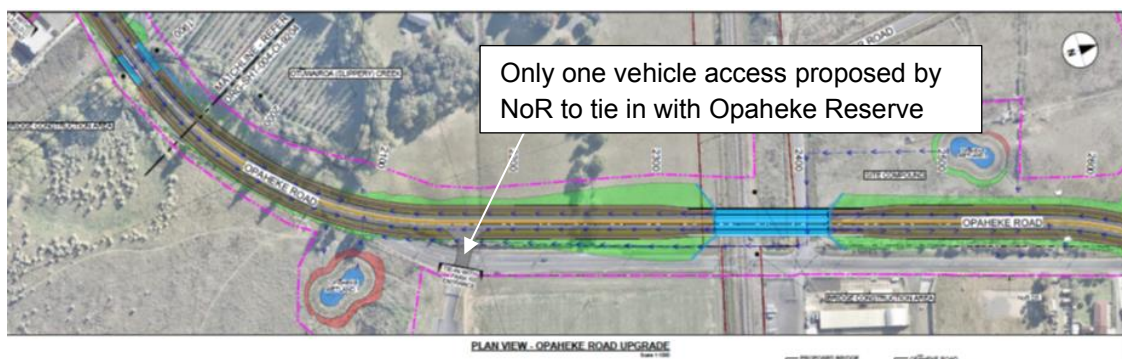


Figure 10 – NoR D5 - Excerpt from Drawing SGA-DRG-STH-04-CI-9205 Rev E

41. The proposal involves a designated area within the edge of Ōpāheke Reserve adjacent to Ōpāheke Road of around 250 metres in length. An existing stormwater pond is proposed to be altered to accommodate stormwater from the road corridor. Ōpāheke Road will be realigned slightly north of its existing location. A new main entrance with a vehicle and multi-modal access will be providing access from the Ōpāheke Road.
42. The proposal is unclear as to whether unrestricted right-hand turning into Ōpāheke Reserve will be provided for in the design. As the road will only be two lanes, it appears that right-hand turning will not be precluded. The other two existing entrances located north of the main entrance are not provided for in the proposal.

Ōpāheke Reserve – Key Considerations

- Effects of the proposal on the intended development of Ōpāheke Reserve as set out in the adopted Concept Plan.
- Provision of adequate access from Ōpāheke Road, during construction and permanently.

Ōpāheke Reserve – Assessment

43. The proposed stormwater pond can be accommodated without significantly affecting the implementation of the Concept Plan. This would be subject to an LOA.
44. The project area and works extend along the entire Ōpāheke Reserve northern frontage. The application AEE details that construction of the Ōpāheke Road Rural Upgrade is estimated to take 2 to 2.5 years (34.4.2). The timeframe for the Ōpāheke Reserve section is not identified. A lapse period of 20 years is proposed.
45. It is expected that the Ōpāheke Reserve will be developed over time in general accordance with the Concept Plan and subject to the extensive earthworks consent. This involves maintaining the main entrance and active sports facilities at the southern part, and the development of passive recreation areas to the north, accessed from Ōpāheke Road at the north-eastern corner of the reserve.
46. The proposal will be generally compatible with the Concept Plan, however, it would be negatively impacted if only the main Ōpāheke Road vehicle entrance is provided for. The proposed conditions do not include a requirement to provide a tie into more than one vehicle crossings at Ōpāheke Reserve. This may affect the ability to access the northern part of the reserve.
47. The ULDMP conditions seek to integrate works into the landscape and urban context. In terms of connectivity to open spaces the emphasis is walking and cycling connections. Whilst road crossings are listed as an item to include in a ULDMP there does not appear to be any requirement to provide road crossings to which would replace existing crossings, as would apply to Ōpāheke Reserve at present and potentially in the future as the reserve is developed.
48. To provide certainty that the required vehicle crossings are provided from Ōpāheke Road into Ōpāheke Reserve, a condition of consent is recommended to ensure that required crossings are provided for in the design.
49. The construction works on Ōpāheke Road may affect access into Ōpāheke Reserve. This would have significant community and recreational effects if full access during times of peak demand (weekend sports and weeknight training) is not provided. If the reserve is not accessible during these times, then alternative locations must be provided or the activities may be unable to occur with resultant adverse effects.
50. The CTMP condition (17) should address this matter and ensure that access to the reserve is maintained during construction. Condition 17(b) requires that the CTMP include methods to maintain vehicle access to property where practicable or to provide alternative access arrangements when it will not be. Alternative access could be created by utilising the unformed road reserve of Gatland Road, however, this would also require formed access within the reserve which may be expensive and impractical. Therefore, maintaining access to the reserve during peak times of demand appears to be the only available option.

51. Condition 17(b)(iii) specifically references schools in terms of any specific non-working or non-movement hours to manage vehicular and pedestrian traffic. The CTMP condition would better serve active recreation Parks land if “open space” is added to the condition. This would require times and days of peak demand to be understood and addressed as required to provide access to Parks land.

Drury Domain / Tui Street – NoR D2

52. Drury Domain is a 3-hectare reserve that contains active recreation areas and community facilities. The land is zoned Open Space - Sport and Active Recreation Zone.

53. The reserve is located on the eastern side of Great South Road and north of the Norrie Road, Waihoehoe Road and Great South Road intersection. The KiwiRail corridor runs along the eastern side.

54. In summer the park provides three touch training and competition fields. Over the winter season, the park provides a full-sized rugby pitch and a smaller training area. Outside of formal training and competition uses, the open grassed area is available for general informal recreation.

55. The southern part of the park is accessed from Tui Street and contains the Drury Community Library, Drury Hall, and the Drury Rugby & Recreation Club.

56. Vehicle access and 25 space car park is located at the north-western corner of the park and is accessed from Great South Road. A playground is located south of the car park.



Figure 11 - Aerial of Drury Domain

57. The proposal involves removing the southern portion of Tui Street where it connects to Waihoehoe Road and rerouting to Great South Road in a west-east orientation.
58. Due to the upgrade of Great South Road to be a four-lane road, and the proximity to the signalised intersection some 30 metres to the south, right-hand turning into the realigned Tui Street would be prohibited.

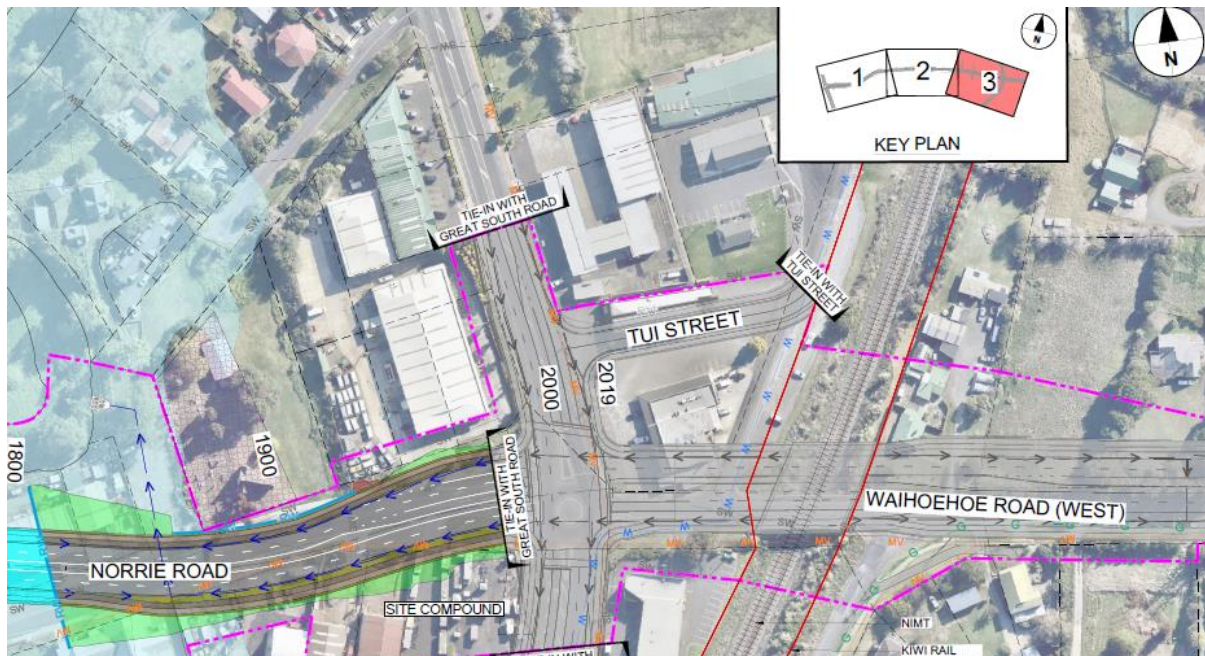


Figure 12 – NoR D5 - Excerpt from Drawing SGA-DRG-STH-004-CI-2103 Rev G

Drury Domain / Tui Street – Key Considerations

- Permanent effects of the proposal on the accessibility of Drury Community Library, Drury Hall, and the Drury Rugby & Recreation Club.
- Provision of adequate access during construction.

Drury Domain / Tui Street – Assessment

59. The proposed lack of right-hand turning into Tui Street, and the car park off Great South Road, will affect the accessibility to the community services and recreation facilities at the reserve. Vehicles travelling from the south from Norrie Road, Waihoehoe Road and Great South Road will need to travel past the entrances to Drury Domain and find a suitable location to turn and then travel southbound to be able to access the reserve with a left-hand turn.
60. Approximately 1,100 hectares of land immediately east of the reserve is zoned future urban. Once developed, even partly, this will escalate the demand for active recreation and community facilities at Drury Domain. The proposed restricted access will likely compromise accessibility and is of concern.
61. A potential alternative permanent access was considered by the local board, located south of the playground. This was not supported. This or a similar option might be considered more viable in the future, especially if right-hand turning is acceptable. The best time to do this would be when the project is in the design phase prior to lodging the Outline Plan of Works.

The potential access and road requirements would be considered based upon the reserve environment at that time.

62. A condition is recommended that alternative access options which will allow right-hand turning into Drury Domain are considered in consultation with Auckland Council prior to the lodgement of an Outline Plan of Works.
63. During construction, access to Drury Domain and the recreational and community facilities will be impacted. CTMP condition 17 should address this matter and ensure that access to the reserve is maintained during construction. Condition 17(b) requires that the CTMP include methods to maintain vehicle access to property where practicable or to provide alternative access arrangements when it will not be.
64. Condition 17(b)(iii) specifically references schools in terms of any specific non-working or non-movement hours to manage vehicular and pedestrian traffic. The CTMP condition would better serve active recreation Parks land if “open space” is added to the condition. This would enable times of peak demand to be understood and addressed as required to provide access to Parks land for the community and maintenance.

Blue-Green Network

65. The Blue-Green network, identified in the Drury Ōpāheke Structure Plan, and the design considerations and treatment recommended by the Requiring Authority’s experts, is not specifically recognised in the conditions.
66. The AEE defines the Blue-Green network as:

A green infrastructure proposal that combines the Auckland wide policies of Section E3, with specific landscape values of the Drury-Ōpāheke area. Proposed by Auckland Council in the Drury-Ōpāheke Structure Plan to guide future urban growth.

67. The AEE lists a positive effect to be:

Improve active mode connectivity to recreational facilities (including Ngakoroa Reserve and the Drury Sports Complex) including the ability to tie into the proposed greenways and recreational corridors anticipated by the Drury -Ōpāheke Structure Plan, Blue-Green Network²;

68. Under the heading of Mitigation Measures³, the AEE states that the ULDMP will include matters which address the principal elements of the Project that are likely to give rise to temporary and permanent adverse effects on landscape character, natural character and visual amenity.
69. Planting design details: landscape design and planting design details will be prepared for the project that demonstrates the following:

a. Street trees along the full length of SH22 in conjunction with shrubs and ground cover species appropriate for use within stormwater treatment areas and berms.

² AEE p. 89, 99, 202, 219,

³ AEE p. 102, 103, 224, 225, 306, 470

Species and tree stature should be selected to correspond with adjacent land use and bluegreen areas, in accordance with the 9 key principles outlined in the Auckland's Urban Ngahere (Forest) Strategy,

b. Identification of existing trees and vegetation that will be retained. Where practicable, mature trees and indigenous vegetation should be retained

...

e. Shape of and treatment of fill slopes and residual land, to integrate with adjacent land use and areas where the Project intersects with the proposed Blue-Green Network.

... Opportunities for integration of landscape mitigation works with the proposed Blue-Green Network, indicated by the Drury – Ōpāheke Structure Plan will also be considered.

70. The Blue-Green network is noted approximately 30 times in the body of the AEE, 90 times in the Assessment of Landscape and Visual Effects, and 20 times in the Urban Design Framework and Evaluation. The Assessment of Ecology Effects report also references the Blue-Green network in terms of areas that should be prioritised for retention and enhancement⁴.

71. The Blue-Green network is not noted as a specific matter to address in the Urban and Landscape Design Management Plan (ULDMP) conditions, yet as described, this plan is noted extensively in the expert assessments.

72. Arguably, the ULDMP conditions would address the integration of the project with the Blue-Green network via the general clauses which recognise landscape character, open space zones, urban context and specifically the *proposed urban* context. Condition 9(c) (in NoR D5 and repeated in other sections) characterises the urban environment as:

urban environment (i.e. centres and density of built form)

73. Based on the explanation of the meaning of urban environment, there appears to be a risk that the proposed urban context does not include the Blue-Green network, as it would comprise potentially a proposed natural environment context and parts might not be zoned open space.

74. To ensure that the intent for appropriate treatment of the Blue-Green network is given effect to, a condition of consent is recommended which amends condition 9(c)(i) to also include the *proposed natural environment*. Given that the Blue-Green network is likely to be superseded by the time the project is implemented, this recommendation should also include any future similar plan.

Pre-construction Conditions

75. The pre-construction conditions do not include any requirement to consult with Auckland Council (Parks).

⁴ Assessment of Ecological Effects p. 169

76. Involvement of Auckland Council (Parks) in the pre-construction phase of work is important to ensure that matters which directly affect access, operational matters and environmental effects at Parks land are appropriately considered prior to design and construction decisions being finalised and the project proceeding to OPW and construction stages.
77. Condition 7 (iv) (Management Plans) requires a summary of comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have been incorporated or not, and why. However, there is no process outlined to obtain these comments relating to stakeholders, including Auckland Council (Parks).
78. Condition 8 (Cultural Advisory Report) requires consultation with Mana Whenua by implication via the invitation to prepare a Cultural Advisory Report. The condition provides Mana Whenua with a minimum of a six-month timeframe to produce the report, prior to the detailed design for a stage of work.
79. Consultation is considered to be the appropriate terminology in this case due to the level of potential impacts upon Parks land. The words consult or consultation appears six times in each proposed set of conditions for each section of NoR, concerning:
- Mana Whenua, concerning the Stakeholder and Communication Management Plan
 - the Construction Noise and Vibration Management Plan where standards cannot be met
 - Auckland Council and the preparation of a Heritage and Archaeology Management Plan.

Consultation and its requirements are already part of the proposed conditions, therefore a requirement to consult with Auckland Council (Parks) is not a departure from conditions relating to other parties or matters, as noted.

80. To provide a requirement for adequate consultation prior to detailed design a condition that requires consultation with Auckland Council (Parks) is recommended.

Urban and Landscape Design Management Plan (ULDMP)

81. Condition 9 (b) states:

The objective of the ULDMP is to:

(i) enable integration of the project's permanent works into the surrounding landscape and urban context; and

(ii) ensure that the project manages potential adverse landscape and visual effects as far as practicable and contributes to a quality urban environment.

82. The purpose and meaning of the word “manage” in condition 9(B)(ii) is unclear, and may inadvertently dilute the intention to avoid, remedy or mitigate adverse effects.

83. Pre-construction condition 6(c)(iii) Outline Plan(s) lists:

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) Network Utilities Management Plan;*
- (ii) Construction Noise and Vibration Management Plan;*
- (iii) Urban and Landscape Design Management Plan;*
- (iv) Heritage and Archaeology Management Plan; and*
- (v) Tree Management Plan.*

84. Section 176A (3) of the Resource Management Act sets out that an outline plan must show:

- (a) the height, shape, and bulk of the public work, project, or work; and*
- (b) the location on the site of the public work, project, or work; and*
- (c) the likely finished contour of the site; and*
- (d) the vehicular access, circulation, and the provision for parking; and*
- (e) the landscaping proposed; and*
- (f) any other matters to avoid, remedy, or mitigate any adverse effects on the environment.*

85. In my opinion, replacing the word “manage” with “avoid, remedy or mitigate” would better give certainty to the intent of an outline plan of works regarding potential landscape and visual effects.

86. The term “avoid, remedy or mitigate” is used in other proposed conditions therefore it would be consistent to adopt the term with the UDLMP condition also. It is proposed in the objective of conditions relating to the Construction Environmental Management Plan (CEMP) and the Construction Traffic Management Plan (CTMP).

87. With respect to managing effect on Parks land, for consistency, it is recommended that the term “avoid, remedy or mitigate” is also added to the Heritage and Archaeology Management Plan and the Tree Management Plan.

Construction Conditions

Condition 14 - Stakeholder and Communication Management Plan (SCMP)

88. As described in this memo, the proposal has the potential to have adverse effects on Park’s land and the community regarding temporary and permanent access.

89. Condition 14 (SCMP) outlines how stakeholders (including directly affected and adjacent owners and occupiers of land) will be communicated throughout the construction works.

90. Consultation with Mana Whenua is required. Consultation with Auckland Council (Parks) is not required in the conditions.

91. Condition 14(c) requires any SCMP prepared for a Stage of Work shall be submitted to the council for information ten working days prior to the Start of Construction for a Stage of Work.

If this clause is intended to function as consultation with Auckland Council, then 10 days is not an adequate period of time.

92. In addition, and in conjunction with the recommended pre-construction conditions, a condition is recommended that following consultation, a SCMP is submitted to the council six months prior to the start of construction for a stage of works.

Submissions

Drury and Districts Rugby Football and Recreation Club

93. The Drury and Districts Rugby Football and Recreation Club have submitted regarding the effects the proposal will have on access to the Drury Domain via Tui Street. The submission:

“seeks a decision that improves access and provision of parking Tui Street, and clearly defines how north and southbound access will be provided to Tui Street.”

94. The provision of the maximum amount of parking spaces and being able to access Tui Street from both North and South directions are important outcomes to ensure the public space and activities can function effectively.
95. The submission point is consistent with the assessment provided in this memo regarding potential effects on access to Drury Reserve.

Memo ends

Memo

26 July 2021

To: Sanjay Bangs, Senior Planner – Plans & Places
From: Paul Crimmins, Senior Specialist – Contamination, Air & Noise

Subject: Notice of Requirement: Drury Arterial Network – Air Quality Assessment

1. As requested, I have reviewed the application reports and relevant submissions received regarding the Notice of Requirement (**NoR**) applications by Auckland Transport and Waka Kotahi for the five Drury Arterial Network projects, with respect to potential air quality effects and the requirements of the *Resource Management (National Environmental Standards for Air Quality) Regulations 2004* (**NES:AQ**) and the *Auckland Unitary Plan (Operative in Part)* (**AUP(OP)**): Chapter E14 Air Quality.
2. My review was requested in response to two submissions received, which raised concerns regarding air quality impacts, particularly relating to construction dust effects. These two submissions relate to NoR D3 (Waihoehoe Road East Upgrade, for the submission received from 26A Fielding Road) and D5 (Ōpāheke Road/Ponga Road Upgrade, for the submission received from 223 Ōpāheke Road). While NoR applications D3 and D5 and potential effects to these submitters have therefore been the focus of my review, I have also reviewed the potential effects of dust discharges during road construction and exhaust pollutant emissions from the operational future roads more generally.

Reviewer details

3. My full name is Paul Edward Crimmins and I am employed as a Senior Specialist within the Contamination, Air & Noise Team of Auckland Council's Specialist Unit, Resource Consents department.
4. I have been employed in this role since a restructure in October 2017 and in a similar Senior Specialist role since February 2013. I have over ten years' experience in air quality assessments (human health and amenity effects). I hold a Master of Science (First Class Honours) in Environmental Science from the University of Auckland (2018), and a BSc (Environmental Science) and BA (Politics) from the University of Auckland (2009). I am a member of the Clean Air Society of Auckland and New Zealand (CASANZ).

Construction dust

5. Section 4.4.5 of the AEE states that 'Suitable dust management measures will be implemented in accordance with the **CEMP** [Construction Environmental Management Plan] for each Project'. Examples of anticipated dust controls are the use of water carts, covered trucks for transporting spoil, and mulching exposed earthworks.
6. As detailed by the *Good Practice Guide for Assessing and Managing Dust* (**GPG:Dust**, Ministry for the Environment, 2016), dust is potentially generated by a range of construction activities for the construction and upgrades of roads, including bulk earthworks where exposed surfaces are present and from the movement of construction vehicles. The dust generated from construction activities (largely from the abrasion of aggregates) is predominantly of a larger particle size that is likely to settle out of the atmosphere within tens of metres from the source, and can cause nuisance effects such as soiling surfaces. The GPG:Dust recommends that conditions of consent are imposed for high-risk dust generating activities requiring that dust discharges do not cause 'offensive or objectionable effects'

beyond the site boundaries, and that dust discharges are minimised by adherence to a Management Plan.

7. For each of the proposed/amended Drury Arterial Designations (D1-D5), the submission of a CEMP is proposed as a condition. A matter for inclusion within the CEMP is 'methods for controlling dust and the removal of debris and demolition of construction materials from public roads or places'.
8. Another condition for D1 (relating to the SH22 upgrade) requires that 'the CEMP shall be prepared having regard to the *NZ Transport Agency Guideline for Preparing Environmental and Social Management Plans (April 2014)*'. I have reviewed this guidance, and note that it has been supplemented more recently by the *Guide to assessing air quality impacts from state highway projects* (NZTA, October 2019). Following the risk matrix of this air quality guide, I note that each of the proposed Drury Arterial works projects are not of such scale that they trigger the requirement for a specific Construction Air Quality Management Plan. Instead, this air quality guide recommends that:

For most projects, measures to address construction air quality effects should be addressed in the Construction Environmental and Social Management Plan (CESMP) developed in accordance with the State highway environmental and social responsibility standard. Generic dust and odour management requirements based on the relevant MfE good practice guides [the GPG:Dust] should be incorporated into the CESMP during project implementation.

9. I agree with this recommendation and consider that the proposed inclusion of 'standard' dust control measures within the proposed CEMPs shall sufficiently minimise construction dust effects for each of the projects. I consider that with these dust control measures in place, and carefully adhered to throughout the works, the potential adverse effects of construction dust to the two above submitters and occupants of nearby dwellings more generally shall be adequately managed so that, overall, construction dust effects are not likely to be significant.
10. The proposed Designation Conditions do not specify a limit for dust effects. The Permitted Activity (PA) Standards for air discharges, AUP(OP) E14.6.1.1, are relevant to the works. I consider these PA Standards shall adequately limit the potential dust effects and do not need to be re-stated as conditions of the Designations. Particularly, PA Standard E14.6.1.1(2) requires that there is 'no offensive or objectionable' dust effects beyond the works boundaries, in accordance with the GPG:Dust's recommended wording for limit conditions. If the submitters, or other neighbours of the works, feel that the measures within any of the CEMPs are not being sufficiently adhered to (or are insufficient) to minimise dust effects for compliance with these relevant Standards, they may raise a complaint during the works which would be investigated and responded to through the Designations' proposed complaint response measures to ensure that compliance with the PA Standards is achieved.
11. The potential construction dust effects and suitability of specific proposed management measures within the CEMPs can also be further assessed during the resource consent applications for bulk earthworks, which are noted to be separately required under the AUP(OP) prior to construction.

Operational air discharges (exhaust emissions)

12. The submission from 223 Ōpāheke Road raises concerns regarding 'pollution' from the upgraded Ōpāheke Road, which may include vehicle exhaust emissions.
13. The *Guide to assessing air quality impacts from state highway projects* (NZTA, October 2019) details how some significant state highway projects may necessitate specific assessments of operational air quality effects. Having reviewed this air quality guidance, I agree that the proposed Drury Arterial Network upgrades are not of a scale or risk to necessitate such specific assessment.

14. I consider that the exhaust emissions from vehicles using the proposed upgraded and new roads are not likely to significantly degrade local air quality such that human health effects are likely to arise as a result of the projects. Based on comparative air quality monitoring data recorded near to similar transport networks, I do not consider that exhaust emissions of vehicles using the new and upgraded Drury Arterials are likely to cause any air pollutant to exceed the NES:AQ Ambient Air Quality Standards at any location.
15. Rule E14.4.1(A114) of the AUP(OP) states that the air discharges from the engines of vehicles (both vehicles using the future roads and construction vehicles during the construction phase) are a Permitted Activity without standards, given that exhaust emissions are regulated at a national level:

E14.4.1(A114): Discharges to air from the engines of motor vehicles, or from aircraft, trains, vessels (including boats) and mobile sources not otherwise specified (such as lawnmowers), including those on industrial or trade premises (excluding tunnels) (permitted standards do not apply) [Permitted Activity in all zones].
16. With respect to greenhouse gas emissions from vehicles using the future road, sections 70A and 104E of the RMA specifically prohibit council from making an assessment of climate change effects arising from discharges of contaminants into air. Currently, climate change effects are addressed at the national level as directed by the *Resource Management (Energy & Climate Change) Amendment Act 2004*. These RMA sections are due to be repealed on 31/12/2021, but are still in effect for these NoR applications.

Conclusion

17. I consider that air quality effects associated with the proposed Drury Arterial Network NoRs shall be adequately mitigated by the inclusion of the proposed conditions requiring adherence to CEMPs that include construction dust management measures.

APPENDIX TWO

SECTION 92 REQUESTS AND RESPONSES

Appendix 2: Section 92 requests and responses

Contents:

Further information request (AC)	22 March 2021
Further information response (SGA)	7 April 2021
Additional information request (AC)	25 June 2021
Additional information response (SGA)	6 July 2021

Note: Attachment A: Form 18s attached to Further information response dated 7 April 2021 are as notified, and can be viewed here for each NoR here: <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/auckland-unitary-plan-modifications/notices-of-requirement-to-designate-land/Pages/default.aspx>

22 March 2021

Helen Hicks
Supporting Growth Alliance
Level 9, 203 Queen Street,
Auckland

Issued via email: helen.hicks@supportinggrowth.nz

Dear Helen,

Request for further information in accordance with section 92 of the Resource Management Act 1991

- Notices of requirement:** Drury Arterial Network:
- Project D1: Alteration to Designation 6707 – State Highway 22 Upgrade (NZTA)
 - Project D2: Jesmond to Waihoehoe West FTN Upgrade (Auckland Transport)
 - Project D3: Waihoehoe Road East Upgrade (Auckland Transport)
 - Project D4: Ōpāheke North-South FTN Arterial (Auckland Transport)
 - Project D5: Ponga Road and Ōpāheke Road Upgrade (Auckland Transport)

We are writing with respect to the notices of requirement lodged for the projects described above.

After completing a preliminary assessment of documents lodged for the notices of requirement, we consider that further information is required to enable an adequate analysis of the proposals, their effects on the environment and the way in which any adverse effects on the environment may be mitigated. Provision of this further information is also sought to ensure potential submitters are able to adequately assess the extent to which the notices of requirement and associated environmental effects will affect their interests.

The information requested below will also enable the council to undertake a full and proper assessment of the notices of requirement and provide recommendations on each proposal.

Under section 92 of the Resource Management Act 1991 (RMA), we request the following further information:

(1) Planning and general matters

1. What will be the council's regulatory role in ensuring that the following management plans achieve their stated objectives of avoiding, remedying or mitigating adverse environmental effects associated with proposed Project construction works if they are only being provided to the council for information instead of certification through submittal with an Outline Plan pursuant to s176A of the RMA (as per Project's proposed management plan conditions, noting that other management plan conditions put forward to address construction effects provide for certification by the council, such as the Project's Construction Noise and Vibration Management Plan conditions) (**Project-wide**):
 - Construction Environmental Management Plan (CEMP)
 - Construction Traffic Management Plan (CTMP)

Explanation: Certification of management plans which address project construction effects (including the certification of CEMPs and CTMPs) is consistent with conditions which have been approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations. When responding to this further information request, and if these requiring authorities are still of the view that CEMPs and CTMPs for the Project should be provided for information only to the council, it would be useful to understand the reasons for adopting this approach which is inconsistent with conditions approved for recent AT and WKNZTA designations.

Section 176A(3)(f) of the RMA requires an Outline Plan to show (amongst other specific matters) "any other matters to avoid, remedy, or mitigate any adverse effects on the environment". As the stated objectives of the Project's proposed CEMP and CTMP conditions are to avoid, remedy or mitigate adverse environmental effects associated with proposed Project construction works, submittal of these management plans with the corresponding outline plans would be required under section 176A(3)(f) of the RMA, noting that the Project's proposed conditions exclude provision of these plans with future Project Outline Plans.

Sections 176A(1) and 176A(4) of the RMA enables the council in its regulatory role to request that the requiring authority make changes to the Outline Plan, and this would not be possible for certification purposes in relation to the Project CEMPs and CTMPs if they are not provided with the Project Outlines Plan and are instead submitted to the council for information only.

Certification of the Project CEMPs and CTMPs to confirm they achieve their stated objectives of avoiding, remedying or mitigating adverse environmental effects associated with proposed Project construction works would also be supported by the need to ensure such effects are appropriately managed both within the existing environment, which is predominantly rural in nature, and likely future environment which is anticipated to reflect a mix of urban residential and business land uses, in accordance with the current future urban zoning and indicative future land uses identified in the Drury-Opaheke Structure Plan (the need to manage construction effects within the likely future receiving environment is particularly relevant to the proposed Project works as anticipated construction commencement dates are identified as being later this decade, and this accords with the 15-20 year lapse periods sought for the Auckland Transport notices of requirement).

2. The AEEs submitted for each notice of requirement (NoR) state that adverse construction effects on affected communities will be mitigated by ensuring the public and stakeholders (including directly affected and adjacent owners and occupiers of land) are communicated with throughout construction works by implementing Stakeholder and Communication Management Plans, and these communications will need to address, amongst other matters:
 - determining adequate notice periods for the commencement of construction activities and works that affect access to properties; and

- informing parties of the expected timing, duration and staging of works and regular updating of progress.

It is also noted that the measures listed at the end of each NoR AEE for managing adverse Project effects on property, land use and business include:

- Methods to regularly communicate with the community, stakeholders and land owners/occupiers during construction, including timeframes.
- Links to other communication methods in other management plans

Please confirm how the Stakeholder and Communication Management Plan conditions proposed for each NoR will achieve the aforementioned communication outcomes and outlined in the submitted NoR AEEs, noting that condition 14(b)(v), which is the same for each NoR, only provides for “*methods to communicate the proposed hours of construction activities outside of normal working hours and on weekends and public holidays, to surrounding businesses and residential communities*” (also noted that the aforementioned measures for managing adverse Project effects on property, land use and business appear to be absent from the Stakeholder and Communication Management Plan conditions proposed for each NoR, with the intention being to include these measures in these conditions (as per statement preceding table summarising measures at the end of each NoR AEE)) (**Project-wide**).

Explanation: Stakeholder and Communication Management Plan conditions which have been approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations specifically provide for methods to communicate and consult with affected communities throughout construction works, but this appears to be absent from the Stakeholder and Communication Management Plan conditions proposed for each NoR. As the AEEs submitted for each NoR states that adverse construction effects on affected communities will be mitigated by ensuring they are communicated with throughout construction works, this should be stated in the Stakeholder and Communication Management Plan conditions proposed for each NoR, as has been the case in relation to Stakeholder and Communication Management Plan conditions approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations (as stated above, noted that the NoR AEEs also specify communication methods, but these appear to be absent from the proposed NoR Stakeholder and Communication Management Plan conditions).

3. In relation to site compounds, construction yards (laydown areas) and bridge construction areas shown on the Project’s indicative design drawings (**Project-wide**):
 - a. Please clarify the anticipated effects on existing buildings located within the footprint of these construction works areas.
 - b. Please explain what amenity-related effects are anticipated on occupied buildings proximate to these construction works areas, particularly in relation to visual, noise and vibration effects. Please also explain what mitigation measures are proposed, and how these are reflected in the proposed conditions for each designation which seek to address construction effects.

Explanation: The AEE and indicative design drawings identify site compounds, construction yards (laydown areas) and bridge construction areas in various locations throughout the Project’s spatial footprint. Further commentary is sought on the noise, vibration and visual effects of construction on owners and occupiers in the vicinity of these construction works areas.

4. Please provide further information to supplement the Project feedback summaries provided for the following groups, stakeholders and affected landowners who were consulted and engaged on the Project which is sought to better understand how this feedback informed the design and proposed designation boundaries for individual NoRs to avoid, remedy or mitigate adverse effects of the Project on their interests (**Project-wide**):

- a. Mana Whenua groups Ngāti Tamaoho, Ngāi Tai Ki Tamaki, Te Ākitai Waiohūa and Ngāti Te Ata Waiohūa
- b. KiwiRail
- c. Heritage New Zealand Pouhere Taonga
- d. Ministry of Education
- e. Department of Conservation
- f. Fire and Emergency New Zealand
- g. Network Utilities providers
- h. Developers
- i. Landowners and community

Explanation: Summaries of feedback received from the above groups, stakeholders and affected landowners during consultation and engagement on the projects have been referenced in Part C and Appendix A of the Project AEE in relation to the design of the Project, assessment of alternatives and avoiding, remedying or mitigating adverse Project effects. To assist the council and potential submitters better understand how the feedback provided by groups, stakeholders and affected landowners was used to address adverse Project effects on their interests, further information is sought which confirms how this feedback informed the design and proposed designation boundaries for individual NoRs. For example, page 49 of the Project's assessment of alternatives makes reference to this in relation to discussions had with stakeholders and affected landowners, although it is not clear from the assessment how the resulting Project design refinements informed selection of the Project's preferred options. Also, Part C of the Project AEE (page 58) states that in relation to those parts of the Project covered by NoR D1-NoR D4, "...there were adjustments to the proposed designation boundary and opportunities, including identification of valued trees and private property adjustments were identified, to address landscape and visual amenity at detailed design stage." Again, it is not clear from the Project's assessment of alternatives how the resulting Project design refinements informed selection of the Project's preferred options.

Furthermore, in order to adequately assess specific concerns raised by groups, stakeholders and affected landowners regarding the Project's environmental effects, it is requested that further information be provided which expands upon these concerns where stated in the corresponding feedback summaries, noting that this information will also assist in ensuring the Project's cultural effects can be adequately assessed in the absence of cultural value assessments from the Mana Whenua groups with an interest in the Project area.

(2) Transport

5. Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Drury Hills Road and Waihoehoe Road (**NoR D3**).

Explanation: Drawing SGA-DRG-STH-004-CI-4103 does not include an appropriate tie in to Drury Hills Road, as shown in Figure 10. We consider that NoR: D3 should demonstrate an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary.



Figure 2: Intersection of Drury Hills Road and Waihoehoe Road, from drawing SGA-DRG-STH-004-CI-4103

6. Please provide further detail on the proposed closure of the Waihoehoe/Flanagan intersection, including timing, co-ordination with any other works needed to maintain access to Flanagan Road, and consultation with affected parties. Alternatively, if the closure of the intersection is not proposed as part of the designation, drawing SGA-DRG-STH-04-CI-3101 should be updated (**NoR D3**).

Explanation: Drawing SGA-DRG-STH-04-CI-3101 identifies that the intersection between Waihoehoe Road and Flanagan Road will be closed and that “CONNECTION WITH FLANAGAN ROAD AND PROPERTY ACCESS TO BE DEVELOPED WITH FUTURE NZUP PROJECT”

Further, Table 7-15 of the Assessment of Transport Effects states that

“The Flanagan Road intersection with Waihoehoe Road West is expected to be closed through NZUP as a result of the new Drury Central Rail station and park and ride facilities.”

In our view NoR D2 should not include the closure of the Flanagan Road intersection, as currently shown in Drawing SGA-DRG-STH-04-CI-3101. If the closure of the intersection proceeds works under NZUP, this affect access to the future rail station and existing properties on Flanagan Road, noting there is currently no alternative access for Flanagan Road.

7. Please provide further detail on construction traffic effects upon the transport network should the Jesmond Road and Bremner Road sections of NoR D2 be constructed in parallel including how this will be addressed in the recommended construction traffic management plan condition (**NoR D2**).

Explanation: Section 5.2 of the Assessment of Transport Effects identifies the methodology used to assess the potential construction traffic effects, including consideration of any works that should not occur at the same time. The subsequent sections of the report do not identify any works that should not occur at the same time. It is unclear whether the author considers that all sections of all corridors could be constructed in parallel. While NoR D2 is assessed in sections, there is no detail on whether NoR D2 is likely constructed in sections, or as a single corridor of works. Should the Jesmond Road and Bremner Road sections be constructed in parallel, there

may be significant effects on access as there are no alternative corridors to access existing and future development within the Auranga Precinct.

8. Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects. Please comment on what, if any, alternatives have been considered to maintain access to properties on Tui Street (**NoR D2**).

Explanation: Drawing SGA-DRG-STH-04-CI-3101 shows the realignment of Tui Street, to form a new intersection with Great South Road, as shown in Figure 11 above. We consider that the proximity of the proposed intersection with the upgraded Great South Road/Waihoehoe Road intersection is likely to create safety issues for drivers turning right into and out of Tui Street. Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects, and comment on what means to mitigate potential safety effects were considered (such as an alternative access to the north of the Drury Rugby Clubrooms).

9. Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Ponga Road and Jack Paterson Road. This should include an assessment of sight distances, management of the interface between a rural and urban road environment, and accommodation of vehicle tracking (**NoR D5**).

Explanation: Drawing SGA-DRG-STH-04-CI-8102 does not include an appropriate tie in between NoR D5 and the Ponga Road/Jack Paterson Road intersection, as shown in Figure 13. We consider that NoR D5 should demonstrate that an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary. The design should demonstrate that safe intersection sight distances can be met, that the interface between a rural and urban road environment is appropriately managed, and appropriate vehicle tracking movements can be accommodated.

10. Please confirm whether the arrangement of the Hunua Road/Croskery Road intersection, as assumed in the traffic model, can be accommodated within the existing legal road boundaries and/or NoR D4 boundary. Further, please confirm the timing of the alteration in intersection form (conversion to a roundabout) (**NoR D4**).

Explanation: In the traffic model, the Hunua Road/Croskery Road intersection is assumed to be a roundabout, in both the future Do Minimum and NoR SATURN models. Clarification is required on

- is the change in layout in response to NOR D4 or considered to be a separate business as usual project*
- what are the implications if the intersection is not altered prior to implementing NOR D4*

whether any localised widening is required and whether it should be included in the NOR D4 designation.

11. Please explain what effects on the transport network may be under or over-stated in the NoR due to the difference between the traffic model and the NoR design for the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road (**NoR D4**).

Explanation: In the traffic model, the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road are assumed to be signalised intersections. However, the designation layout includes roundabouts at both intersections. While we appreciate that the detail around intersection design and control will be dealt with through the design phase, the traffic modelling includes a sizeable delay at the Ponga Road intersection (more than 3 minutes).

Our concern here isn't related to the potential footprint at these particular intersections, as a roundabout presents a conservative approach, but the footprint about the upstream and downstream signalised intersections may alter, as the level of delay included in the traffic model may be pushing demand away from the corridor and onto alternative routes.

Some feedback on possible impacts to the NOR D4 designation is worth teasing out should modelled constraints (high delays along the route) be reduced.

12. Please detail the extent to which documents lodged for NoR D4 will be updated to confirm the proposed closure of the Sutton Road at-grade rail crossing, with the traffic model used to inform the supporting transport assessment placing particular importance on the Ōpāheke N-S arterial being protected to allow for this network change (**NoR D4**).

Explanation: The SATURN traffic model assumes that Sutton Road is closed when the Ōpāheke N-S arterial is operational. We support the closing of this level rail crossing, noting that it presents a safer outcome and aligns with the Vision Zero safety strategy, but highlight the need for this assumption to be addressed in the AEE for NoR D4 and proposed designation conditions, noting that the closure of this connection places additional importance on adjacent sections of the NOR D4 corridor being protected to allow for this network change.

13. Please provide clarification on whether turning lanes and/or intersection improvements along the urban section of Ōpāheke Road may be required due to the increase in vehicle movements resulting from (**NoR D5**).

Explanation: The traffic modelling suggests predicts a significant increase in traffic on Ōpāheke Road into the future. For example, the base traffic model assumes some 150 vehicles northbound about Boundary Road, with this predicted to increase to some 750 vehicles per hour. While the proposed designation includes several vehicle crossings, where localised works are required, we ask for clarification on the extent to which turning lanes and localised intersection improvements have been captured within the analysis. For example, right turning storage space will likely be required to ensure right turning vehicles can stack safely based on the increased demand predicted along this route.

(3) Noise and vibration

Construction noise and vibration (Project-wide unless otherwise stated)

14. The preamble to Table 4-1 of the CA notes that the long term construction noise limits of the AUP have been adopted but the night time levels reported in Table 4-1 do not include the described -5dB correction. Please clarify why this is the case.
15. Please explain whether the exceptions to construction noise outlined in E25.6.29(3) (page 10 of the CA) apply to the Project?

Explanation: Page 10 of the CA discusses Rule E25.6.29(3) of the Auckland unitary Plan – Operative in Part (AUP) and identifies situations where the AUP construction noise levels between 7am and 10pm do not apply. These include:

(a) ...

(b) Because the nature of the works and the proximity of the receivers the noise generated cannot practicably be made to comply ... or

(c) for planned works, a copy of the works access permit issued by Auckland Transport or approval from the NZTA is provide to the Council five days prior to work commencing; or

(d) for planned works where the works will take more than 8 hours to completed a construction noise and vibration management plan is provided to the Council no less than five days prior to work commencing ...

Could the author of the CA please comment on how the above three points apply to the Project? Is the Project required to comply with the AUP limits?

16. Please explain what thought has been given to protect construction of the road corridors against reverse sensitivity effects arising from future development.

Explanation: *In the last paragraph of the summary to the Assessment Methodology (Section 5) the CA notes that "Construction will occur several years in the future. Therefore, receivers may have changed by then, with new receivers in the vicinity due to increased development. Construction noise and vibration effects will need to be reassessed at the time of construction".*

While we understand this to be a practical solution to address the unknown, this does not appear to fulfil the purpose of the designation, being route protection for the local arterial roads. If the future reassessments result in significant adverse effects, could this compromise the project through reverse sensitivity?

17. Please elaborate on the potential effects of construction works at night, particularly in relation to bridge demolition and construction, and noise from machinery (millers, trucks and pavers) operating on existing roads.

Explanation: *Section 5.1 provides commentary on activities and duration. It raises night works, which may include the noisiest activity of pavement construction. Any night work has the potential to result in the largest effects on neighbours and is touched on in Section 5.6.6. For previous projects, bridge demolition and construction were often undertaken at night, both of which require major items of plant and occur for significant durations. Likewise, working on existing roads, of which most of the designations relate to, often requires night works with the use of noisy machinery including millers, trucks and pavers. Given the large machinery often required at night, the potential for adverse effects and size and resources available to the design team, could the potential effects of night works be significantly elaborated upon?*

18. Please assess the construction noise effects arising from night time works.

Explanation: *Table 5-4 of the CA provides an assessment of day time effects from various levels of construction noise and is used throughout the CA as a basis for determining effects. Given the expectation of night time works, could some form of assessing the resulting effects be provided?*

19. Please provide noise data for the large items of plant identified in Table 6.1 of the CA, including mobile concrete pumps and trucks, mobile cranes used for bridge construction, graders and kerb machines.

Explanation: *Table 5.1 of the CA provides noise data from some of the plant considered in the analysis. Table 6.1 goes on to identify other large items of plant not considered, including mobile concrete pumps and truck, mobile cranes used for bridge construction, graders and kerb machines. Could noise data please be provided for this additional plant?*

20. Please clarify whether the plant identified in Table 5.1 of the CA is a complete list, or if additional plant will be required.

Explanation: *Other, noisy plant often required for road building includes motor scrapers, millers, concrete saws and breakers.*

21. Please explain what type of piling is expected in construction of the bridges. Given that proposed bridges are often over streams, please clarify whether piling require driving or casings to be vibrated in or out. If so, does the assessment allow for this?

22. Please check and confirm the construction noise anticipated from the plate compactor

Explanation: *Throughout the CA, it is the plate compactor that results in the largest effects. Table 5.1 reports this as one of the noisiest pieces of plant anticipated for construction with a sound power level of 110dBA. Based on field measurements of handheld plate compactors undertaken by Hegley Acoustics, this level appears high.*

23. Please clarify whether setback distances from plant are required for night time construction.

Explanation: *Tables 5-1 and 5-2 give the respective setback distances from individual and groups of plant to comply with the day time limit of 70dB LAeq. Given night time works are anticipated, is a similar setback distance required for night time?*

24. Please comment on whether the requirements of Waka Kotahi (*Waka Kotahi State highway construction and maintenance noise and vibration guide (version 1.1, 2019)*) referenced in Condition 20 to NoR D1 should be included in the appendices to the conditions? (**NoR D1**)

Explanation: Condition 20 to NoR D1 requires the CNVMP to be undertaken in accordance with Waka Kotahi State highway construction and maintenance noise and vibration guide (version 1.1, 2019), but does not make this document available to view within the conditions.

25. Please explain why the requirements of the Schedules in the CA (Section 5.6.2) are different to those of the CNVMP (Section 5.6.1).
26. Please explain whether SGA has considered developing a set of guidelines for the relocation of neighbours during times of high noise at this stage of the project to provide an understanding of how this is anticipated to work.

Explanation: In 5.6.3, the CA describes the hierarchy of noise mitigation measures before going on to note the limitations of relocating neighbours. Section 5.6.4 is the comparable vibration section.

27. Please expand on the noise and vibration effects associated with demolition in any of the sections of the Project. This is not discussed in the construction methodology within the CA or the AEE.
28. Please expand the assessment of construction noise effects within the CA to consider the following:

- a. The noise levels that each property predicted to more than 70dB LAeq was to receive. For instance, Section 6.2.1.2 says that with mitigation the highest levels of noise would be 75 – 80dB LAeq. It is not clear however, whether this level applies to all 22 properties or whether some are exposed to lower levels.
- b. The addresses of the properties that are predicted to receive over the 70dB LAeq adopted limit. This is requested as it will aid with determining which properties should be considered for notification, and which is discussed further below:
- c. When assessing effects of the various levels, it would be useful to understand the duration of such levels. The CA explains that construction noise will vary with worst case levels expected for around three days. However, given that the construction periods of the various NoRs are up to four years, a more detailed investigation on the durations is requested.
- d. A discussion on expected night-time levels and durations is requested (cross-reference with item 13 which also seeks similar information)
- e. The assessment provided is in terms of LAeq. Why has L_{AFmax} been omitted? If it has been omitted from the assessment, should the L_{AFmax} form part of the conditions?

Explanation: The sections relevant to each NoR on Construction Noise Effects are confined to reporting the highest day time level to the most affected property/properties and the number of properties that can expect to receive day time levels above 70dB LAeq. For assessment, it would be useful to understand the above.

29. Please explain how significant vibration effects that exceed the damage protection threshold of DIN 4150 would be avoided, remedied or mitigated by the project, and who would undertake this.

Explanation: Throughout the NoRs, there are 83 of sites where vibration is reported to exceed the damage protection threshold of DIN 4150. The CA advises pre and ongoing monitoring of such sites but offers no view on whether such damage is an acceptable outcome for the project and comment on this adverse effect is requested. Comment is also requested on who would remediate any damage. While it is expected that much of this

would be addressed through the CNVMP, it would be useful if the CA at least offered guidance on how any serious effects would be avoided, remedied or mitigated.

30. Please clarify the approximate durations where vibration is anticipated to exceed the amenity criteria levels of DIN 4150.
31. Please identify all buildings predicted to be exposed to vibration levels exceeding the amenity criteria of DIN 4150, and the duration that these receivers would be exposed to vibration exceeding these criteria.

Explanation to 25 & 26: In addition to the buildings predicted to receive vibration levels in exceedance of DIN 4150, there are a number of additional buildings that are predicted to be exposed to vibration levels that exceed the amenity criteria.

32. Please explain whether the use of construction yards across the project requires consideration from a noise and vibration perspective.

Operational noise and vibration (Project-wide)

33. Please expand upon the statement in Section 4.1.1 of the CA that commercial and industrial building do not fall within the definition of a Protected Premises and Facility (PPF) as described by NZS 6806. It is our understanding that section 1.4 of NZS 6806¹ neither includes such uses nor excludes such uses.
34. Please clarify whether consideration needs to be given to controlling road traffic noise on future residential areas to levels considered appropriate for residential amenity. Please explain why the Operational Noise Assessment ('ONA') assessment is limited to existing and consented PPF's under NZD 6806, given the limitation of these standards in addressing a changing environment.

Explanation: The ONA has included existing PPFs and those with building consent but which are yet to be built but excludes all future properties. It is recognised that this is the approach described by NZS 6806. However, most roading projects that NZS 6806 relates to are in either a rural environment or a built up area where the potential for future dwellings is limited. The proposal differs in that the purpose of the intended roads is to facilitate large numbers of new residential dwellings. This being the case, does consideration need to be given to controlling road traffic noise to future residential areas to levels that are considered appropriate for residential amenity? Essentially, is the Project creating a problem for someone else to fix as suggested by section 5.4?

In relation to the above point, Auckland Council Practice Note RC 3.2.23 describes assessing noise to sites based in their development potential as described by the AUP. While the practice note confines itself to NZS 6802 and resource consent applications, please explain whether you consider this approach is appropriate for the Project?

35. Please explain whether consideration has been given to achieving the BPO described in s16. Are there areas of the Project where mitigation could easily and effectively be installed to the benefit to PPFs regardless of the level before such mitigation?
36. Please explain the rationale underpinning the timeframe of 2048 is used as a design year in Section 4.1.3.

Explanation: In relation to the design year, Section 4.1.3 makes the point that the opening year for the project is yet to be confirmed before going on to describe why 2048 was selected. Is the SGA able to confirm that 2048 is generally in accordance with the requirement of NZS 6806 for it to be 10 – 20 years after the completion of a road

37. Please provide further commentary on the risk that traffic flows exceed those anticipated due to some road alignments not being constructed, and whether the effects associated with these risks could lead to a different conclusion being reached in respect of designation the project.

¹ NZS 6806: 2010 Acoustics – Road-traffic noise – New and altered roads

Explanation: The ONA notes that the design year does not represent the highest possible traffic flows which, it explains, might eventuate should some of the roads not be constructed. Is the author able to provide some commentary on the risk that any realistic alternatives pose to the Project? Are there scenarios where traffic flows/ noise levels would increase significantly to the point that a different conclusion would be reached with respect to designating the Project

38. In relation to comparing the noise effects against the Do-nothing and Do-minimum scenarios/baselines used for the ONA:
- a. Please justify the use of Do-nothing flows as a baseline for the operational noise effects assessment, given that the Do-nothing noise levels are based on full residential development of the Future Urban area, which the ONA identifies as not being possible without the Project.
 - b. Please clarify the difference in traffic flows between the Do-nothing and Do-minimum scenarios.
 - c. Please explain whether the calculation method used for the Do-nothing noise levels lead to any issues with comparing the Do-minimum levels, which the assessment relies upon.
 - d. Please explain why the analysis methodology explained in Section 5.1.1 of the ONA does not apply to interrupted vehicle flows, and how this methodology addresses intersections, which introduce interrupted flows.
 - e. Table 5-2 demonstrates the accuracy of the modelling through a comparison of a measured level of the existing noise at 116 Waihoehoe Road with a predicted level of road traffic noise at the same point. The conclusion is that the difference of 0.6dB confirms the accuracy of the model. Section 6.1.3 discusses the same measurement but describes the dominant sounds as being birdsong and farm animals with road traffic noise being audible at a distance. Did road traffic noise control the measurement making it a good basis for calibrating the noise model?

Explanation: NZS 6806 describes the Do-nothing scenario as the predicted noise levels at design year assuming the Project did not go ahead. As Section 4.1.4 explains, this assumes full growth of the surrounding area (for which the Project is intended to facilitate). Does this mean that the Do-nothing flows are the same as the Do-minimum flows?

Based on the answer to the above being yes, the ONA goes on to point out that the Do-nothing flows could not occur as the existing roads could not accommodate that volume of traffic before confirming that the reported do-nothing noise levels are therefore not a feasible option. However, the predicted Do-nothing levels are then used as the basis of the analysis. In simple terms, the use of the Do-nothing noise levels by NZS 6806 is to allow a noise level comparison at a set point in time with and without the Project to highlight its effects. In this instance, this does not appear to be possible as the Do-nothing noise levels are based on the full residential development, which cannot occur without the Project. As such, it would appear that the differences between the Do-nothing and the Do-minimum are limited to road width, traffic speed and road surface. The anticipated change in traffic flow resulting from the upgraded road network (which is the aim of the Project) is not addressed by the analysis. Is this a correct interpretation of the assessment and if so, can it be justified?

39. Table 5-2 demonstrates the accuracy of the modelling through a comparison of a measured level of the existing noise at 116 Waihoehoe Road with a predicted level of road traffic noise at the same point. The conclusion is that the difference of 0.6dB confirms the accuracy of the model. Section 6.1.3 discusses the same measurement but describes the dominant sounds as being birdsong and farm animals with road traffic noise being audible at a distance. Did road traffic noise control the measurement making it a good basis for calibrating the noise model?
40. Has the applicant considered providing a conclusion on the existing noise environment for each of the NoRs?

(4) Urban design and Landscape and visual effects

AV1. The proposed Urban Landscape Design Management Plan conditions appear to be quite generic, and do not take into account the place-based recommendations made in the Urban Design and Form Effects and Assessment of Landscape and Visual Effects. Further consideration will need to be given to these matters later in the NoR process (**Project-wide**).

(5) Arboriculture

41. Please confirm whether the proposed replanting will include a calculation for replacing the ecosystem services including sequestered carbon loss that will result from the proposed tree removals (**Project-wide**).

Explanation: While the Applicant has offered to provide 'mitigation' for the proposed tree removals, by definition, mitigation acknowledges that there is a lasting negative effect, and it is preferred that an approach which remedies the impact of tree removals is adopted, where the remedial planting accounts for lost future environmental benefits, including the eco-system services of soil / erosion protection, storm-water reduction, wildlife habitat, and sequestered carbon as outlined in the Applicant's tree values checklist.

In consideration of the ecosystem services provided by the trees proposed to be removed for these designations, and specifically carbon sequestration, the loss will also require appropriate remedial planting to achieve the stated objective of central government to be 'carbon neutral' by 2050 and also to align with the sustainability goals of the Auckland Council's 'Low Carbon Strategic Action Plan'.

In regards to carbon sequestration, the remedial planting needs to match or exceed the value of total stored carbon which would have been achieved by the existing tree asset at the end of the forecast period. In this instance the forecasted carbon sequestration value is for 30 years, which was chosen as this is a realistic average life span for the trees proposed for removal, and 2050 is the goal that has been set by the government for carbon neutrality under the Climate Change Response (Zero Carbon) Amendment Act.

The carbon calculation can be achieved by using the i-Tree Development Team, 2020 forecasting tool to estimate the lost future benefits arising from the proposed tree removals.

The remedial planting will need to achieve this same value of stored carbon by 2050 if carbon neutrality is to be achieved, and the actual effects of tree removal are to be addressed in a sustainable fashion. Please refer to this link provided for your assistance <https://www.itreetools.org/>

(6) Heritage

42. Please explain how the discovery and subsequent management of non-Māori artefacts found during the development of the arterial network will be undertaken, particularly in relation to the redevelopment of bridges over the Ngākoroa and Hingaia streams (**Project-wide**).

Explanation: The potential for finding, and subsequent management of, non-Māori artefacts found during the development of the arterial network, should be addressed in the AEE. Matters that should be considered include conservation treatment (where needed) and eventual ownership or intended repository or display of items recovered.

In relation to NoR D2, the proposed transport corridor crosses the Ngākoroa and Hingaia streams and will involve demolition and replacement of the existing bridges.

The existing Ngākoroa bridge occupies the site of a series of earlier bridges dating back to (at least) Runcimans bridge of the 1850s. The bridge site is recorded as R12_1171. The effects on this site are not specifically addressed in the historic heritage AEE. They

will potentially include modification or destruction of structural elements of earlier bridges or abutments and of earlier road/track approaches, both of which exist beneath the existing bridge.

There is also potential for assemblages of artefacts (including waterlogged organic materials) lost or dropped from the bridge to be present in stream bed deposits at this site and that of the Hingaia Stream bridge (R12_1152). Both bridges were extensively used during the New Zealand Wars. The Ngākoroa Stream bridge is close to the site of the Commissariat Redoubt and wharves, Runciman's homestead and wharf (which was also used to ship coal from Drury) and a Tauranga waka (Māori canoe landing site).

We consider that the effects on the Ngākoroa and Hingaia bridge sites including potential artefact finds and how they will be managed are not fully addressed in the application.

The D2 and D5 NoRs are adjacent to or within the extent of cemeteries (St Johns Church graveyard – D2; Papakura Cemetery – D5). While it would appear unlikely that unmarked or unrecorded graves will be impacted, this possibility should be addressed since it is not uncommon in historic cemeteries to find unrecorded burials such as pauper graves in unexpected locations.

43. Please explain how the discovery of graves will be managed (**NoR D2 and D5**).

Explanation: The D2 and D5 NoRs are adjacent to or within the extent of cemeteries (St Johns Church graveyard – D2; Papakura Cemetery – D5). While it would appear unlikely that unmarked or unrecorded graves will be impacted, this possibility should be addressed since it is not uncommon in historic cemeteries to find unrecorded burials such as pauper graves in unexpected locations

The discovery and disinterment of burials would potentially have an impact on affected persons, particularly descendants of the individuals interred. This community of interest may include New Zealanders of pākehā or Māori descent, and/or persons resident overseas.

In my opinion, the potential effects of the discovery of graves and how they will be managed are not fully addressed in the application and would be of interest to persons who may be affected. For example, it may be appropriate to address identification and reinterment of disinterred individuals, should graves be found.

44. Please identify the extent of vibration effects on scheduled historic heritage places, and in particular the St Johns Church graveyard and also Papakura Cemetery (**NoR D2 and D5**).

Explanation: Vibration effects on the church are briefly addressed and indicate that the thresholds for damage may be exceeded (p.46) and that there is the potential for 'cosmetic damage' to buildings such as cracking. This is a matter of concern. St Johns Church is a timber framed and clad building. The structure itself is not in the same risk category as an unreinforced masonry building. However the building has historic stained glass windows (see photo of one example). These are potentially made of very thin and brittle glass, in colours or patterns that are difficult or impossible to replace. The associated graveyard contains multiple unreinforced stone or masonry grave markers including tablets and obelisks (see photos) including some from the New Zealand Wars of the 1860s. Some of these are very close to the existing road and are potentially at significant risk of damage from excessive construction vibration.

I consider cracking of windows, or cracking, collapse or subsidence of grave markers, to be modification of features/fabric of a scheduled heritage place rather than cosmetic damage. I consider that these effects have not been adequately addressed in the vibration report and application, and that these potential effects should be avoided to the extent possible rather than just monitored to determine if damage was pre-existing.

Further information is required to better understand the effects on these identified historic heritage places.

(7) Parks Planning

45. In relation to NoR D1, please provide an assessment detailing it's effects on the blue-green network in the Drury-Opaheke Structure Plan and the proposed future delivery of a greenway connection along the Ngakaroa Esplanade (**NoR D1**).
46. In relation to NoR D2, please provide an assessment detailing it's effects on the blue-green network in the Drury-Opaheke Structure Plan and the proposed future delivery of a greenway connection along the Hingaia stream esplanade reserve (**NoR D2**).
47. In relation to NoR D5, please provide an assessment detailing it's effects on access to the proposed Opaheke Park shown in the Bellfield Masterplan and Opaheke park concept plan (included as **Appendix 1** to this letter) and how this will be provided for during and after project construction works are completed, particularly in relation to the finished ground levels for the widened Opaheke Road corridor and proposed new bridge over Slippery Creek. For example, how will these finished ground levels affect the feasibility of proposed carpark and pedestrian access links into Opaheke Park from Opaheke Road, as shown on the concept plan? (**NoR D5**).

You must provide this information within 15 working days (before 14 April 2021). If you are unable to provide the information within 15 working days, then please contact me so that an alternative timeframe can be mutually agreed.

If you do not respond within 15 working days, refuse to provide the information or do not meet an agreed alternative timeframe between the council and yourself, this application must be publicly notified as required by section 95C of the Resource Management Act 1991.

In accordance with the Resource Management Act, processing of your notice of requirement will remain on hold until the indicated date, pending your response to this request. Please note that the processing clock will stop as this is the first request for additional information.

If you have any queries regarding the above, please contact Nicholas Lau on 021 897 429 | nicholas.lau@aucklandcouncil.govt.nz, or Sanjay Bangs at 021 619 327 | Sanjay.bangs@aucklandcouncil.govt.nz.

Yours sincerely,

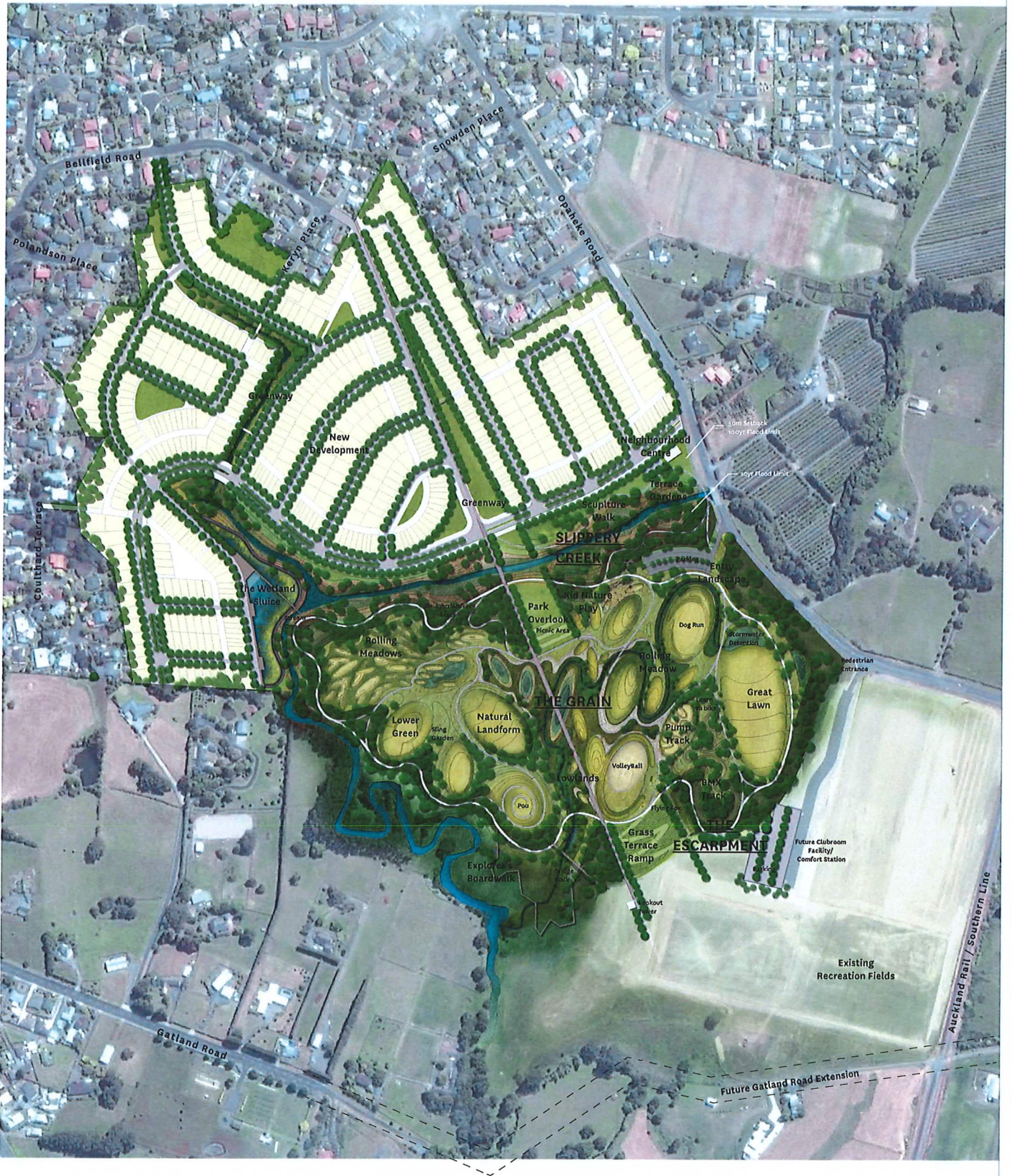
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Nicholas Lau,
Senior Policy Planner, Central and South
Planning



Sanjay Bangs,
Policy Planner, Central and South Planning



BELLFIELD OPAHEKE PARK



SURFACEDESIGN INC.
 12 Decatur Street
 San Francisco, CA 94103
 415.621.5522 P

SURFACEDESIGN, INC
 24th July 2018




OPAHEKE PARK

OPAHEKE CONCEPT PLAN

24th July 2018

Park Amenities Key

- 1 Great Lawn
- 2 Dog Run
- 3 Bike Park
- 4 Beach
- 5 Kids Nature Play
- 6 Flying Fox
- 7 Hammock/Sling Garden
- 8 Climbing Wall
- 9 Embankment Slide
- 10 Rolling Meadows
- 11 High Point Promontory
- 12 Picnic Tables & BBQ
- 13 Benches
- 14 Fitness Stations
- 15 Distance Track & km Markers
- 16 Central Boardwalk
- 17 Grassed Terrace
- 18 Wetlands
- 19 Lookout Tower
- 20 Explorers' Boardwalk
- 21 Elevated Walk

-  Watercourse
-  Primary Path
-  Secondary Path



7 April 2021

Te Tupu Ngātahi
Supporting Growth
PO Box 105218
Auckland 1143

Nicholas Lau and Sanjay Bangs
Auckland Council
135 Albert Street,
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Private Bag 92300, Auckland 1142

Issued via email: nicholas.lau@aucklandcouncil.govt.nz and Sanjay.bangs@aucklandcouncil.govt.nz

Dear Nicholas and Sanjay

Re: Response to s92 Further Information Request for the Drury Arterial Network

We refer to your letter of 22 March 2021 requesting further information under section 92 of the Resource Management Act 1991 (RMA) in relation to the Notice of Requirement by Waka Kotahi for an alteration to designation and Notices of Requirement by Auckland Transport for four designations for the Drury Arterial Network.

This letter contains the response to each request. For ease of reference, tables are included that include the request and the relevant response. Where appropriate, reference has been made to the relevant lodgement documentation that should be read in conjunction with a response.

In preparing the response, AT and Waka Kotahi have updated a few of the proposed conditions that were submitted with the Notices of Requirement. Appendix A contains the updated conditions. We welcome further discussion with Council on appropriate conditions in due course.

We request that the public notification of the Notices of Requirement for the Drury Arterial Network are included in the next Auckland Unitary Plan notification schedule.

If you have any queries regarding the information contained in this response, please do not hesitate to get in contact.

Yours sincerely

Helen Hicks

Drury Arterial Network – Planning Lead

Helen.Hicks@supportinggrowth.nz

029 355 1385

Response to s92 Request for Further Information

(1) Planning and General Matters

Table 1: s92 Response – Planning and General Matters

Ref	Request	Response	Relevant Document / Section
1	<p>What will be the council's regulatory role in ensuring that the following management plans achieve their stated objectives of avoiding, remedying or mitigating adverse environmental effects associated with proposed Project construction works if they are only being provided to the council for information instead of certification through submittal with an Outline Plan pursuant to s176A of the RMA (as per Project's proposed management plan conditions, noting that other management plan conditions put forward to address construction effects provide for certification by the council, such as the Project's Construction Noise and Vibration Management Plan conditions) (Project-wide):</p> <ul style="list-style-type: none"> Construction Environmental Management Plan (CEMP) Construction Traffic Management Plan (CTMP) <p><i>Explanation: Certification of management plans which address project construction effects (including the certification of CEMPs and CTMPs) is consistent with conditions which have been approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations. When responding to this further information request, and if these requiring authorities are still of the view that CEMPs and CTMPs for the Project should be provided for information only to the council, it would be useful to understand the reasons for adopting this approach which is inconsistent with conditions approved for recent AT and WKNZTA designations.</i></p> <p><i>Section 176A(3)(f) of the RMA requires an Outline Plan to show (amongst other specific matters) "any other matters to avoid, remedy, or mitigate any adverse effects on the environment". As the stated objectives of the Project's proposed CEMP and CTMP conditions are to avoid, remedy or mitigate adverse environmental effects associated with proposed Project construction works, submittal of these management plans with the corresponding outline plans would be required under section 176A(3)(f) of the RMA, noting that the Project's proposed conditions exclude provision of these plans with future Project Outline Plans.</i></p> <p><i>Sections 176A(1) and 176A(4) of the RMA enables the council in it's regulatory role to request that the requiring authority make changes to the Outline Plan, and this would not be possible for certification purposes in relation to the Project CEMPs and CTMPs if they are not provided with the Project Outlines Plan and are instead submitted to the council for information only.</i></p> <p><i>Certification of the Project CEMPs and CTMPs to confirm they achieve their stated objectives of avoiding, remedying or mitigating adverse environmental effects associated with proposed Project construction works would also be supported by the need to ensure such effects are appropriately managed both within the existing environment, which is</i></p>	<p>The reasons the CEMP and CTMP are to be provided to Council for information are set out below. We welcome further discussion with Council on conditions as the Projects progress.</p> <p><u>CEMP</u></p> <p>It is appropriate that the CEMP be provided to Council for information only. The CEMP requirements are largely factual and administrative in nature. For example, they specify construction management roles and procedures such as recording contact details, working hours, contractor roles and responsibilities. These are not typical effects management measures that require technical peer review comments or input from Council for example, ecological mitigation techniques or soil/erosion control methodologies. We note that the Council has accepted the CEMP can be provided for information in recent transport projects including the Puhoi to Warkworth and the Warkworth to Wellsford designation conditions. In addition, it is expected that any CEMP associated with future regional consents will be certified by Council as it will contain management measures requiring peer review.</p> <p><u>CTMP</u></p> <p>It is appropriate that the CTMP be provided to Council for information only. Auckland Transport and Waka Kotahi are the relevant road controlling authorities for Auckland's transport network and State Highway system. It is their primary statutory function to ensure the safe and efficient operation of this network and to ensure that their construction activities will not impact on the safe operation of Auckland's transport network. Both Auckland Transport and Waka Kotahi have significant experience with developing and implementing Construction Traffic Management Plans. Additional peer review by Auckland Council is not necessary or efficient in this context.</p>	N/A

Ref	Request	Response	Relevant Document / Section
	<p><i>predominantly rural in nature, and likely future environment which is anticipated to reflect a mix of urban residential and business land uses, in accordance with the current future urban zoning and indicative future land uses identified in the Drury-Opaheke Structure Plan (the need to manage construction effects within the likely future receiving environment is particularly relevant to the proposed Project works as anticipated construction commencement dates are identified as being later this decade, and this accords with the 15-20 year lapse periods sought for the Auckland Transport NoRs).</i></p>		
2	<p>The AEEs submitted for each NoR state that adverse construction effects on affected communities will be mitigated by ensuring the public and stakeholders (including directly affected and adjacent owners and occupiers of land) are communicated with throughout construction works by implementing Stakeholder and Communication Management Plans, and these communications will need to address, amongst other matters:</p> <ul style="list-style-type: none"> determining adequate notice periods for the commencement of construction activities and works that affect access to properties; and informing parties of the expected timing, duration and staging of works and regular updating of progress. <p>It is also noted that the measures listed at the end of each NoR AEE for managing adverse Project effects on property, land use and business include:</p> <ul style="list-style-type: none"> Methods to regularly communicate with the community, stakeholders and land owners/occupiers during construction, including timeframes. Links to other communication methods in other management plans <p>Please confirm how the Stakeholder and Communication Management Plan conditions proposed for each NoR will achieve the aforementioned communication outcomes and outlined in the submitted NoR AEEs, noting that condition 14(b)(v), which is the same for each NoR, only provides for “methods to communicate the proposed hours of construction activities outside of normal working hours and on weekends and public holidays, to surrounding businesses and residential communities” (also noted that the aforementioned measures for managing adverse Project effects on property, land use and business appear to be absent from the Stakeholder and Communication Management Plan conditions proposed for each NoR, with the intention being to include these measures in these conditions (as per statement preceding table summarising measures at the end of each NoR AEE)).</p> <p><i>Explanation: Stakeholder and Communication Management Plan conditions which have been approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations specifically provide for methods to communicate and consult with affected communities throughout construction works, but this appears to be absent from the Stakeholder and Communication Management Plan conditions proposed for each NoR. As the AEEs submitted for each NoR states that adverse construction effects on affected communities will be mitigated by ensuring they are communicated with throughout construction works, this should be stated in the Stakeholder and Communication Management Plan conditions proposed for each NoR, as has been the case in relation to Stakeholder and Communication Management Plan</i></p>	<p>The following points describe how the SCMP and other proposed management plans and/or designation conditions will achieve the communication outcomes identified in request #2:</p> <ul style="list-style-type: none"> “informing parties of the expected timing, duration and staging of works and regular updating of progress.” <p>See Condition 2¹ <i>Project Information</i>. This information will be available on a Project website (or equivalent virtual information source) which will be established within 12 months of the date on which each designation is included in the AUP. At the start of detailed design for a Stage of Work, the Project website or virtual information source will be updated to provide information on the likely date for Start of Construction and any staging of works.</p> <p>The Project website (or equivalent virtual information source) will contain the status of the Project and anticipated construction timeframes which will be updated on the website as they change.</p> <ul style="list-style-type: none"> “Methods to regularly communicate with the community, stakeholders and land owners/occupiers during construction, including timeframes” <p>The SCMP objective 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. As noted in the request, the SCMP will <i>provide methods to communicate the proposed hours of construction activities outside of normal working hours and on weekends and public holidays, to surrounding businesses and residential communities</i>. It is not the intent of the condition to limit the SCMP to construction outside of normal working hours. Therefore, a minor amendment to the proposed condition 14(b)(v)² is made as follows:</p> <p style="padding-left: 40px;">...14(b)(v) <i>methods to communicate the proposed hours of construction activities including outside of normal working hours and on weekends and public holidays, to surrounding businesses and residential communities...</i></p> <p>The SCMP will also include 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. This contact person will be available for regular communication with any party who seeks information.</p> <ul style="list-style-type: none"> “Links to other communication methods in other management plans” <p>SCMP Condition 14³(b)(vi) provides for links to other communication methods in other management plans:</p> <p style="padding-left: 40px;">14(b) <i>The objective of the SCMP 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. To achieve the objective, the SCMP shall include:</i></p> <p style="padding-left: 40px;">... (vi) <i>linkages and cross-references to communication methods set out in other conditions and management plans where relevant.</i></p> <ul style="list-style-type: none"> “determining adequate notice periods for the commencement of construction activities and works that affect access to properties” 	<p>Appendix A, Condition 2 for NoR D2, D3, D4 and D5. Condition 3 for NoR D1.</p> <p>Appendix A, Condition 14(b)(v) for NoR D1, D3, D4 and D5. Condition 15(b)(v) for NoR D2.</p> <p>Appendix A, Condition 14(b)(vi) for NoR D1, D3, D4 and D5. Condition 15(b)(vi) for NoR D2</p>

¹ Condition 2 for NoR D2, D3, D4 and D5. Condition 3 for NoR D1.

² Condition 14(b)(v) for NoR D1, NoR D3, NoR D4, NoR D5 and condition 15(b)(v) for NoR D2

³ Condition 14(b)(vi) for NoR D1, NoR D3, NoR D4, NoR D5 and condition 15(b)(vi) for NoR D2

Ref	Request	Response	Relevant Document / Section
	<p>conditions approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations (as stated above, noted that the NoR AEEs also specify communication methods, but these appear to be absent from the proposed NoR Stakeholder and Communication Management Plan conditions).</p>	<p>The proposed CTMP condition provides for methods to communicate traffic measures that affect road users:</p> <p><i>17⁴(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></p> <p><i>... (viii) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents/public/stakeholders/emergency services)</i></p> <p>Traffic management measures provided for in condition 17⁵(b)(viii) include impacts to property access as a result of the Project. Methods that will be undertaken to communicate traffic management measures will include the determination of adequate notice periods.</p>	<p>Appendix A, Condition 17(b)(viii) for NoR D1, D3, D4 and D5. Condition 18(b)(viii) for NoR D2</p>
3	<p>In relation to site compounds, construction yards (laydown areas) and bridge construction areas shown on the Project's indicative design drawings (Project-wide):</p> <p>a) Please clarify the anticipated effects on existing buildings located within the footprint of these construction works areas.</p> <p>b) Please explain what amenity-related effects are anticipated on occupied buildings proximate to these construction works areas, particularly in relation to visual, noise and vibration effects. Please also explain what mitigation measures are proposed, and how these are reflected in the proposed conditions for each designation which seek to address construction effects.</p> <p><i>Explanation: The AEE and indicative design drawings identify site compounds, construction yards (laydown areas) and bridge construction areas in various locations throughout the Project's spatial footprint. Further commentary is sought on the noise, vibration and visual effects of construction on owners and occupiers in the vicinity of these construction works areas.</i></p>	<p>a) As identified in Section 5 of the Assessment of Construction Noise and Vibration Effects, any buildings within the proposed designation footprint will be removed or will not be occupied by members of the public.</p> <p>b) <u>Visual Amenity Effects</u></p> <p>Temporary visual effects during construction including site compound and construction areas are assessed and summarised for each Project at the following locations within the lodgement documentation:</p> <ul style="list-style-type: none"> • D1 – SH22 Upgrade: <ul style="list-style-type: none"> • Section 6.3.2.4 of the Assessment of Landscape and Visual Effects • Section 9.5.2 (including subsections) of the Assessment of Effects on the Environment • D2 – Jesmond to Waihoehoe Road West FTN Upgrade: <ul style="list-style-type: none"> • Sections 7.3.2.1.4, 7.3.3.3 and 7.3.4.2.1 of the Assessment of Landscape and Visual Effects • Section 16.5.2 (including subsections) of the Assessment of Effects on the Environment • D3 – Waihoehoe Road East Upgrade: <ul style="list-style-type: none"> • Section 8.3.2.4 of the Assessment of Landscape and Visual Effects • Section 23.5.2 (including subsections) of the Assessment of Effects on the Environment • D4 – Ōpāheke N-S FTN Arterial: <ul style="list-style-type: none"> • Section 9.3.3.2 of the Assessment of Landscape and Visual Effects • Section 30.5.2 (including subsections) of the Assessment of Effects on the Environment • D5 – Ponga and Ōpāheke Road Upgrade: <ul style="list-style-type: none"> • Sections 10.3.2.3, 10.3.4.2 and 10.3.6.1 of the Assessment of Landscape and Visual Effects • Section 37.5.2 (including subsections) of the Assessment of Effects on the Environment <p>Within each assessment identified above, a number of factors which are considered to moderate the nature and significance of the potential adverse visual effects are outlined. In addition, it is standard practice that site compounds and construction works areas are fenced, which will assist to mitigate potential effects.</p> <p>Mitigation measures proposed are outlined for each notice in sections 6.3.3, 7.3.5, 8.3.3, 9.3.4 and 10.3.7 of the Assessment of Landscape and Visual Effects. Among a range of other measures provided for within the proposed conditions, these measures are reflected in the following condition clauses under the ULDM (see Appendix A):</p> <ul style="list-style-type: none"> • <i>For all notices:</i> <ul style="list-style-type: none"> • <i>10(a)(iii)(I) - re-instatement of construction and site compound areas, driveways, accessways and fences.</i> • <i>11(a)(iii)(C) - ground preparation (top soiling and decompaction).</i> • <i>NoR D1, D2 and D5:</i> 	<p>Assessment of Construction Noise and Vibration Effects, Version 1, January 2021</p> <p>Assessment of Landscape and Visual Effects, Version 1, January 2021</p> <p>Assessment of Effects on the Environment, Version 1, January 2021</p>

⁴ Condition 17(b)(viii) for NoR D1, NoR D3, NoR D4, NoR D5 and condition 18 (b)(viii) for NoR D2

⁵ As above

Ref	Request	Response	Relevant Document / Section
		<ul style="list-style-type: none"> • 11(a)(i)(A) - identification of existing trees and vegetation that will be retained with reference to the Tree Management Plan in Condition 25. Where practicable, mature trees and native vegetation should be retained; • For NoR D1 and D2: <ul style="list-style-type: none"> • 11(a)(i)(E) - identification of vegetation to be retained and any planting requirements under Conditions 23 and 24; • 11(a)(i)(G) - reinstatement planting of construction and site compound areas as appropriate • For NoR D3 and D4: <ul style="list-style-type: none"> • 11(a)(i)(B) – where practicable, mature trees and native vegetation should be retained • For NoR D3, D4 and D5: <ul style="list-style-type: none"> • 11(a)(i)(F) -reinstatement planting of construction and site compound areas as appropriate; <p><u>Noise and Vibration Effects</u></p> <p>Construction site compounds, construction yards (laydown areas) and bridge construction areas were included within the noise modelling undertaken within the Assessment of Construction Noise and Vibration Effects (see response to Request #32). These effects are assessed and summarised for each Project at the following locations within the lodgement documentation:</p> <ul style="list-style-type: none"> • D1 – SH22 Upgrade: <ul style="list-style-type: none"> • Section 6.2 (including subsections) of the Assessment of Construction Noise and Vibration Effects • Section 9.9.2 (including subsections) of the Assessment of Effects on the Environment • D2 – Jesmond to Waihoehoe Road West FTN Upgrade: <ul style="list-style-type: none"> • Sections (including their subsections) 7.2 of the Assessment of Construction Noise and Vibration Effects • Section 16.9.1 (including subsections) of the Assessment of Effects on the Environment • D3 – Waihoehoe Road East Upgrade: <ul style="list-style-type: none"> • Section 8.2 (including subsections) of the Assessment of Construction Noise and Vibration Effects • Section 23.9.2 (including subsections) of the Assessment of Effects on the Environment • D4 – Ōpāheke N-S FTN Arterial: <ul style="list-style-type: none"> • Sections 9.2 (including subsections) of the Assessment of Construction Noise and Vibration Effects • Section 30.9.1 (including subsections) of the Assessment of Effects on the Environment • D5 – Ponga and Ōpāheke Road Upgrade: <ul style="list-style-type: none"> • Sections 10.2 (including subsections) of the Assessment of Construction Noise and Vibration Effects • Section 37.9.1 (including subsections) of the Assessment of Effects on the Environment <p>Mitigation measures for all Projects are provided in Section 5.6 of the Assessment of Construction Noise and Vibration Effects. These measures are reflected in the following conditions provided in Appendix A:</p> <ul style="list-style-type: none"> • For NoR D1, D3, D4 and D5: <ul style="list-style-type: none"> • 18. Construction Noise Standards • 19. Construction Vibration Standards • 20. Construction Noise and Vibration Management Plan (CNVMP) • 21. Schedule to a CNVMP • For NoR D2: <ul style="list-style-type: none"> • 19. Construction Noise Standards • 20. Construction Vibration Standards • 21. Construction Noise and Vibration Management Plan (CNVMP) • 22. Schedule to a CNVMP. 	Appendix A

Ref	Request	Response	Relevant Document / Section
4	<p>Please provide further information to supplement the Project feedback summaries provided for the following groups, stakeholders and affected landowners who were consulted and engaged on the Project which is sought to better understand how this feedback informed the design and proposed designation boundaries for individual NoRs to avoid, remedy or mitigate adverse effects of the Project on their interests (Project-wide):</p> <ul style="list-style-type: none"> a) Mana Whenua groups Ngāti Tamaoho, Ngāi Tai Ki Tamaki, Te Ākitai Waiohū and Ngāti Te Ata Waiohū b) KiwiRail c) Heritage New Zealand Pouhere Taonga d) Ministry of Education e) Department of Conservation f) Fire and Emergency New Zealand g) Network Utilities providers h) Developers i) Landowners and community <p><i>Explanation: Summaries of feedback received from the above groups, stakeholders and affected landowners during consultation and engagement on the projects have been referenced in Part C and Appendix A of the Project AEE in relation to the design of the Project, assessment of alternatives and avoiding, remedying or mitigating adverse Project effects. To assist the council and potential submitters better understand how the feedback provided by groups, stakeholders and affected landowners was used to address adverse Project effects on their interests, further information is sought which confirms how this feedback informed the design and proposed designation boundaries for individual NoRs. For example, page 49 of the Project's assessment of alternatives makes reference to this in relation to discussions had with stakeholders and affected landowners, although it is not clear from the assessment how the resulting Project design refinements informed selection of the Project's preferred options. Also, Part C of the Project AEE (page 58) states that in relation to those parts of the Project covered by NoR D1-NoR D4, "...there were adjustments to the proposed designation boundary and opportunities, including identification of valued trees and private property adjustments were identified, to address landscape and visual amenity at detailed design stage." Again, it is not clear from the Project's assessment of alternatives how the resulting Project design refinements informed selection of the Project's preferred options.</i></p> <p><i>Furthermore, in order to adequately assess specific concerns raised by groups, stakeholders and affected landowners regarding the Project's environmental effects, it is requested that further information be provided which expands upon these concerns where stated in the corresponding feedback summaries, noting that this information will also assist in ensuring the Project's cultural effects can be adequately assessed in the absence of cultural value assessments from the Mana Whenua groups with an interest in the Project area.</i></p>	See Appendix B.	Appendix B

(2) Transport

Table 2: s92 Response - Transport

Ref	Request / Advice	Response	Relevant Document / Section
5	<p>Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Drury Hills Road and Waihoehoe Road (NoR D3).</p> <p><i>Explanation: Drawing SGA-DRG-STH-004-CI-4103 does not include an appropriate tie in to Drury Hills Road, as shown in Figure 10. We consider that NoR: D3 should demonstrate an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary.</i></p>	<p>The proposed Waihoehoe Road East Upgrade primarily involves the addition of walking and cycling facilities to support the adjoining development, along with a suitable urban streetscape. At this location the upgrade connects to Drury Hills Road, which is an existing rural road with no walking or cycling facilities. Upgrading the intersection of Waihoehoe Road and Drury Hills Road is not required as part of the Waihoehoe Road East Upgrade Project. The proposed designation boundary has sufficient space for the proposed walking and cycling upgrade on Waihoehoe Road to tie into the existing environment. This could be achieved by provision of 'Transition Ramps' (Auckland Transport TDM – Section 9).</p>	N/A
6	<p>Please provide further detail on the proposed closure of the Waihoehoe/Flanagan intersection, including timing, co-ordination with any other works needed to maintain access to Flanagan Road, and consultation with affected parties. Alternatively, if the closure of the intersection is not proposed as part of the designation, drawing SGA-DRG-STH-04-CI-3101 should be updated (NoR D3).</p> <p><i>Explanation: Drawing SGA-DRG-STH-04-CI-3101 identifies that the intersection between Waihoehoe Road and Flanagan Road will be closed and that "CONNECTION WITH FLANAGAN ROAD AND PROPERTY ACCESS TO BE DEVELOPED WITH FUTURE NZUP PROJECT"</i></p> <p><i>Further, Table 7-15 of the Assessment of Transport Effects states that</i></p> <p><i>"The Flanagan Road intersection with Waihoehoe Road West is expected to be closed through NZUP as a result of the new Drury Central Rail station and park and ride facilities."</i></p> <p><i>In our view NoR D2 should not include the closure of the Flanagan Road intersection, as currently shown in Drawing SGA-DRG-STH-04-CI-3101. If the closure of the intersection proceeds works under NZUP, this affect access to the future rail station and existing properties on Flanagan Road, noting there is currently no alternative access for Flanagan Road.</i></p>	<p>For the Jesmond to Waihoehoe Road West FTN Upgrade Project (NoR D2), the existing Waihoehoe Road Bridge over the rail line will need to be replaced with a wider and higher bridge to accommodate adequate clearance over the rail line. This will include retaining wall abutments with upgraded bridge barriers on the approaches. Therefore, Flanagan Road cannot be retained in its current location as the presence of the retaining walls and barriers would restrict access and visibility. The existing sight distance along Waihoehoe Road from Flanagan Road is already compromised by the alignment over the existing bridge.</p> <p>As part of the Drury Central Rail Station Project which is a part of the New Zealand Upgrade Programme (NZUP), the closure of the intersection of Flanagan Road with Waihoehoe Road is also proposed and an alternative access for Flanagan Road provided. This project is funded and work is anticipated to begin in 2023. The closure of Flanagan Road and provision of alternative access is therefore expected to be undertaken as part of the Drury Central Rail Station Project prior to the Jesmond to Waihoehoe Road West FTN Upgrade taking place and therefore no alternative access has been included in the Jesmond to Waihoehoe Road West FTN Upgrade.</p> <p>However, in the event that this work has not been undertaken as part of the Drury Central Rail Station Project prior to closure of Flanagan Road for the upgrade to Waihoehoe Road West (NoR D2), an alternative connection will be provided by Auckland Transport. Auckland Transport will seek landowner and statutory approvals to provide an alternative access before the Flanagan Road intersection with Waihoehoe Road is closed.</p> <p>A condition has been proposed to address this and is included as Condition 13 on NoR D2 (included in Appendix A):</p> <p><i>13. Closure of Flanagan Road Intersection with Waihoehoe Road</i></p> <p><i>If the Flanagan Road intersection with Waihoehoe Road requires closure, the project shall be designed to provide an alternative connection for Flanagan Road. Where this outcome cannot be achieved within the designation, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.</i></p>	Appendix A, new condition 13 on NoR D2.
7	<p>Please provide further detail on construction traffic effects upon the transport network should the Jesmond Road and Bremner Road sections of NoR D2 be constructed in parallel including how this will be addressed in the recommended construction traffic management plan condition (NoR D2).</p> <p><i>Explanation: Section 5.2 of the Assessment of Transport Effects identifies the methodology used to assess the potential construction traffic effects, including consideration of any works that should not occur at the same time. The subsequent sections of the report do not identify any works that should not occur at the same time. It is unclear whether the author considers that all sections of all corridors could</i></p>	<p>Due to the long term nature of this Project, it is recommended that the construction traffic effects are assessed again when a greater level of detail is available regarding the specific construction methodology, any staging of the Jesmond to Waihoehoe Road West FTN Arterial and traffic and urban form environment at the time of construction. Should the Jesmond Road and Bremner Road sections of Jesmond to Waihoehoe West FTN Upgrade (NoR D2) be constructed in parallel, the effects on the transport network will be assessed and managed through the implementation of the Construction Traffic Management Plan, proposed as a condition on the designation. Specifically, the objective of the CTMP</p>	

Ref	Request / Advice	Response	Relevant Document / Section
	<p><i>be constructed in parallel. While NoR D2 is assessed in sections, there is no detail on whether NoR D2 is likely constructed in sections, or as a single corridor of works. Should the Jesmond Road and Bremner Road sections be constructed in parallel, there may be significant effects on access as there are no alternative corridors to access existing and future development within the Auranga Precinct.</i></p>	<p>(Condition 17⁶(b)) is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects. This will include methods to manage the effects of temporary traffic management activities on traffic, methods to ensure the safety of all transport users and methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists, on existing roads. The objective of the CTMP ensures that NoR D2 could not be staged so that there would be significant effects on the transport network, including on access to specific areas.</p>	<p>Condition 17(b) for NoR D1, D3, D4 and D5. Condition 18(b) for NoR D2.</p>
8	<p>Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects. Please comment on what, if any, alternatives have been considered to maintain access to properties on Tui Street (NoR D2).</p> <p><i>Explanation: Drawing SGA-DRG-STH-04-CI-3101 shows the realignment of Tui Street, to form a new intersection with Great South Road, as shown in Figure 11 above. We consider that the proximity of the proposed intersection with the upgraded Great South Road/Waihoehoe Road intersection is likely to create safety issues for drivers turning right into and out of Tui Street. Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects, and comment on what means to mitigate potential safety effects were considered (such as an alternative access to the north of the Drury Rugby Clubrooms).</i></p>	<p>The proposed Tui Street and Great South Road intersection is planned to allow left-in and left-out vehicle movements only - with right turn movements prohibited. While some trips may require longer routes for access (such as where right turn access is banned), these effects are expected to be offset by the more reliable and safer travel provided along the corridor itself.</p> <p>The Project team also looked at retaining the existing Tui Street access from Waihoehoe Road. With the need to raise the level of Waihoehoe Road to accommodate clearance over the rail corridor, the intersection with Tui Street would also need to be raised. A compliant geometric design on the approach to Waihoehoe Road could not be accommodated without significant regrading along Tui Street, so the existing location could not be retained. To reduce the vertical grades, a further option to relocate the intersection to the west of the existing location was reviewed. However, this needed to be very close to the Great South Road intersection (and on the exit), so this option was discounted.</p> <p>An additional northern alignment through Drury Domain was also considered. However, this was discounted due to the direct impacts to the playing fields and the Drury and Districts Rugby Football and Recreation Club Inc.</p> <p>At the time of construction, the Project will be subject to detailed safety audit, as is standard practice for Auckland Transport.</p> <p>It is noted that the site to the north of Drury Domain is subject to potential intensification and reconfiguration by Kainga Ora. Those potential future changes provide opportunity to rationalise and improve the access to this location.</p>	<p>N/A</p>
9	<p>Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Ponga Road and Jack Paterson Road. This should include an assessment of sight distances, management of the interface between a rural and urban road environment, and accommodation of vehicle tracking (NoR D5).</p> <p><i>Explanation: Drawing SGA-DRG-STH-04-CI-8102 does not include an appropriate tie in between NoR D5 and the Ponga Road/Jack Paterson Road intersection, as shown in Figure 13. We consider that NoR D5 should demonstrate that an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary. The design should demonstrate that safe intersection sight distances can be met, that the interface between a rural and urban road environment is appropriately managed, and appropriate vehicle tracking movements can be accommodated.</i></p>	<p>The proposed Ponga Road Upgrade is primarily a walking and cycling upgrade, along with a suitable urban streetscape. At this location, the upgrade connects to Jack Paterson Road and Ponga Road, which are existing rural roads with no walking or cycling facilities. Upgrading the intersection of Ponga Road and Jack Paterson Road is not required as part of the Ponga Road and Ōpāheke Road Upgrade Project. The proposed designation boundary has sufficient space for the proposed walking and cycling upgrade on the portion of Ponga Road to tie into the existing environment. This could be achieved by provision of 'Transition Ramps' (Auckland Transport TDM – Section 9).</p>	<p>N/A</p>
10	<p>Please confirm whether the arrangement of the Hunua Road/Croskery Road intersection, as assumed in the traffic model, can be accommodated within the existing legal road boundaries and/or NoR D4 boundary. Further, please confirm the timing of the alteration in intersection form (conversion to a roundabout) (NoR D4).</p> <p><i>Explanation: In the traffic model, the Hunua Road/Croskery Road intersection is assumed to be a roundabout, in both the future Do Minimum and NoR SATURN models. Clarification is required on</i></p>	<p>This intersection is not part of the Project and the change of form of the Croskery Road / Hunua Road intersection to a roundabout is not a consequence of, or required for NoR D4.</p> <p>The Hunua Road/Croskery Road intersection is grouped with the Frequent Transit Networks Business Case. This is a future South Detailed Business Case Supporting Growth Programme project that will evaluate any footprint requirements and corresponding designation in more detail. The role and form of Croskery Road is also subject to decisions regarding intersection controls on the adjacent Mill Road project.</p>	<p>N/A</p>

⁶ Condition 17(b) for NoR D1, D3, D4 and D5. Condition 18(b) for NoR D2.

Ref	Request / Advice	Response	Relevant Document / Section
	<ul style="list-style-type: none"> • <i>is the change in layout in response to NOR D4 or considered to be a separate business as usual project</i> • <i>what are the implications if the intersection is not altered prior to implementing NOR D4</i> • <i>whether any localised widening is required and whether it should be included in the NOR D4 designation.</i> 	<p>For the purpose of the Drury Arterial Network modelling, we assumed such an upgrade could be in place before or at the same time as NoR D4. The future year models include a number of network upgrade assumptions in order to provide plausible forecasts for the growth expected. That location is therefore subject to other studies and the upgrade assumed for modelling purposes is not expected to have a significant impact on the required corridor width, nor the assessed effect of NoR D4.</p>	
11	<p>Please explain what effects on the transport network may be under or over-stated in the NoR due to the difference between the traffic model and the NoR design for the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road (NoR D4).</p> <p><i>Explanation: In the traffic model, the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road are assumed to be signalised intersections. However, the designation layout includes roundabouts at both intersections. While we appreciate that the detail around intersection design and control will be dealt with through the design phase, the traffic modelling includes a sizeable delay at the Ponga Road intersection (more than 3 minutes).</i></p> <p><i>Our concern here isn't related to the potential footprint at these particular intersections, as a roundabout presents a conservative approach, but the footprint about the upstream and downstream signalised intersections may alter, as the level of delay included in the traffic model may be pushing demand away from the corridor and onto alternative routes.</i></p> <p><i>Some feedback on possible impacts to the NOR D4 designation is worth teasing out should modelled constraints (high delays along the route) be reduced.</i></p>	<p>As part of the indicative design, both intersection forms were tested. While roundabouts were favoured for safety and efficiency, walking and cycling provision could be preferable via signals. Therefore, the final intersection design and controls will be decided at detailed design phase. Under conditions where fewer delays are present than modelled, more trips could be attracted to Ōpāheke N-S arterial, along with less traffic on other routes such as Mill Road and Great South Road.</p> <p>Although it is feasible that there is less delay at the Ponga Road intersection, it is not the aim of the Project to provide uncongested road conditions during the commuter peaks (with priority for PT and walking/cycling facilities). The full build-out models (2048+) have high delays for traffic during the commuter peaks in a large number of locations, so such delays in the network are to be expected.</p> <p>Additionally, as the Ōpāheke area develops, there could be additional collector-road intersections on the Ōpāheke North-South FTN arterial south of Ponga Road or additional northbound delay at Walker Road. These intersections would add additional travel time to north-south movement, offsetting any reduced delay at the Ponga Road location. Within the context of these future uncertainties, it is not considered that these model uncertainties reflect an adverse effect being materially under-stated.</p> <p>We have undertaken a sensitivity test in the model⁷ on the traffic signal settings to reduce the northbound delay on Ōpāheke North South FTN Arterial.</p> <p>As identified by Council in the request (number 11), the model showed reasonably high delays at the Ōpāheke North South FTN Arterial/Ponga Road intersection in the full build (2048+) AM peak model. The model assumed traffic signal control at this location, although other forms (such as a roundabout) could be implemented.</p> <p>The test involved altering the traffic signal settings to reduce that northbound delay to identify any potential wider network effect.</p> <p>A roundabout (instead of signals) could give different modelled delays. However, the test is considered representative of a scenario with less delay, whatever intersection form is ultimately implemented.</p> <p>This test showed a potential increase in northbound am peak flows of 211 passenger car units (equivalent to just under 200 vehicles per hour). This increase was due to vehicles diverting from parallel north-south routes, mainly Mill Road, and to a much lesser extent from Great South Road. That diversion was a localised impact, with limited change north of Hunua Road. For example, the model indicated an increase of only some 30 vehicles per hour on Hunua Road and some 20 vpd on Ōpāheke Road.</p> <p>The potential effect on the wider network is therefore not expected to be significant.</p>	N/A
12	<p>Please detail the extent to which documents lodged for NoR D4 will be updated to confirm the proposed closure of the Sutton Road at-grade rail crossing, with the traffic model used to inform the supporting transport assessment placing particular importance on the Ōpāheke N-S arterial being protected to allow for this network change (NoR D4).</p> <p><i>Explanation: The SATURN traffic model assumes that Sutton Road is closed when the Ōpāheke N-S arterial is operational. We support the closing of this level rail crossing, noting that it presents a safer outcome and aligns with the Vision Zero safety strategy, but highlight the need for this assumption to be</i></p>	<p>We agree that a positive effect of NoR D4 is that it allows for a range of potential wider-network changes, such as the potential closure of the Sutton Road at-grade crossing and extended bus lanes on Great South Road etc. However, they remain independent projects (with the closure of Sutton Road primarily required by future rail projects) and it is not intended to link NoR D4 with wider network projects through the designation conditions (or update any of the documents associated with NoR D4 to reflect this closure).</p>	N/A

⁷ Note that the testing was undertaken on a slightly different version of the model. However, the same issue was seen in both versions of the model and the same outcome is expected.

Ref	Request / Advice	Response	Relevant Document / Section
	<i>addressed in the AEE for NoR D4 and proposed designation conditions, noting that the closure of this connection places additional importance on adjacent sections of the NOR D4 corridor being protected to allow for this network change.</i>		
13	<p>Please provide clarification on whether turning lanes and/or intersection improvements along the urban section of Ōpāheke Road may be required due to the increase in vehicle movements resulting from (NoR D5).</p> <p><i>Explanation: The traffic modelling suggests predicts a significant increase in traffic on Ōpāheke Road into the future. For example, the base traffic model assumes some 150 vehicles northbound about Boundary Road, with this predicted to increase to some 750 vehicles per hour. While the proposed designation includes several vehicle crossings, where localised works are required, we ask for clarification on the extent to which turning lanes and localised intersection improvements have been captured within the analysis. For example, right turning storage space will likely be required to ensure right turning vehicles can stack safely based on the increased demand predicted along this route.</i></p>	<p>The intersection improvements on Ōpāheke Road (urban section) are limited to walking and cycling improvements. We do not preclude that such future localised intersection improvements might be necessary as the area develops. Ōpāheke Road will become significantly busier due to growth in Ōpāheke. It is not anticipated that Ōpāheke Road will significantly increase its traffic capacity beyond a general two lane arterial. Any treatments at specific locations would therefore likely be localised, and dependent on redevelopment and other network pressures, not as a result of this Project.</p>	N/A

(3) Noise and Vibration

Table 3: s92 Response - Construction Noise and Vibration

Ref	Request	Response	Relevant Document / Section
Construction Noise and Vibration			
14	<p>The preamble to Table 4-1 of the CA notes that the long term construction noise limits of the AUP have been adopted but the night time levels reported in Table 4-1 do not include the described -5dB correction. Please clarify why this is the case.</p>	<p>There is a discrepancy between NZS 6803 and AUP limits for night time levels.</p> <p>E25.6.1(3) of the AUP states "the noise from any construction work activity must be measured and assessed in accordance with the requirements of New Zealand Standard NZS6803:1999 Acoustics – Construction noise. Construction work is defined in New Zealand Standard NZS6803:1999 Acoustics – Construction noise."</p> <p>Rule E25.6.27 details construction noise limits for different times of the day. Part 4 of this rule states that where the duration of construction work will be longer than 20 weeks the limits should be decreased by 5 dB in all cases. However, this differs from NZS6803 where only the daytime limits are reduced by 5 dB. The AUP appears to have misinterpreted the standard. The limits in Table 4-1 of our report align with the long term duration noise limits detailed in NZS6803.</p> <p>This change has no material effect on the outcomes of the construction noise assessment as any noisy works would not comply with either 40 or 45 dB LAeq.</p>	N/A
15	<p>Please explain whether the exceptions to construction noise outlined in E25.6.29(3) (page 10 of the CA) apply to the Project?</p> <p><i>Explanation: Page 10 of the CA discusses Rule E25.6.29(3) of the Auckland Unitary Plan – Operative in Part (AUP) and identifies situations where the AUP construction noise levels between 7am and 10pm do not apply. These include:</i></p> <p>(a) ...</p>	<p>The exceptions to construction noise outlined in E25.6.29(3) do not apply to this Project. The exception in this rule applies to short duration night-time works in roads but not to longer duration works as proposed for the Drury Arterial Network.</p>	N/A

Ref	Request	Response	Relevant Document / Section
	<p>(b) Because the nature of the works and the proximity of the receivers the noise generated cannot practicably be made to comply ... or</p> <p>(c) for planned works, a copy of the works access permit issued by Auckland Transport or approval from the NZTA is provide to the Council five days prior to work commencing; or</p> <p>(d) for planned works where the works will take more than 8 hours to completed a construction noise and vibration management plan is provided to the Council no less than five days prior to work commencing ...</p> <p>Could the author of the CA please comment on how the above three points apply to the Project? Is the Project required to comply with the AUP limits?</p>		
16	<p>Please explain what thought has been given to protect construction of the road corridors against reverse sensitivity effects arising from future development.</p> <p><i>Explanation:</i> In the last paragraph of the summary to the Assessment Methodology (Section 5) the CA notes that “Construction will occur several years in the future. Therefore, receivers may have changed by then, with new receivers in the vicinity due to increased development. Construction noise and vibration effects will need to be reassessed at the time of construction”.</p> <p>While we understand this to be a practical solution to address the unknown, this does not appear to fulfil the purpose of the designation, being route protection for the local arterial roads. If the future reassessments result in significant adverse effects, could this compromise the project through reverse sensitivity?</p>	<p>It is not uncommon for works on roads to occur within urban environments, and the potential effects of this (including reverse sensitivity effects) have been assessed, and will be mitigated, as part of the Project. The proposed road upgrades and new roads are required to support the planned growth in Drury-Ōpāheke. Without the Drury Arterial Network, the transport infrastructure will be insufficient and the planned growth cannot occur. As outlined in our description of the existing environment, it was assumed for assessment purposes that generally construction will take place before or in parallel with the urbanisation of the area, as this is required to support the growth.</p> <p>The proposed alteration to existing, and new designations signal the upgrade and construction of the roads.</p> <p>In each NoR there are existing properties right on the boundary of the designation. As the assessment assumes construction works can occur right up to the boundary of the designation the worst case effects have already been considered for the construction methodology provided. Whilst new dwellings may be constructed in the future, the effects they experience will be no worse than those already described in the report.</p> <p>The CNVMP will include all receivers present at the time of construction. When construction does take place and new houses are present, then they will be included in the CNVMP at the time. The recommended conditions reflect the management approach to construction noise and vibration that will be flexible enough to respond to any new buildings that may be present at the time of road construction.</p> <p>There is no risk to this Project to consider future receivers this way as effects of construction are covered over an extended area and not just at existing receivers.</p>	N/A
17	<p>Please elaborate on the potential effects of construction works at night, particularly in relation to bridge demolition and construction, and noise from machinery (millers, trucks and pavers) operating on existing roads.</p> <p><i>Explanation:</i> Section 5.1 provides commentary on activities and duration. It raises night works, which may include the noisiest activity of pavement construction. Any night work has the potential to result in the largest effects on neighbours and is touched on in Section 5.6.6. For previous projects, bridge demolition and construction were often undertaken at night, both of which require major items of plant and occur for significant durations. Likewise, working on existing roads, of which most of the designations relate to, often requires night works with the use of noisy machinery including millers, trucks and pavers. Given the large machinery often required at night, the potential for adverse effects and size and resources available to the design team, could the potential effects of night works be significantly elaborated upon?</p>	<p>According to the current construction methodology, night works are expected to be rare and limited. The majority of construction works can happen during the day. Night works are discussed further in Section 5.6.6 of the Assessment of Construction Noise and Vibration Effects.</p> <p>If night-time work occurs then the CNVMP provisions would be used (e.g. the use of site specific Schedules) to manage and mitigate all activities’ noise emissions to achieve reasonable outcomes.</p>	Section 5.6.6, Assessment of Construction Noise and Vibration Effects, Version 1, January 2021
18	Please assess the construction noise effects arising from night time works.	Please refer to above comments regarding night time noise	N/A

Ref	Request	Response	Relevant Document / Section															
	<i>Explanation:</i> Table 5-4 of the CA provides an assessment of day time effects from various levels of construction noise and is used throughout the CA as a basis for determining effects. Given the expectation of night time works, could some form of assessing the resulting effects be provided?																	
19	<p>Please provide noise data for the large items of plant identified in Table 6.1 of the CA, including mobile concrete pumps and trucks, mobile cranes used for bridge construction, graders and kerb machines.</p> <p><i>Explanation:</i> Table 5.1 of the CA provides noise data from some of the plant considered in the analysis. Table 6.1 goes on to identify other large items of plant not considered, including mobile concrete pumps and truck, mobile cranes used for bridge construction, graders and kerb machines. Could noise data please be provided for this additional plant?</p>	<table border="1"> <thead> <tr> <th>Equipment</th> <th>Source BS5228</th> <th>Sound Power Level (dB L_{AW})</th> </tr> </thead> <tbody> <tr> <td>Grader</td> <td>D3.75</td> <td>112</td> </tr> <tr> <td>Kerb Machines</td> <td>C4.28</td> <td>103</td> </tr> <tr> <td>Concrete Truck</td> <td>C4.27</td> <td>107</td> </tr> <tr> <td>Cranes</td> <td>C4.41</td> <td>99</td> </tr> </tbody> </table>	Equipment	Source BS5228	Sound Power Level (dB L _{AW})	Grader	D3.75	112	Kerb Machines	C4.28	103	Concrete Truck	C4.27	107	Cranes	C4.41	99	N/A
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20	<p>Please clarify whether the plant identified in Table 5.1 of the CA is a complete list, or if additional plant will be required.</p> <p><i>Explanation:</i> Other, noisy plant often required for road building includes motor scrapers, millers, concrete saws and breakers.</p>	<p>The plant identified in Table 5-1 is based on the indicative construction methodology provided by the Project team. Section 5.2 makes note that the equipment list is to be updated and reassessed at detailed design stage. Motor scrapers, millers and concrete saws are not currently specified in the indicative construction methodology. As future design phases progress, different machinery may be required. The CNVMP outlined in Condition 20⁸ will be used to manage the effects from construction machinery</p>	<p>Table 5-1 and Section 5.2, Assessment of Construction Noise and Vibration Effects, Version 1, January 2021</p> <p>Condition 20 for NoR D1, D3, D4 and D5. Condition 21 for NoR D2.</p>															
21	<p>Please explain what type of piling is expected in construction of the bridges. Given that proposed bridges are often over streams, please clarify whether piling require driving or casings to be vibrated in or out. If so, does the assessment allow for this?</p>	<p>Bored piling is identified in Table 5-1 of the construction assessment and is allowed for within the assessment. Typically, piling works will utilise temporary steel casing to protect the bored hole from collapsing, especially at the softer upper layers. These steel casings are normally vibrated down to the top of the rock level. Once the pile hole is bored and concrete placed, the steel casing can be extracted or left in place. Further design work and ground investigations will be needed to confirm the final pile design which will confirm the piling method to be used.</p>	<p>Table 5-1, Assessment of Construction Noise and Vibration Effects, Version 1, January 2021</p>															
22	<p>Please check and confirm the construction noise anticipated from the plate compactor</p> <p><i>Explanation:</i> Throughout the CA, it is the plate compactor that results in the largest effects. Table 5.1 reports this as one of the noisiest pieces of plant anticipated for construction with a sound power level of 110dBA. Based on field measurements of handheld plate compactors undertaken by Hegley Acoustics, this level appears high.</p>	<p>Whilst not the largest item of equipment used, plate compactors are expected to be working at locations closest to the designation boundaries, and in turn closest to receivers. As such it is considered appropriate to use for the assessment.</p> <p>The noise level provided is considered appropriate.</p>	N/A															
23	<p>Please clarify whether setback distances from plant are required for night time construction.</p> <p><i>Explanation:</i> Tables 5-1 and 5-2 give the respective setback distances from individual and groups of plant to comply with the day time limit of 70dB LAeq. Given night time works are anticipated, is a similar setback distance required for night time?</p>	<p>We do not consider it necessary to provide set back distances at this stage.</p> <p>Night time works are expected to be rare and limited and will be managed by the CNVMP(s) and Schedules</p> <p>Should night works be required a Schedule will be produced that sets out predicted noise and vibration levels from the actual equipment for any affected receivers and details the BPO if required.</p>	N/A															

⁸ Condition 20 for NoR D1, D3, D4 and D5. Condition 21 for NoR D2.

Ref	Request	Response	Relevant Document / Section
24	<p>Please comment on whether the requirements of Waka Kotahi (Waka Kotahi State highway construction and maintenance noise and vibration guide (version 1.1, 2019) referenced in Condition 20 to NoR D1 should be included in the appendices to the conditions? (NoR D1)</p> <p><i>Explanation: Condition 20 to NoR D1 requires the CNVMP to be undertaken in accordance with Waka Kotahi State highway construction and maintenance noise and vibration guide (version 1.1, 2019), but does not make this document available to view within the conditions.</i></p>	<p>A reference to Waka Kotahi State highway construction and maintenance noise and vibration guide within the conditions is preferred to allow for updated Waka Kotahi documentation in the future. It is not necessary to append the requirements to the conditions as these are readily accessible online.</p>	N/A
25	<p>Please explain why the requirements of the Schedules in the CA (Section 5.6.2) are different to those of the CNVMP (Section 5.6.1).</p>	<p>The CNVMP and Schedules are two different documents serving different purposes, therefore it is appropriate for the requirements of these documents to be different. The CNVMP covers a wider scope than the Schedules. The Schedules are typically an appendix of the CNVMP specific to a construction activity or specific property.</p>	N/A
26	<p>Please explain whether SGA has considered developing a set of guidelines for the relocation of neighbours during times of high noise at this stage of the project to provide an understanding of how this is anticipated to work.</p> <p><i>Explanation: In 5.6.3, the CA describes the hierarchy of noise mitigation measures before going on to note the limitations of relocating neighbours. Section 5.6.4 is the comparable vibration section.</i></p>	<p>We do not consider further guidelines are necessary. The CNVMP and Schedules will set out how neighbours will be engaged with and how offers of relocation will be undertaken at the appropriate time if relocation is required.</p>	N/A
27	<p>Please expand on the noise and vibration effects associated with demolition in any of the sections of the Project. This is not discussed in the construction methodology within the CA or the AEE.</p>	<p>Demolition will typically use excavators with various attachments to suit the job, such as hydraulic breakers, ripping bucket, or hydraulic crushers. High noise levels can be generated by the use of this equipment, however, this is typically intermittent and over a short duration.</p> <p>If demolition of a building or structure is required in close proximity to a receiver, then the effects associated with demolition will be similar to those from construction as assessed in the report (as they have similar noise levels).</p> <p>Mitigation and management measures will be determined if required during production of the CNVMP.</p>	N/A
28	<p>Please expand the assessment of construction noise effects within the CA to consider the following:</p> <ol style="list-style-type: none"> The noise levels that each property predicted to more than 70dB LAeq was to receive. For instance, Section 6.2.1.2 says that with mitigation the highest levels of noise would be 75 – 80dB LAeq. It is not clear however, whether this level applies to all 22 properties or whether some are exposed to lower levels. The addresses of the properties that are predicted to receive over the 70dB LAeq adopted limit. This is requested as it will aid with determining which properties should be considered for notification, and which is discussed further below: When assessing effects of the various levels, it would be useful to understand the duration of such levels. The CA explains that construction noise will vary with worst case levels expected for around three days. However, given that the construction periods of the various NoRs are up to four years, a more detailed investigation on the durations is requested. A discussion on expected night-time levels and durations is requested (cross-reference with item 13 which also seeks similar information) The assessment provided is in terms of LAeq. Why has LAFmax been omitted? If it has been omitted from the assessment, should the LAFmax form part of the conditions? <p><i>Explanation: The sections relevant to each NoR on Construction Noise Effects are confined to reporting the highest day time level to the most affected property/ properties and the</i></p>	<ol style="list-style-type: none"> Section 6.2.1.1 specifies the total number of properties exceeding 70dBA (25) and Section 6.2.1.2 identifies the number of properties still exceeding the 70dBA with mitigation applied (22). With the highest noise levels between 75-80dBA with mitigation. This approach is consistent throughout each NoR. The list of properties is included in Appendix C. We can not provide further detail on duration of noise levels at this stage of the Project. That level of detail will be unknown until a contractor is onboard and the construction methodology finalised. For some of the NoRs this will be in 10 to 15 years' time. However, a reasonable assessment has been made noting that the road construction is linear, and each receiver would only be affected for part of the overall construction duration. Please refer to previous comments on night works. L_{Amax} is not predictable as it depends on the specific items of equipment and how they are being operated. Typically L_{Amax} is 15dB higher than L_{Aeq}. Therefore, compliance with the L_{Aeq} criteria is likely to indicate compliance with the L_{Amax} criteria. 	<p>Section 6.2.1.1 and 6.2.1.2, Assessment of Construction Noise and Vibration Effects, Version 1, January 2021</p> <p>Appendix C</p>

Ref	Request	Response	Relevant Document / Section
	<i>number of properties that can expect to receive day time levels above 70dB LAeq. For assessment, it would be useful to understand the above.</i>		
29	<p>Please explain how significant vibration effects that exceed the damage protection threshold of DIN 4150 would be avoided, remedied or mitigated by the project, and who would undertake this.</p> <p><i>Explanation: Throughout the NoRs, there are 83 of sites where vibration is reported to exceed the damage protection threshold of DIN 4150. The CA advises pre and ongoing monitoring of such sites but offers no view on whether such damage is an acceptable outcome for the project and comment on this adverse effect is requested. Comment is also requested on who would remediate any damage. While it is expected that much of this would be addressed through the CNVMP, it would be useful if the CA at least offered guidance on how any serious effects would be avoided, remedied or mitigated.</i></p>	<p>Properties predicted to exceed the DIN 4150 vibration criteria for cosmetic building damage will have a building condition survey before construction takes place and another survey once construction has finished to determine if any cosmetic damage has been caused by the Project. Any cosmetic damage would be remediated as part of the Project by the Requiring Authority as is standard practice.</p> <p>Although current predictions indicate vibration could exceed the cosmetic building damage criteria at a number of receivers, this may not be the case in reality. It is difficult to predict construction vibration effects at this early stage as there are a number of variables that are not yet known or that are likely to change. For example, the ground conditions are unknown, and this will be major factor in vibration transmission. Different construction methods may be used, and vibration source energies will vary depending on the precise equipment selected.</p> <p>Vibration monitoring will be carried out when works begin on site to determine actual equipment vibration levels and the attenuation provided by the local ground conditions. The emission radii will then be updated accordingly. This is standard practice.</p> <p>It should be noted that even if the cosmetic building damage criteria are exceeded it does not necessarily mean damage will occur.</p> <p>Section 5.6.4 of the report sets out some vibration mitigation/ management measures. These will be further developed through the CNVMP.</p> <p>We do not anticipate “serious effects” (e.g. structural damage) relating to construction vibration.</p>	Section 5.6.4, Assessment of Construction Noise and Vibration Effects, Version 1, January 2021
30	Please clarify the approximate durations where vibration is anticipated to exceed the amenity criteria levels of DIN 4150.	It is not possible to provide this level of detail at this stage of the Project.	N/A
31	<p>Please identify all buildings predicted to be exposed to vibration levels exceeding the amenity criteria of DIN 4150, and the duration that these receivers would be exposed to vibration exceeding these criteria.</p> <p><i>Explanation to 25 & 26: In addition to the buildings predicted to receive vibration levels in exceedance of DIN 4150, there are a number of additional buildings that are predicted to be exposed to vibration levels that exceed the amenity criteria.</i></p>	<p>A table of addresses predicted to exceed the amenity criteria is included in Appendix D. Note that some addresses have multiple buildings. Consultation nearer the time of construction will determine which buildings will be occupied.</p> <p>As per the previous response it is not possible to determine durations at this stage.</p> <p>The amenity criteria are only applicable to occupied buildings.</p>	Appendix D
32	Please explain whether the use of construction yards across the project requires consideration from a noise and vibration perspective.	Construction yards are referred to as construction compounds within the Assessment of Construction Noise and Vibration Effects. These have been included in the assessment of effects. Construction compounds will be in place for longer but are generally less noisy than other construction works. Noise from construction compounds will be managed by the CNVMP and Schedules where required as outlined in Section 5.6 of the Assessment of Construction Noise and Vibration Effects.	Assessment of Construction Noise and Vibration Effects, Version 1, January 2021
Operational Noise and Vibration			
33	Please expand upon the statement in Section 4.1.1 of the CA that commercial and industrial building do not fall within the definition of a Protected Premises and Facility (PPF) as described by NZS 6806. It is our understanding that section 1.4 of NZS 6806 neither includes such uses nor excludes such uses.	<p>Although Section 1.4 of NZS 6806 does not specifically exclude commercial or industrial buildings it states that the standard applies to a limited range of PPFs used for noise-sensitive activities. Commercial and industrial buildings, other than those specified in section 1.4.1 of the standard, do not typically contain noise-sensitive activities and are therefore excluded from this assessment.</p> <p>This is also supported by the definition of an “activity sensitive to noise” in the AUP, which excludes businesses and commercial premises.</p>	N/A

Ref	Request	Response	Relevant Document / Section
34	<p>Please clarify whether consideration needs to be given to controlling road traffic noise on future residential areas to levels considered appropriate for residential amenity. Please explain why the Operational Noise Assessment ('ONA') assessment is limited to existing and consented PPF's under NZD 6806, given the limitation of these standards in addressing a changing environment.</p> <p><i>Explanation: The ONA has included existing PPFs and those with building consent but which are yet to be built but excludes all future properties. It is recognised that this is the approach described by NZS 6806. However, most roading projects that NZS 6806 relates to are in either a rural environment or a built up area where the potential for future dwellings is limited. The proposal differs in that the purpose of the intended roads is to facilitate large numbers of new residential dwellings. This being the case, does consideration need to be given to controlling road traffic noise to future residential areas to levels that are considered appropriate for residential amenity? Essentially, is the Project creating a problem for someone else to fix as suggested by section 5.4?</i></p> <p><i>In relation to the above point, Auckland Council Practice Note RC 3.2.23 describes assessing noise to sites based in their development potential as described by the AUP. While the practice note confines itself to NZS 6802 and resource consent applications, please explain whether you consider this approach is appropriate for the Project?</i></p>	<p>In assessing noise effects, we applied the standard assessment methodology required by the AUP. Across the different NoRs there are some dwellings that have been assessed that are adjacent to the proposed designation boundary. This is considered as representative of future dwellings that may be constructed near to the new and upgraded road corridors. Therefore, the traffic noise levels will be similar to those already assessed at these dwellings. Mitigation, where required, is typically a low noise road surface which will benefit future receivers as well as existing receivers.</p> <p>Section 5.4 does not suggest the Project is creating a problem for someone else to fix. It indicates the design of new developments should take account of potential traffic noise effects. This is no different to a developer building next to any other busy road in a rural or residential zone in Auckland except that they will know what potential traffic noise to expect from the Project as noise level contours for the design year are available to inform future development. Importantly, Council has zoned the land Future Urban and the roads are required to enable the development of the future residential areas. That development could not take place without the roads and road improvements enabled by this Project.</p> <p>The practice note does not apply to this assessment for several reasons. NZS6806 (which the AUP applies to roads within the Auckland Council area) clearly excludes mitigation of future developments unless the location of such development is known (e.g. when building consent has been obtained). Mitigation for individual PPFs relates to the location of the facade (including height and location of noise sensitive rooms), and therefore designing specific mitigation for an unknown receiver is impractical and potentially ineffective. Further mitigation (e.g. fences) may in fact limit access to development and be contrary to the urban design outcomes sought.</p> <p>Applying low noise road surface across the Projects is the most appropriate mitigation.</p>	Section 5.4, Assessment of Traffic Noise and Vibration Effects, Version 1, January 2021
35	<p>Please explain whether consideration has been given to achieving the BPO described in s16. Are there areas of the Project where mitigation could easily and effectively be installed to the benefit to PPFs regardless of the level before such mitigation?</p>	<p>Different mitigation methods have been considered for different areas of the Project including low noise road surface and barriers. Barriers do not work in some locations due to topography and may not be in keeping with the urban design approach or access requirements for the future developments. Without knowing if future developments adjacent to the Project will be single storey or multi-storey and where exactly the facades of the future developments will be, the effectiveness of any barrier cannot be determined. Low noise road surface is already proposed for the majority of the arterial roads which will benefit both existing and future receivers.</p>	N/A
36	<p>Please explain the rationale underpinning the timeframe of 2048 is used as a design year in Section 4.1.3.</p> <p><i>Explanation: In relation to the design year, Section 4.1.3 makes the point that the opening year for the project is yet to be confirmed before going on to describe why 2048 was selected. Is the SGA able to confirm that 2048 is generally in accordance with the requirement of NZS 6806 for it to be 10 – 20 years after the completion of a road</i></p>	<p>Whilst no opening year is confirmed, 2048 is expected to be 10 – 20 years after the completion and therefore in keeping with NZS 6806 requirements.</p>	N/A
37	<p>Please provide further commentary on the risk that traffic flows exceed those anticipated due to some road alignments not being constructed, and whether the effects associated with these risks could lead to a different conclusion being reached in respect of designating the project.</p> <p><i>Explanation: The ONA notes that the design year does not represent the highest possible traffic flows which, it explains, might eventuate should some of the roads not be constructed. Is the author able to provide some commentary on the risk that any realistic alternatives pose to the Project? Are there scenarios where traffic flows/ noise levels would increase significantly to the point that a different conclusion would be reached with respect to designating the Project</i></p>	<p>There is no significant risk of different effects arising, because any change in traffic volumes is unlikely to be significant enough (such as doubling or halving of traffic volumes) to alter outcomes. A change in traffic volume of 1/3 would result in a 1 dB change, which is unnoticeable.</p>	N/A
38	<p>In relation to comparing the noise effects against the Do-nothing and Do-minimum scenarios/baselines used for the ONA:</p>	<p>a) The do-nothing levels are based on the Transport model of "Likely future without Drury Projects" also referred to as "2048+ without Drury" which considers the growth of the surrounding area with other projects planned such as Mill Road and Drury Rail stations to be implemented. These traffic volumes</p>	N/A

Ref	Request	Response	Relevant Document / Section
	<p>a) Please justify the use of Do-nothing flows as a baseline for the operational noise effects assessment, given that the Do-nothing noise levels are based on full residential development of the Future Urban area, which the ONA identifies as not being possible without the Project.</p> <p>b) Please clarify the difference in traffic flows between the Do-nothing and Do-minimum scenarios.</p> <p>c) Please explain whether the calculation method used for the Do-nothing noise levels lead to any issues with comparing the Do-minimum levels, which the assessment relies upon.</p> <p>d) Please explain why the analysis methodology explained in Section 5.1.1 of the ONA does not apply to interrupted vehicle flows, and how this methodology addresses intersections, which introduce interrupted flows.</p> <p>e) Table 5-2 demonstrates the accuracy of the modelling through a comparison of a measured level of the existing noise at 116 Waihoehoe Road with a predicted level of road traffic noise at the same point. The conclusion is that the difference of 0.6dB confirms the accuracy of the model. Section 6.1.3 discusses the same measurement but describes the dominant sounds as being birdsong and farm animals with road traffic noise being audible at a distance. Did road traffic noise control the measurement making it a good basis for calibrating the noise model?</p> <p><i>Explanation: NZS 6806 describes the Do-nothing scenario as the predicted noise levels at design year assuming the Project did not go ahead. As Section 4.1.4 explains, this assumes full growth of the surrounding area (for which the Project is intended to facilitate). Does this mean that the Do-nothing flows are the same as the Do-minimum flows?</i></p> <p><i>Based on the answer to the above being yes, the ONA goes on to point out that the Do-nothing flows could not occur as the existing roads could not accommodate that volume of traffic before confirming that the reported do-nothing noise levels are therefore not a feasible option. However, the predicted Do-nothing levels are then used as the basis of the analysis. In simple terms, the use of the Do-nothing noise levels by NZS 6806 is to allow a noise level comparison at a set point in time with and without the Project to highlight its effects. In this instance, this does not appear to be possible as the Do-nothing noise levels are based on the full residential development, which cannot occur without the Project. As such, it would appear that the differences between the Do-nothing and the Do-minimum are limited to road width, traffic speed and road surface. The anticipated change in traffic flow resulting from the upgraded road network (which is the aim of the Project) is not addressed by the analysis. Is this a correct interpretation of the assessment and if so, can it be justified?</i></p>	<p>are supplied by the transport engineers and reflect the requirements of NZS6806 for the Do-nothing noise environment.</p> <p>b) The Do-minimum flows are generally lower than the Do-Nothing flows. The reason is that the Do-nothing scenario assumes that all traffic from the developments would travel on existing roads only. This is a theoretical scenario that would not occur, nevertheless, a transport model reflecting this situation was prepared (refer (a) above). The Do-minimum scenario includes the Drury Projects which enables traffic volumes to spread out over existing, upgraded, and new, roads.</p> <p>c) Following the requirements of NZS6806 and basing the assessment of altered roads on the comparison of the Do-nothing and Do-minimum scenarios has limited effect on the assessment of the Drury Arterial Network Projects. Only "altered roads" are potentially affected. Of the five NoRs assessed, four result in a full assessment or all PPFs receive noise levels in Category A only. Only NoR D3 would not be assessed as an "altered road" because the relevant noise level change is not sufficiently high to qualify as an "altered road" in accordance with NZS 6806, which in turn affects the mitigation requirements. Of the PPFs receiving noise levels above Category A, several are likely to be removed as they are inside another Drury Arterial Network NoR area. Overall, following the requirements of NZS 6806 results in an equitable assessment of all PPFs affected by the Projects, and the recommendations are unlikely to change if the approach was changed to diverge from the Standard approach.</p> <p>d) The assessment has been carried out in accordance with the standard which does not include noise at intersections. The calculation method commonly applied in New Zealand is the Calculation of Road Traffic Noise, which also does not account for interrupted traffic flows. The majority of intersections associated with the Projects already exist, and the assessment of the existing and Do-nothing scenarios also does not account for these intersections. Given that the predictions relate to a comparison of noise levels, the assessment has been equally applied to all scenarios. It is noted that noise at intersections is likely to be similar to free flowing traffic when assessing the 24-hour LAeq as the increase in noise level from accelerating after a stop is balanced against a slower speed and idling of vehicles at the intersections.</p> <p>e) Road traffic was the controlling noise during measurements at 116 Waihoehoe Road with birdsong and farm noise being audible when no traffic was present. Birdsong and farm noise levels were lower than traffic noise and it was therefore a good basis for calibrating the model.</p>	
39	<p>Table 5-2 demonstrates the accuracy of the modelling through a comparison of a measured level of the existing noise at 116 Waihoehoe Road with a predicted level of road traffic noise at the same point. The conclusion is that the difference of 0.6dB confirms the accuracy of the model. Section 6.1.3 discusses the same measurement but describes the dominant sounds as being birdsong and farm animals with road traffic noise being audible at a distance. Did road traffic noise control the measurement making it a good basis for calibrating the noise model?</p>	See response above in 38-e.	N/A
40	<p>Has the applicant considered providing a conclusion on the existing noise environment for each of the NoRs?</p>	<p>The information included about the existing environment is considered appropriate for the assessment. A conclusion in each section is unnecessary.</p>	N/A

(4) Urban design and Landscape and visual effects

Ref	Advice received	Response	Relevant Document / Section
AV1	The proposed Urban Landscape Design Management Plan conditions appear to be quite generic, and do not take into account the place-based recommendations made in the Urban Design and Form Effects and Assessment of Landscape and Visual Effects. Further consideration will need to be given to these matters later in the NoR process (Project-wide).	Not required.	N/A

(5) Arboriculture

Table 4: s92 Response - Arboriculture

Ref	Request	Response	Relevant Document / Section
41	<p>Please confirm whether the proposed replanting will include a calculation for replacing the ecosystem services including sequestered carbon loss that will result from the proposed tree removals (Project-wide).</p> <p><i>Explanation: While the Applicant has offered to provide 'mitigation' for the proposed tree removals, by definition, mitigation acknowledges that there is a lasting negative effect, and it is preferred that an approach which remedies the impact of tree removals is adopted, where the remedial planting accounts for lost future environmental benefits, including the eco-system services of soil / erosion protection, storm-water reduction, wildlife habitat, and sequestered carbon as outlined in the Applicant's tree values checklist.</i></p> <p><i>In consideration of the ecosystem services provided by the trees proposed to be removed for these designations, and specifically carbon sequestration, the loss will also require appropriate remedial planting to achieve the stated objective of central government to be 'carbon neutral' by 2050 and also to align with the sustainability goals of the Auckland Council's 'Low Carbon Strategic Action Plan'.</i></p> <p><i>In regards to carbon sequestration, the remedial planting needs to match or exceed the value of total stored carbon which would have been achieved by the existing tree asset at the end of the forecast period. In this instance the forecasted carbon sequestration value is for 30 years, which was chosen as this is a realistic average life span for the trees proposed for removal, and 2050 is the goal that has been set by the government for carbon neutrality under the Climate Change Response (Zero Carbon) Amendment Act.</i></p> <p><i>The carbon calculation can be achieved by using the i-Tree Development Team, 2020 forecasting tool to estimate the lost future benefits arising from the proposed tree removals.</i></p> <p><i>The remedial planting will need to achieve this same value of stored carbon by 2050 if carbon neutrality is to be achieved, and the actual effects of tree removal are to be addressed in a sustainable fashion. Please refer to this link provided for your assistance https://www.itreetools.org/</i></p>	<p>No, we are not proposing a calculation at this time. This is because the majority of any vegetation removal required to facilitate the Projects and therefore any replanting works will need to be authorised through the regional resource consents for the Projects, which will be sought in the future at detailed design (i.e. 10-20 years from now). We consider it is more appropriate to consider replanting matters holistically at that time.</p> <p>We have added a new clause (condition 23⁹(c)(viii)) to the Tree Management Plan condition so that any measures developed under that plan are consistent with any equivalent measures proposed via resource consent conditions granted for the Project in relation to managing construction effects on trees:</p> <p><i>c) The Tree Management Plan shall:</i></p> <p><i>(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.</i></p>	<p>Appendix A, conditions:</p> <ul style="list-style-type: none"> • For NoR D1, condition 25 • For NoR D2, condition 26 • For NoR D5, condition 23

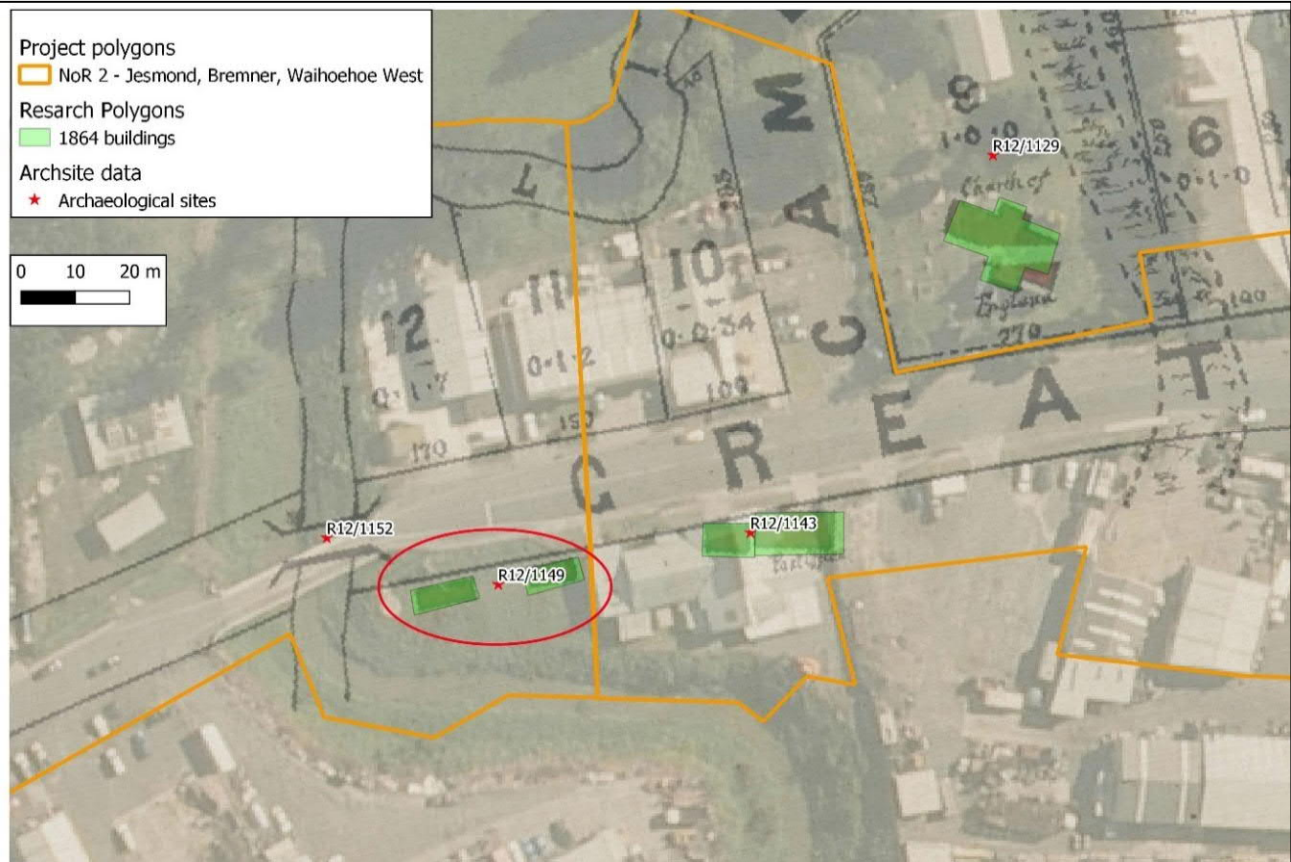
⁹ Condition 25 for NoR D1, Condition 26 for NoR D2, and Condition 23 for NoR D5.


(6) Historic Heritage

Table 5: s92 Response – Historic Heritage

Ref	Request	Response	Relevant Document / Section
42	<p>Please explain how the discovery and subsequent management of non-Māori artefacts found during the development of the arterial network will be undertaken, particularly in relation to the redevelopment of bridges over the Ngākoroa and Hingaia streams (Project-wide).</p> <p><i>Explanation: The potential for finding, and subsequent management of, non-Māori artefacts found during the development of the arterial network, should be addressed in the AEE. Matters that should be considered include conservation treatment (where needed) and eventual ownership or intended repository or display of items recovered.</i></p> <p><i>In relation to NoR D2, the proposed transport corridor crosses the Ngākoroa and Hingaia streams and will involve demolition and replacement of the existing bridges.</i></p> <p><i>The existing Ngākoroa bridge occupies the site of a series of earlier bridges dating back to (at least) Runcimans bridge of the 1850s. The bridge site is recorded as R12_1171. The effects on this site are not specifically addressed in the historic heritage AEE. They will potentially include modification or destruction of structural elements of earlier bridges or abutments and of earlier road/track approaches, both of which exist beneath the existing bridge.</i></p> <p><i>There is also potential for assemblages of artefacts (including waterlogged organic materials) lost or dropped from the bridge to be present in stream bed deposits at this site and that of the Hingaia Stream bridge (R12_1152). Both bridges were extensively used during the New Zealand Wars. The Ngākoroa Stream bridge is close to the site of the Commissariat Redoubt and wharves, Runciman's homestead and wharf (which was also used to ship coal from Drury) and a Tauranga waka (Māori canoe landing site).</i></p> <p><i>We consider that the effects on the Ngākoroa and Hingaia bridge sites including potential artefact finds and how they will be managed are not fully addressed in the application.</i></p> <p><i>The D2 and D5 NoRs are adjacent to or within the extent of cemeteries (St Johns Church graveyard – D2; Papakura Cemetery – D5). While it would appear unlikely that unmarked or unrecorded graves will be impacted, this possibility should be addressed since it is not uncommon in historic cemeteries to find unrecorded burials such as pauper graves in unexpected locations.</i></p>	<p>Methods for the discovery and management of artefacts are set out in the proposed Heritage and Archaeological Management Plan condition 22¹⁰ (HAMP). The HAMP will be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work.</p> <p>The HAMP condition on the proposed designations specifically covers:</p> <ul style="list-style-type: none"> The names of agencies that will need to be involved should discoveries be made Specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project Inclusion of HNZ authorities or those to be sought. <p>The sites near the Ngākoroa and Hingaia Streams are known sites and an HNZPTA authority will be sought at detailed design once the construction methodology has been confirmed and effects on these sites is better understood. As there are a number of sites within the NoR D2 Project area, an authority will be sought for the Project works throughout the area (or stage of works). The methodology for the discovery of artefacts associated with these sites will be included in the authority application and within the HAMP.</p> <p>Further information on standard practice for discovery is provided below. Should pre-1900 European material be exposed in the works, these will be the property of the landowner, as per Objective 7 within Heritage New Zealand Pouhere Taongas Statement Of General Policy: the Administration Of The Archaeological Provisions.</p> <p>The conservation of material which requires specialist input, such as waterlogged wood of a bridge structure or cloth, will be managed using standard conservation methodologies with the guidance of the University of Auckland Conservation laboratory who will be contacted as soon as the material is exposed.</p> <p>Once the material is analysed and reported on for the final report under HNZPTA conditions, the material will be offered to the Papakura Museum and similar entities for display. This could include a public Project display cabinet, which the material could help the public engage with tangible evidence of the past of Drury.</p>	<p>Appendix A, conditions:</p> <ul style="list-style-type: none"> For NoRs D1, D3, D4 and D5, condition 22 For NoR D2, condition 23
43	<p>Please explain how the discovery of graves will be managed (NoR D2 and D5).</p> <p><i>Explanation: The D2 and D5 NoRs are adjacent to or within the extent of cemeteries (St Johns Church graveyard – D2; Papakura Cemetery – D5). While it would appear unlikely that unmarked or unrecorded graves will be impacted, this</i></p>	<p>It is considered very unlikely that unmarked graves will be exposed during works for NoR D2 (St John's Church and Cemetery) and NoR D5 (Papakura Cemetery). As can be seen in the images below from the Drury Arterial Network Historic Heritage Assessment, both Norrie Road (previously Great South Road) and Ōpāheke Road were in place before the graves. No works are proposed with the scheduled site of St Johns Church and Cemetery and minimal works within the edge of the Papakura Cemetery site. Although part of the Papakura Cemetery has been recorded as an</p>	N/A

¹⁰ Condition 22 for NoR D1, D3, D4 and D5. Condition 23 for NoR D2

Ref	Request	Response	Relevant Document / Section
	<p><i>possibility should be addressed since it is not uncommon in historic cemeteries to find unrecorded burials such as pauper graves in unexpected locations</i></p> <p><i>The discovery and disinterment of burials would potentially have an impact on affected persons, particularly descendants of the individuals interred. This community of interest may include New Zealanders of Pākehā or Māori descent, and/or persons resident overseas.</i></p> <p><i>In my opinion, the potential effects of the discovery of graves and how they will be managed are not fully addressed in the application and would be of interest to persons who may be affected. For example, it may be appropriate to address identification and reinterment of disinterred individuals, should graves be found.</i></p>	<p>archaeological site (Presbyterian section), the graves in proximity to the proposed designation boundary are more recent(see Figure 2 where no graves are shown at this location in 1960).</p> <p>In the unlikely event that graves are discovered during works, this will be managed appropriately. The exposure of graves will be in accordance with a HNZPTA authority which will be sought at detailed design and included in the HAMP. Any exposure will be hand-removed by a suitably qualified specialist with the archaeologist, such as a bioarchaeologist. Stakeholders who determine the reinterment process, location, and any post-excavation analysis will likely include the New Zealand Police, Auckland Council, HNZPT, manawhenua, necessary representatives of Saint Johns Church or Auckland Council (Papakura Cemetery), and the Ministry of Culture and Heritage.</p>  <p>Figure 1: Figure 7-22 from Drury Arterial Network Historic Heritage Assessment. Close-up of Drury in 1865 overlaid on modern aerial with NoR2 overlaid and buildings shaded in transparent green and R12/1149 circled in red (NZ Map 4498-16).</p>	

Ref	Request	Response	Relevant Document / Section
		 <p>Figure 2: Figure 10-7 from the Drury Arterial Network Historic Heritage Assessment. Aerial taken in 1960 showing the cemetery use for earlier graves clustered to the northern half of the property with proposed NoR D5 designation (taken from Retrolens.nz).</p>	
44	<p>Please identify the extent of vibration effects on scheduled historic heritage places, and in particular the St Johns Church graveyard and also Papakura Cemetery (NoR D2 and D5).</p> <p><i>Explanation: Vibration effects on the church are briefly addressed and indicate that the thresholds for damage may be exceeded (p.46) and that there is the potential for 'cosmetic damage' to buildings such as cracking. This is a matter of concern. St Johns Church is a timber framed and clad building. The structure itself is not in the same risk category as an unreinforced masonry building. However the building has historic stained glass windows (see photo of one example). These are potentially made of very thin and brittle glass, in colours or patterns that are difficult or impossible to replace. The associated graveyard contains multiple unreinforced stone or masonry grave markers including tablets and obelisks (see photos) including some from the New Zealand Wars of the 1860s. Some of these are very close to the existing road and are potentially at significant risk of damage from excessive construction vibration.</i></p> <p><i>I consider cracking of windows, or cracking, collapse or subsidence of grave markers, to be modification of features/fabric of a scheduled heritage place rather than cosmetic damage. I consider that these effects have not been adequately addressed in the vibration report and application, and that these potential effects</i></p>	<p>Construction vibration levels at St Johns Church and cemetery (Scheduled Extent of Place 707), are predicted to exceed 2.5 mm/s PPV criterion based on the worst-case equipment operating at the construction boundary. A Schedule to the Construction Noise and Vibration Management Plan will be prepared (as set out in the proposed designation conditions) at this location to assess potential construction vibration management plans, effects and methodologies for heritage buildings and changes could be made to the construction methodology to minimise vibration nearer the time.</p> <p>A suitably qualified conservator will be consulted to recommend methods of mitigation for the Scheduled St Johns Church and associated surface grave structures. This will include the stained-glass windows and other vulnerable elements of the building and surrounds. This requirement has been added to HAMP Condition 23(b)(viii) of NoR D2 in Appendix A, as follows:</p> <p><i>23(b) The objective of the HAMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable. To achieve the objective, the HAMP shall identify:</i></p> <p><i>...(viii) methods to protect or minimise damage to the St Johns Anglican Church and Cemetery (AUP Scheduled Site 707) during project works as far as practicable based on pre construction advise from a specialist heritage conservator.</i></p> <p>If it is recommended by the heritage conservator that headstones should be moved before specific construction works, consultation with stakeholders will occur such as the St John's Church, Auckland Council, HNZPT, the Ministry of Culture and Heritage and descendants of the plot owner (if known). These requirements and methodologies will be included in the archaeological management plan as part of the HNZPT authority and the HAMP and will include any reinstatement or repair of items damaged as a result of the Project.</p>	Appendix A, NoR D2 Condition 23(b)(viii)

Ref	Request	Response	Relevant Document / Section
	<p><i>should be avoided to the extent possible rather than just monitored to determine if damage was pre-existing.</i></p> <p><i>Further information is required to better understand the effects on these identified historic heritage places.</i></p>	<p>It is noted that the section of the Papakura Cemetery adjacent to the works area is not a Scheduled Historic Site. The south-east corner of Papakura Cemetery is adjacent to the construction boundary of NoR D5. This area of the cemetery is the returned servicemen section, a newer part of the cemetery established post-1900. The cemetery area within 21m of the construction boundary could experience vibration levels of up to 2mm/s PPV based on the worst-case construction scenario. Since only walking and cycling facilities are proposed to be constructed, smaller equipment may be used (e.g. plate compactors rather than vibratory rollers). A Schedule will be prepared to look at the construction vibration management and methodologies that are being prepared for heritage buildings / cemeteries and where necessary changes could be made to the construction methodology to minimise vibration nearer the time. In addition, management of construction will take account of any active service times to avoid disruption due to construction noise.</p> <p>There are two other Scheduled heritage sites adjacent to NoR D2 works – Aroha Cottage (Scheduled Extent of Place 704) and Redoubt Wharves (Scheduled Extent of Place 2173). These sites could experience vibration levels of up to 2.5 mm/s PPV for Aroha Cottage and 2mm/s PPV for the Redoubt Wharves based on the worst-case construction scenario. A Schedule will be prepared for these sites and where necessary changes could be made to the construction methodology to minimise vibration nearer the time.</p>	

(7) Parks Planning

Table 6: s92 Response – Parks Planning

Ref	Request	Response	Relevant Document / Section
45	In relation to NoR D1, please provide an assessment detailing its effects on the blue-green network in the Drury-Opaheke Structure Plan and the proposed future delivery of a greenway connection along the Ngakoroa Esplanade (NoR D1).	<p>The potential effects of the proposed SH22 Upgrade on the blue-green network were assessed as part of the Assessment of Landscape and Visual Effects (section 6.3.1), the Assessment of Ecological Effects (section 6.4.3) and summarised in the Assessment of Effects on the Environment (section 9.1). The Urban Design Framework and Evaluation also made urban design recommendations relating to the blue-green network in section 4.4.</p> <p>In summary, the proposed upgrade of SH22 will include the provision of safe active mode facilities that will improve connectivity to recreational facilities (including Ngakoroa Reserve and the Drury Sports Complex). This will include the ability for future active mode tie ins to the proposed greenways and recreational corridors anticipated by the Drury-Ōpāheke Structure Plan Blue-Green Network.</p> <p>In addition, the Project will result in a net increase in green infrastructure within the Project area associated with street trees, berm and stormwater plantings and planted stormwater wetlands, resulting in improved visual amenity for road users and adjacent audiences. The future Project landscape planting will provide an opportunity to tie into the proposed vegetated corridors anticipated by the Drury-Ōpāheke Structure Plan Blue-Green Network.</p> <p>The implementation of these positive effects and opportunities is represented in the Urban Landscape and Design Management Plan (conditions 9, 10 and 11). In particular:</p> <p><i>9(d) To achieve the objective, the ULDM(s) shall provide details of how the Project:</i></p> <ul style="list-style-type: none"> <i>(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), landscape character, and open space zones;</i> <i>(ii) provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, and walking and cycling connections;</i> 	<p>Section 6.3.1, Assessment of Landscape and Visual Effects, Version 1, January 2021</p> <p>Section 6.4.3, Assessment of Ecological Effects, Version 1, January 2021</p> <p>Section 9.1, Assessment of Effects on the Environment, Version 1, January 2021</p> <p>Section 4.4, Urban Design Framework and Evaluation, Version 1, January 2021</p>
46	In relation to NoR D2, please provide an assessment detailing its effects on the blue-green network in the Drury-Opaheke Structure Plan and the proposed future delivery of a greenway connection along the Hingaia stream esplanade reserve (NoR D2).	<p>The potential effects of the proposed Jesmond to Waihoehoe Road West FTN Arterial on the blue-green network were assessed as part of the Assessment of Landscape and Visual Effects (section 6.3.1), the Assessment of Ecological Effects (section 6.4.3) and summarised in the Assessment of Effects on the Environment (section 9.1). The Urban Design Framework and Evaluation also made urban design recommendations relating to the blue-green network in section 5.8.</p> <p>In summary, the proposed Jesmond to Waihoehoe Road West FTN Arterial will include the provision of safe active mode facilities that will improve active mode connectivity to recreational facilities (Drury Sports Complex, Drury Domain and open space planned within Auranga Development) and passive open space areas (north of Drury Sports Complex and the esplanade reserves associated with Ngakoroa and Hingaia Streams). This will</p>	<p>Section 7.3.1, Assessment of Landscape and Visual Effects, Version 1, January 2021</p> <p>Section 7.4.3, Assessment of Ecological Effects, Version 1, January 2021</p>

Ref	Request	Response	Relevant Document / Section
		<p>include the ability to tie into the proposed greenways and recreational corridors anticipated by the Drury -Ōpāheke Structure Plan Blue-Green Network.</p> <p>In addition, the Project will result in a net increase in green infrastructure within the Project area associated with street trees, berm and stormwater plantings, resulting in improved visual amenity for road users and adjacent audiences. The future Project landscape planting will provide an opportunity to tie into the proposed vegetated corridors anticipated by the Drury -Ōpāheke Structure Plan Blue-Green Network.</p> <p>The implementation of these positive effects and opportunities is represented in the Urban Landscape and Design Management Plan (conditions 9, 10 and 11). In particular:</p> <p><i>9(c) To achieve the objective, the ULDMP(s) shall provide details of how the Project:</i></p> <ul style="list-style-type: none"> <i>(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), landscape character, and open space zones;</i> <i>(ii) provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, and walking and cycling connections;</i> 	<p>Section 16.1, Assessment of Effects on the Environment, Version 1, January 2021</p> <p>Section 5.8, Urban Design Framework and Evaluation, Version 1, January 2021</p>
47	<p>In relation to NoR D5, please provide an assessment detailing it's effects on access to the proposed Opaheke Park shown in the Bellfield Masterplan and Opaheke park concept plan (included as Appendix 1 to this letter) and how this will be provided for during and after project construction works are completed, particularly in relation to the finished ground levels for the widened Opaheke Road corridor and proposed new bridge over Slippery Creek. For example, how will these finished ground levels affect the feasibility of proposed carpark and pedestrian access links into Opaheke Park from Opaheke Road, as shown on the concept plan? (NoR D5).</p>	<p>The Project will improve active mode connectivity to recreational facilities including the proposed upgrades to Ōpāheke Park and the Ōpāheke Reserve Sports Park. The Project will also include the ability to tie into the proposed greenways and recreational corridors anticipated by the Drury-Ōpāheke Structure Plan Blue-Green Network.</p> <p>The purpose of this Project is to primarily provide improved active mode facilities along the Ōpāheke Road – adjacent to the Ōpāheke Park. This can be achieved through providing a widened berm area (widening is generally to the northern side of the road), and it is anticipated that the existing road levels will remain. There are new active mode bridges proposed for either side of the bridge over Ōtūwairoa (Slippery) Creek which can be graded into the existing levels either side of the bridge. Formation of a new access to Ōpāheke Park as proposed in the concept plan will be maintained, with an upgraded active mode crossing of the access provided. During construction, access will be maintained to the Ōpāheke Park.</p> <p>In summary, there will be minimal impact from on the proposed accessway and car park as shown in the concept plan. The Project will improve access to the park through walking and cycling facilities.</p>	N/A

Appendix B – Further Engagement Details

Response to Request 4.

Engagement with Project partners, stakeholders and affected landowners was considered in the identification of preferred options, design refinement, designation boundaries and assessment of effects on the environment. It was also used to provide sufficient land to undertake the works and undertake any mitigation measures to avoid, remedy and mitigate any potential adverse effects on those parties.

The following sections provide further information to support the information provided in Part C of the Assessment of Effects on the Environment and Appendix A – Assessment of Alternatives and should be read in conjunction with these reports.

Ngā Manawhenua

Feedback received from Manawhenua fed into the identification of preferred alignments. Table 2 below summarises the feedback and project responses.

Table 7: Manawhenua feedback summary

Project	Feedback	Project response
State Highway 22 upgrade	During hui on 30 August 2019, manawhenua suggested widening to the southeast at the northern extent, to avoid the significant ecological area (Ngakoroa Stream) and to then widen to the northwest further south (central part of SH22 options) where it starts to straighten, to reduce stream loss and impact on Ngakoroa Reserve. Manawhenua also identified that the developers of Auranga town centre intend to develop around the artificial wetland so suggested widening to the east in that location.	Manawhenua suggestions were considered and widening was confirmed in line with their feedback. The design did however result in fill slopes extending into the Ngakoroa Reserve. Fill slopes in the northern extent of the reserve are due to the need to raise the approach to the Ngakoroa Stream bridge to achieve required flood levels. Surrounding Great South Road and the southern half of the reserve to MacPherson Road, fill slopes into the reserve are required to provide for road widening and a tie into Great South Road, achieving the required horizontal curvature and reducing superelevation. Impacts were minimised where possible.
Jesmond Road	Feedback from Manawhenua was received at two hui, on 30 August and 3 October 2019. Manawhenua noted the existing streams but that none of them were major enough for waka route. Manawhenua see this as an opportunity for stream enhancement, and to replace culverts with bridges.	Opportunities for stream enhancement and stream works will be explored during detailed design and regional consenting phases.
Bremner Road (Central)	Feedback from manawhenua was received at two hui, on 30 August and 3 October 2019. Manawhenua indicated the Ngakoroa Stream was a major travel route for Maori therefore there is potential for undiscovered	Option B - widen to the south was confirmed as the preferred option, reducing impacts on the coastal marine area. An Assessment of Effects on Historic Heritage was undertaken.

Project	Feedback	Project response
	<p>archaeological remains. A heritage/archaeological investigation was requested to be undertaken. Option B was preferred by manawhenua, to avoid effects on marine significant ecological areas. Reclamation of the coastal marine area is not supported by manawhenua.</p>	
Bremner Road (East)	<p>Feedback from Manawhenua was received at two hui, on 30 August and 3 October 2019. Manawhenua expressed preferences for Option B1, D or D1 due to stormwater constraints and these options having the most direct transport connection. Manawhenua indicated stormwater management was a key concern for the alignment through the floodplain and upstream/downstream effects. Ngati Tamaoho indicated a preference for bridges instead of reclaiming land or culverting, and that stormwater treatment devices should be located outside of the floodplain. Ngati Tamaoho indicated an opportunity for a green corridor to be established underneath the bridge of Option D1.</p>	<p>Manawhenua feedback was considered in determining the preferred option. Feedback on flooding was taken forward to design, constructing a new bridge over Hingaia Stream and removing the Norrie Road Bridge will have a positive impact on flooding effects. Opportunities were noted for future detailed design and regional resource consenting phases.</p>
Waihoehoe Road (West)	<p>Feedback from Manawhenua was received at two hui, on 30 August and 3 October 2019. Manawhenua did not identify a preference of any option. At the second hui, Ngāti Tamaoho expressed their desire for the existing industrial sites that connect / go through the awa to be removed. Te Ākitai Waiohū expressed concern about the potential social impact of a rail station being located on a large number of properties.</p>	<p>The Project team noted no preference for options expressed by Manawhenua. Feedback on industrial properties and rail station were not within the scope of this Project.</p>
Waihoehoe Road (East)	<p>The three options and the emerging preferred option were shared with manawhenua at hui on 20 February 2020. No specific concerns or comments were raised by manawhenua.</p>	<p>Project team noted no concerns and no preference for options expressed by Manawhenua.</p>
Ōpāheke North-South connection	<p>Feedback from Manawhenua was received at two hui, on 30 August and 3 October 2019. Manawhenua did not express an option preference. However, they recommended that bridges should cross the entire floodplain and embankments should be minimised. Their preference was to amend the design to keep embankments out of the floodplain.</p>	<p>The project team noted no preference for options expressed by Manawhenua. For the indicative design it was explained that the bridges have been designed to mitigate flood hazard effects. The Project team also explained that there will be a number of factors that will influence the design of bridges at the detailed design phase. This includes flood hazard effects, cost and regional consenting matters such as ecology</p>

Project	Feedback	Project response
	Manawhenua also noted the desire to avoid kahikatea trees that were known in the area.	as well as input from Manawhenua at this stage. Kahikatea trees have been avoided by the Project.
Ponga Road	The three options and the emerging preferred option was shared with manawhenua at hui on 20 February 2020. No specific concerns or comments were raised by mana whenua about the options. Manawhenua raised an area of interest in the high section of Ponga Road (out of the project area).	Project team noted no concerns and no preference for options expressed by Manawhenua.
Ōpāheke Road (Rural section)	The three options and the emerging preferred option was shared with manawhenua at hui on 20 February 2020. No specific concerns or comments were raised by manawhenua.	Project team noted no concerns and no preference for options expressed by Manawhenua.
Ōpāheke Road (Urban Section) Settlement Road intersection	The options and the emerging preferred option were shared with Manawhenua at hui on 2 July 2020. Manawhenua noted any upgrade to the intersection is a good outcome. They also noted they would prefer to retain any native vegetation.	Project team noted Manawhenua view that any option would be a good outcome. Retention of native vegetation was considered in the assessment of preferred options.

Proposed designation conditions were drafted in collaboration with Manawhenua which require Manawhenua to be invited by Auckland Transport and Waka Kotahi to prepare a Cultural Advisory Report and require a Cultural Monitoring Plan to be prepared for the Projects. These conditions will assist in understanding and identifying Ngā Taonga Tuku Iho ('treasures handed down by our ancestors') affected by the projects, to inform their management and protection, and will identify methods for undertaking cultural monitoring to assist with management of any cultural effects during construction.

KiwiRail

KiwiRail is a Project Partner and the southern rail network forms a key part of the Supporting Growth Indicative Strategic Transport Network. Following engagement with KiwiRail and collaborative work on the wider transport network, the Drury Arterial Network has provided for the future upgrade of the rail corridor, and KiwiRail's interests, including:

- Raising and widening Waihoehoe Road West rail bridge to the north of the existing road corridor to enable suitable clearance and acceptable curve radii for future four tracking of the rail network.
- Providing safe grade separation of Ōpāheke Road and the NIMT for general traffic, pedestrians and cyclists.
- s176 approval is required from KiwiRail for any works within their existing designation
- A Network Utility Management Plan is proposed as a condition on the designations which will be prepared in consultation with KiwiRail.

Heritage New Zealand Pouhere Taonga

Information provided in the AEE sufficiently describes the engagement with HNZPT. The Drury Arterial Network has avoided key scheduled sites of historic heritage and proposes management measures through the proposed Heritage and Archaeology Management Plan(s), Cultural Advisory Report(s), Cultural Monitoring Plan(s) and future HNZPT authorities.

Ministry of Education

Information provided in the AEE sufficiently describes the engagement with the Ministry of Education. NoR D2 largely avoids the future Drury West Primary School site and the preferred alignment for the Jesmond to Bremner Link sought to avoid severing the future MoE site at 281 Jesmond Road. The Crown (MoE) has sold a southern portion of the site to Auckland Council to facilitate the future Jesmond to Bremner Link. The final alignment is expected to adjoin the southern boundary of the school. However, AT has proposed to designate enough land to ensure the road can be constructed in the existing environment, including sufficient space for earthworks and construction area. There are ongoing communications with MoE on the timing and proposed design of both the MoE's and Auckland Transport's respective works.

Department of Conservation (DOC)

Information provided in the AEE sufficiently describes the engagement with DOC.

Fire and Emergency New Zealand

As a result of engagement with FENZ, a site for a proposed fire station was identified by FENZ along the SH22 corridor. Prior to this engagement the Project Team had proposed to designate the site for a construction area. Following engagement, and with ongoing communication with FENZ, the construction area was able to be reduced on the site to make it viable for FENZ proposed use. Ongoing engagement with FENZ is being undertaken by Waka Kotahi to discuss the operational requirements of the site on SH22 (this is outside the scope of this Project).

Network Utilities providers

Information provided in the AEE sufficiently describes the engagement with Network Utility Providers. Effects on network utility providers are managed through the proposed NUMP and that Network Utility Operators with existing infrastructure located within the proposed designation will not require written consent under section 176 of the RMA for those activities identified in the AEE.

Developers

Information provided in the AEE sufficiently describes the engagement with developers that resulted in design refinement.

Landowners and community

Overview of engagement undertaken and key themes raised throughout these phases are provided in Section 5.2.3 of the AEE. The table below expands on the information provided in Section 5.2.3 of the AEE and should be read in conjunction with that section.

Table 8: Landowner and Community feedback summary

Phase	Ref	Key Themes Raised	Project Response
Phase 1: June – July 2019	(a)	Access to properties during and after construction	Access to all existing properties will be maintained during construction and operation of the projects. The management of access during construction is provided for in the CTMP condition 17 ¹⁰ (b)(vi).
	(b)	Loss of amenity/rural lifestyle and change of sense of place	<p>It was acknowledged by the community and landowners that the area is changing and it is understood that most of the land impacted by the Drury Arterial Network has been signalled for urban development and growth by Auckland Council through Future Urban Zoning in the Auckland Unitary Plan, the Drury-Ōpāheke Structure Plan and proposed private plan changes to rezone land. The proposed road upgrades will respond to this growth in a changing environment.</p> <p>Amenity and landscape effects of the Drury Arterial Network have been considered, and any required mitigation proposed (fed into the proposed conditions) in the following assessments lodged to Council:</p> <ul style="list-style-type: none"> • Assessment of Landscape and Visual Effects and conditions proposed under the ULDMP • Assessment of Construction Noise and Vibration Effects and conditions proposed under the CNVMP and Schedules • Assessment of Traffic Noise and Vibration Effects and conditions proposed under the CTMP.
	(c)	Loss of value and ability to sell	Concerned landowners were informed of the Public Works Act 1981 (PWA) and Resource Management Act 1991 (RMA) processes.
	(d)	Site acquisition / land development	Concerned landowners were informed of the PWA processes and ability to develop sites in agreement with the requiring authority through RMA s176 approval processes.
	(e)	Alignment concerns	Alternatives assessment process and outcomes was explained to concerned landowners and reasons for the preferred alignments discussed.
	(f)	Uncertainty and project timing	The Project Team provided project updates and confirmation of the proposed designation boundary once investigations were complete. The Project Team also advised landowners and the community that there is commitment to route protect but there is currently no funding to construct the projects and they would likely occur ten to 20 years in the future.

¹⁰ Conditions 17(b)(vi) for NoR D1, D3, D4 and D5. Condition 18(b)(vi) for NoR D2.

Phase	Ref	Key Themes Raised	Project Response
Phase 2: December 2019			Condition 2 ¹¹ <i>Project Information</i> is proposed which ensures a Project website, or equivalent virtual information source, will be established. The Project website will provide information on the status of the Projects, anticipated construction timeframes and contact details for enquiries.
	(g)	Alignment concerns	See (e) above.
	(h)	Loss of property	Landowners were informed of the PWA processes for acquisition of property or temporary use of land during construction. At detailed design in the future, exact land requirement will be confirmed with the affected landowner at that time. It was also explained that the requiring authority will review the designation boundary after works have been completed. This is provided for in Condition 3 ¹² , Designation Review.
	(i)	Loss of amenity	See (b) above.
	(j)	Timing for construction	See (f) above.
	(k)	Active transport paths as an alternative to cars	The Drury Arterial Network includes active mode facilities on all corridors.
Phase 3: May to June 2020	(l)	Highlighted the existing dangerous environment for active transport and the importance of lowering road speeds	The Drury Arterial Network includes active mode facilities on all corridors. Road speeds will be reduced as the areas are urbanised.
	(m)	property (acquisition/loss of value/access)	See (a), (b), (c), (d) and (h) above.

¹¹ Condition 2 for NoR D2, D3, D4 and D5; Condition 3 for NoR D1.

¹² Condition 3 for NoR D2, D3, D4 and D5; Condition 4 for NoR D1.

Phase	Ref	Key Themes Raised	Project Response
Phase 4: October 2020	(n)	Alignment concerns	See (e) above.
	(o)	impact to property boundaries	See (h) above.
	(p)	Timing of construction	See (f) above.
	(q)	Timing of property acquisition	Property owners were informed of the PWA processes and that the requiring authority would reach out 2-3 years prior to construction to discuss property acquisition. Condition 2 ¹³ <i>Project Information</i> (as noted above in (f)) will keep property owners, and the public, updated on project timing.
	(r)	Ongoing tenure of property	Concerned landowners were informed of the PWA processes, that they were able to continue using their properties as they exist and the ability to develop sites in agreement with the requiring authority through RMA s176 approval processes.
	(s)	property (acquisition/loss of value/access)	See (a), (b), (c), (d) and (h) above.
	(t)	alignment of the proposed intersection	See (e) above.
	(u)	Timing for construction of the project	See (f) above.
(v)	Safety issues with the existing intersection and considered that a roundabout would not improve safety (specifically for NoR D5).	In response, the Project team drafted a memo to the Papakura Local Board to address the concerns and encouraged local board members to share this information with any community members and/or direct any queries to the Project team.	

¹³ Condition 2 for NoR D2, D3, D4 and D5. Condition 3 for NoR D1.

Appendix C –Properties predicted to receive over the 70dB LAeq adopted limit for construction noise before mitigation

NoR D1

Receiver Addresses exceeding 70dB criteria pre-mitigation	Type
14 Burberry Road	Residential
15 Burberry Road	
160 Karaka Road	
18 Burberry Road	
200 Karaka Road	
250 Karaka Road	
332 Karaka Road	
351 Karaka Road	
36 Pitt Road	
370 Karaka Road	
373 Karaka Road	
41 Jesmond Road	
411 Karaka Road	
435 Karaka Road	
462 Karaka Road	
5 Burberry Road	
7 Woodlyn Drive	
73 Mercer Street	
81 Mercer Street	
90 Karaka Road	
26 Mercer Street	
300 Karaka Road	
415 Karaka Road	
60 Mercer Street	
64 Jesmond Road	

NoR D2

Receiver addresses exceeding 70dB criteria pre-mitigation	Type
125 Jesmond Road	Residential
288 Jesmond Road	
101 Waihoehoe Road	
31 Waihoehoe Road	
235 Jesmond Road	
169 Jesmond Road	
201 Jesmond Road	
5 Fitzgerald Road	
97 Waihoehoe Road	
28 Waihoehoe Road	
31 Bremner Road	
71 Waihoehoe Road	
131 Jesmond Road	
256 Jesmond Road	
81 Waihoehoe Road	
45 Waihoehoe Road	
64 Jesmond Road	
7 Fitzgerald Road	
171 Waihoehoe Road	
28 Fitzgerald Road	
14 Cameron Place	
341 Jesmond Road	Commercial
97 Waihoehoe Road	
201 Jesmond Road	
224 Jesmond Road	
236 Great South Road	
222 Great South Road	
11 Bremner Road	
11 Bremner Road	
38 Firth Street	
141 Jesmond Road	
64 Jesmond Road	
38 Bremner Road	
233 Great South Road	
35 Firth Street	
48 Creek Street	
22 Norrie Road	
40 Firth Road	

Receiver addresses exceeding 70dB criteria pre-mitigation	Type
67 Waihoehoe Road	
233 Great South Road	
251 Great South Road	
39 Firth Street	
48 Firth Street	
35 Creek Street	
262 Jesmond Road	
43 Firth Street	
38 Bremner Road	
38 Bremner Road	
16 Norrie Road	
137 Jesmond Road	
38 Bremner Road	
10 Tui Street	
48 Creek Street	
45 Firth Street	
214 Great South Road	

NoR D3

Receiver addresses exceeding 70dB criteria pre-mitigation	Type
168 Waihoehoe Road	Residential
432 Waihoehoe Road	
201 Waihoehoe Road	
185 Waihoehoe Road	
221 Cossey Road	
412 Waihoehoe Road	
171 Waihoehoe Road	
336 Waihoehoe Road	
460 Waihoehoe Road	
26 Fielding Road	
196 Waihoehoe Road	
297 Waihoehoe Road	
10 Appleby Road	
297 Waihoehoe Road	
211 Waihoehoe Road	
319 Waihoehoe Road	

NoR D4

Receiver addresses exceeding 70dB criteria pre-mitigation	Type
105 Walker Road	Residential
115 Walker Road	
201 Sutton Road	
28 Ponga Road	
285 Sutton Road	
36 Ponga Road	
48 Ponga Road	
6 Ponga Road	
68 Ponga Road	
70 Hunua Road	
85 Boundary Road	
141 Boundary Road	
35 Hunua Road	

NoR D5

Receiver addresses exceeding 70dB criteria pre-mitigation	Type
Bellfield Units 10	Residential - Rural
Bellfield Units 11	
Bellfield Units 12	
Bellfield Units 13	
Bellfield Units 14	
Bellfield Units 15	
Bellfield Units 16	
Bellfield Units 17	
Bellfield Units 18	
Bellfield Units 2	
Bellfield Units 3	
Bellfield Units 32	
Bellfield Units 33	
Bellfield Units 4	
Bellfield Units 5	
Bellfield Units 6	
Bellfield Units 7	
Bellfield Units 8	
Bellfield Units 9	
Bellfield Units 97	
Bellfield Units 98	

Receiver addresses exceeding 70dB criteria pre-mitigation	Type	
Bellfield Units 99		
1 Lorelei Place		
106 Opaheke Road		
114 Opaheke Road		
120 Ponga Road		
122 Opaheke Road		
126 Ponga Road		
2 Lorelei Place		
211 Opaheke Road		
215 Ponga Road		
216 Opaheke Road		
231 Opaheke Road		
235 Opaheke Road		
300 Sutton Road		
4 Lorelei Place		
61 Ponga Road		
70 Ponga Road		
74 Ponga Road		
86 Opaheke Road		
88 Opaheke Road		
93 Opaheke Road		
95 Opaheke Road		
97 Opaheke Road		
Bellfield Units 34		
1/15 Settlement Road		Residential - Urban
2/15 Settlement Road		
1 /21 Opaheke Road		
1-4/19 Opaheke Road		
1/17 Settlement Road		
20 Opaheke Road		
20 A Opaheke Road		
2/14 Alexander Street		
3/14 Alexander Street		
16 B Alexander Street		
21 Settlement Road		
1/23 Settlement Road		
2/23 Settlement Road		
25 Settlement Road		
19 King Edward Avenue		

Receiver addresses exceeding 70dB criteria pre-mitigation	Type
1/17 King Edward Road	
3 /16 Settlement Road	
2/14 Settlement Road	
1/16 Settlement Road	
2 /16 Settlement Road	
1/14 Settlement road	
17 Korakora Lane	
19 Korakora Lane	
154 Ponga Road	
174 Ponga Road	

Appendix D – Properties exceeding construction vibration amenity criteria of DIN 4150 before mitigation

NoR D1

Receiver Address Exceeding Amenity criteria pre-mitigation	Type
160 Karaka Road	Residential
200 Karaka Road	
329 Karaka Road	
335 Karaka Road	
351 Karaka Road	
370 Karaka Road	
435 Karaka Road	
462 Karaka Road	
5 Burberry Road	

NoR D2

Receiver Address Exceeding Amenity criteria pre-mitigation	Type
201 Jesmond Road	Historic/Sensitive
9 Cameron Place	
101 Waihoehoe Road	Residential
125 Jesmond Road	
131 Jesmond Road	
144 Bremner Road	
169 Jesmond Road	
235 Jesmond Road	
28 Waihoehoe Road	
281 Jesmond Road	
288 Jesmond Road	
3 Fitzgerald Road	
31 Bremner Road	
31 Waihoehoe Road	
5 Fitzgerald Road	
71 Waihoehoe Road	
8 Flanagan Road	
97 Waihoehoe Road	
37 Bremner Road	
256 Jesmond Road	
11 Bremner Road	Commercial
110 Karaka Road	

Receiver Address Exceeding Amenity criteria pre-mitigation	Type
141 Jesmond Road	
16 Norrie Road	
22 Norrie Road	
222 Great South Road	
233 Great South Road	
236 Great South Road	
251 Great South Road	
262 Jesmond Road	
35 Creek Street	
35 Firth Street	
38 Bremner Road	
38 Firth Street	
39 Firth Street	
48 Creek Street	
48 Firth Street	
5 Bremner Road	
64 Jesmond Road	
67 Waihoehoe Road	
14 Bremner Road	
15 Bremner Road	
16 Bremner Road	
17 Bremner Road	
223 Great South Road	
40 Firth Street	

NoR D3

Receiver Address exceeding amenity criteria pre-mitigation	Type
168 Waihoehoe Road	Residential
196 Waihoehoe Road	
201 Waihoehoe Road	
221 Cossey Road	
251 Waihoehoe Road	
31 Appleby Road	
336 Waihoehoe Road	
412 Waihoehoe Road	
432 Waihoehoe Road	
185 Waihoehoe Road	
	Commercial

NoR D4

Receiver Address Exceeding Amenity criteria pre-mitigation	Type
105 Walker Road	Residential
115 Walker Road	
201 Sutton Road	
28 Ponga Road	
36 Ponga Road	
48 Ponga Road	
6 Ponga Road	
68 Ponga Road	
70 Hunua Road	
85 Boundary Road	
9 Ponga Road	
128 Waihoehoe Road	
141 Boundary Road	

NoR D5

Receiver Address Exceeding Amenity criteria pre-mitigation	Type
154 Ponga Road	Commercial
223 Opaheke Road	
31 Ponga Road	
9 Ponga Road	
74A-D Opaheke Road	Residential
78A-D Opaheke Road	
Bellfield Units 1	
Bellfield Units 10	
Bellfield Units 11	
Bellfield Units 12	
Bellfield Units 13	
Bellfield Units 14	
Bellfield Units 15	
Bellfield Units 16	
Bellfield Units 17	
Bellfield Units 18	
Bellfield Units 2	
Bellfield Units 3	
Bellfield Units 32	
Bellfield Units 33	
Bellfield Units 4	

Receiver Address Exceeding Amenity criteria pre-mitigation	Type
Bellfield Units 5	
Bellfield Units 6	
Bellfield Units 7	
Bellfield Units 8	
Bellfield Units 9	
Bellfield Units 97	
Bellfield Units 98	
Bellfield Units 99	
1 /12 Alexander Street	
1 Lorelei Place	
1/14 Settlement road	
1/15 Settlement Road	
1/16 Settlement Road	
1/17 King Edward Road	
1/17 Settlement Road	
1/21 Opaheke Road	
1/23 Settlement Road	
114 Opaheke Road	
117 Ponga Road	
120 Ponga Road	
122 Opaheke Road	
126 Ponga Road	
1-4/19 Opaheke Road	
145 Ponga Road	
15 Korakora Lane	
17 Korakora Lane	
174 Ponga Road	
18-24 Tautaiiao Lane	
19 King Edward Avenue	
19 Korakora Lane	
2 Lorelei Place	
2/14 Alexander Street	
2/14 Settlement Road	
2/16 Settlement Road	
2/21 King Edward Avenue	
2/23 Settlement Road	
2/82 Opaheke Road	
20 A Opaheke Road	
20 Opaheke Road	
21 Settlement Road	

Receiver Address Exceeding Amenity criteria pre-mitigation	Type
211 Opaheke Road	
216 Opaheke Road	
235 Opaheke Road	
25 Settlement Road	
28 Ponga Road	
3/14 Alexander Street	
3/16 Settlement Road	
48 Ponga Road	
70 Ponga Road	
72 Opaheke Road	
74 Ponga Road	
80 Opaheke Road	
81 Opaheke Road	
88 Opaheke Road	
93 Opaheke Road	
95 Opaheke Road	
97 Opaheke Road	

25 June 2021

Helen Hicks
Supporting Growth Alliance
Level 9, 203 Queen Street,
Auckland

Issued via email: helen.hicks@supportinggrowth.nz

Dear Helen,

Request for further information in accordance with section 92 of the Resource Management Act 1991

Notices of requirement: Drury Arterial Network:

- Project D1: Alteration to Designation 6707 – State Highway 22 Upgrade (NZTA)
- Project D2: Jesmond to Waihoehoe West FTN Upgrade (Auckland Transport)
- Project D3: Waihoehoe Road East Upgrade (Auckland Transport)
- Project D4: Ōpāheke North-South FTN Arterial (Auckland Transport)
- Project D5: Ponga Road and Ōpāheke Road Upgrade (Auckland Transport)

We are writing with respect to the notices of requirement described above.

After completing a preliminary assessment of matters raised in submissions received on the notices of requirement, we consider that further information is required to adequately assess the proposals environmental effects and the mitigation of adverse effects (including specific adverse effects raised by submitters in relation to land affected by the projects).

The information requested below will also enable the council to undertake a full and proper assessment of the notices of requirement and provide recommendations on each project.

Under section 92 of the Resource Management Act 1991 (RMA), we request the following further information:

(1) Planning and general matters

1. With reference to the lodged indicative design drawings, please provide further information which explains why the spatial extent of designations proposed for the NoR projects extend beyond construction areas adjoining the designated road corridors, noting that this resulted in a number of properties for each NoR project having significant portions of land coming within the proposed designation boundaries, including existing vehicle accessways which these properties are dependent on to access the surrounding road network (**Project-wide**).

Explanation:

Upon reviewing the lodged indicative design drawings, submissions received on the NoR projects have raised this as a specific matter of concern which submitters and the council are seeking further information on before hearings commence.

2. Please identify the 'key destinations' in Drury East which the NOR D3 project seeks to improve connectivity between, as referenced in the reasons provided in the lodged documents for the proposed project works being reasonably necessary to achieve it's stated objectives (**NoR D3**).

Explanation:

Submission 09 received on the NoR D3 project has requested this information, and upon reviewing the lodged project documents, there is no explanation provided which identifies these key destinations. Consequently, both the submitter and the council are seeking further information on this before hearings commence to adequately assess the reasons provided in the lodged documents for the proposed project works being reasonably necessary to achieve it's stated objectives.

(2) Transport

3. Please detail mitigation methods/measures for addressing vehicle access restrictions proposed by each NoR project upon implementation and how these methods/measures will be applied to sites affected by these restrictions which either adjoin or come within the proposed designation boundaries, including existing vehicle accessways (**Project-wide**).

Explanation:

Submissions received on the NoR projects have raised proposed vehicle access restrictions as a specific matter of concern which submitters and the council are seeking further information on before hearings commence.

4. Please detail methods/measures for mitigating adverse effects on the physical state and use of existing vehicle accessways and on-site parking during and after the completion of construction works for each NoR project (**Project-wide**).

Explanation:

Submissions received on the NoR projects have raised this as a specific matter of concern which submitters and the council are seeking further information on before hearings commence.

4. With reference to the lodged indicative design drawings, please detail mitigation methods/measures for ensuring existing and future vehicle access is still feasible from sites adjoining the new and upgraded roads proposed by the NoR projects, particularly where the drawings indicate large changes in relative levels between the roads and adjoining sites, as shown by the longitudinal cross-sections which indicate steep slopes up to a 1 in 3 gradient along certain road sections (**Project-wide**).

Explanation:

Submissions received on the NoR projects have raised concerns regarding adverse effects on existing and future vehicle accessways to sites adjoining the boundaries of designations proposed for each NoR project. Consequently, further information is sought on how these concerns will be addressed before hearings commence.

5. Please explain how pedestrian and/or cyclist connectivity across the proposed road corridors will be achieved for each NoR project, and whether conditions are required (such as within the Urban Design and Landscape Management Plan) to ensure that crossing opportunities are provided where adjacent land development identifies pedestrian/cycling desire lines (**Project-wide**).

Explanation:

Submissions received on all of the NoR projects from Kāinga Ora Homes and Communities seek further information regarding how suitable pedestrian and/or cyclist

access across the proposed and upgraded arterials will be achieved for each NoR project to avoid severance effects between land on either side of the arterial routes, and this is a matter which the council also seeks further information on for the aforementioned reasons.

6. With respect to the Stakeholder and Communication Management Plan condition proposed for each NoR project, please detail how direct and ongoing engagement between affected landowners and the requiring authorities will be enabled during project construction works to manage localised effects (**Project-wide**).

Explanation:

Submission 25 from the Ministry of Education submission on the NoR D2 project has sought confirmation from the requiring authorities that further engagement will occur during project construction works to manage localised traffic effects, and this is a matter which the council also seeks confirmation on for all of the NoR projects, including where these effects restrict vehicle access to affected properties.

7. As it is predicted in lodged application documents that NoR D2 and D3 projects will be implemented by 2028, please confirm whether any material changes would be required to the NoRs transport effects assessment if the Mill Road corridor project was not implemented by 2028, noting that the assessment identifies project construction works likely starting in late 2022 and being completed in stages between 2025 to 2030, which will no longer be the case given the project's deferment resulting from recently announced changes to the New Zealand Upgrade Programme (NZUP) (although no deferment date was provided, the NZUP factsheet for South Auckland projects made publicly available following the government's announcement includes a projects timeline up to 2026 which does not include the Mill Road corridor project, and it is therefore assumed that any future implementation will not occur before 2028) (**NoR D2 and D3**).

Explanation:

Submissions received on the NoRs have sought further clarification regarding the relationship between the proposed road upgrades and the Mill Road corridor project.

The AEE lodged in support of the NoR D2 and D3 proposals confirms that the Mill Road corridor project (identified as a funded project in the AEE) formed part of the likely future environment against which the proposals were assessed. Given that the project is now unlikely to form part of the likely future environment when the NoR proposals are implemented, further information is sought in relation to whether this would materially change the transport effects assessment submitted in support of the NoR proposals.

8. In the likely scenario that the arterial road proposed by the NoR D3 project is implemented prior to any future implementation of the Mill Road corridor project, please confirm and provide supporting information (where applicable) that:
 - (a) the functional intent of NoR D3 "...to provide strategic east-west connectivity between the strategic north-south corridors...", including Mill Road, will remain unaffected, with NoR D3 also being identified in lodged application documents as "... a critical east-west walking and cycling connection to the proposed Mill Road corridor for longer inter-regional routes..."; and
 - (b) the intersection with Drury Hills Road will not need to be upgraded and that the proposed designation and/or existing legal road boundaries would be sufficient to accommodate anticipated traffic volumes under this scenario (**NoR D3**).

Explanation:

Submissions received on the NoR have sought further clarification regarding the relationship between the proposed upgrading of Waihoehoe Road and the Mill Road corridor project. In seeking this clarification, submissions have also raised design concerns regarding the intersection between Drury Hills Road and Waihoehoe Road, particularly in relation to the adequacy of the proposed designation boundaries around this intersection and its relationship with any future implementation of the Mill Road corridor project.

9. Regarding the change in access to Tui Street, from its current arrangement allowing all directions access from Waihoehoe Road to a realigned intersection with Great South Road that is restricted to left turns in and left turns out:
- (a) please provide a road safety audit which assesses potential safety effects in relation to:
 - a. the intersection of Great South Road and Tui Street; and
 - b. inbound trips to Tui Street approaching from the south and outbound trips from Tui Street leaving towards the north, including the potential for U-turn manoeuvres occurring on Great South Road or Waihoehoe Road, and whether these can occur safely.
 - (b) please detail methods/measures to mitigate the proposed vehicle access restrictions on:
 - i. recreational users of Drury Domain and adjoining community facilities, including the existing clubroom facilities used by the Drury and Districts Rugby Football and Recreation Club; and
 - ii. Parks contractors responsible for the maintenance of Drury Domain;
 - (c) please detail methods/measures to mitigate the loss of access to the Drury Domain from Tui Street during construction works for the NoR D2 project, including the provision of multi-modal temporary access to Drury Domain and the availability of adjoining temporary parking spaces if existing parking is not available during construction works (**NoR D2**).

Explanation:

Submissions received on NoR D2, such as submission 18 from the Drury and Districts Rugby Football and Recreation Club, have raised concerns regarding the project's adverse effects on existing access to Tui Street, with submitters and the council seeking further information on how these effects on affected public and private land will be addressed before hearings commence.

10. Please detail mitigation methods/measures for addressing vehicle access restrictions and detours proposed during construction works for the Bremner Road frequent transit network (FTN) project, including the temporary closure of a section of State Highway 1 resulting in the detour of traffic to Great South Road (**NoR D2**).

Explanation:

Submissions received on NoR D2 have raised proposed vehicle access restrictions as a specific matter of concern which submitters are seeking further information on before hearings commence. In relation to the proposed temporary closure of a section of State Highway 1 during construction works for the Bremner Road FTN project, it is noted that the transport assessment lodged in support of the NoR D2 project identified the proposed Mill Road corridor as providing an alternative detour route for traffic during the closure of State Highway 1 to reduce detour traffic on Great South Road, although it is now unlikely that the Mill Road corridor will be in place when construction works commence on the Bremner Road FTN project (refer to item 7. above for further information on this likely scenario).

11. Regarding the change in relative levels between the upgraded Ōpāheke Road carriageway proposed by the NoR 5 project and adjoining sites in proximity to the proposed rail overbridge (shown in indicative design drawings lodged for the project), please detail mitigation methods/measures for ensuring vehicle access is still feasible from these sites, including the property at 174 Ōpāheke Road and Ōpāheke Reserve which would likely require alternative vehicle access being provided from Ōpāheke Road.

In relation to Ōpāheke Reserve, the Council's Parks Planning department have requested further details regarding how full and functional recreational vehicle access to Ōpāheke Reserve will be maintained during construction and operation of the upgraded Ōpāheke Road carriageway (including pedestrian and cycle access), and if this cannot be achieved, then an assessment detailing the effects of access restrictions on community and recreational use of Ōpāheke Reserve is requested, including the duration and timing of construction works, consequential access restrictions (including any restrictions on

vehicles turning right) and methods/measures to mitigate these effects if required (**NoR D5**).

Explanation:

Submissions received on NoR D5 have raised concerns regarding the project's adverse effects on existing access and vehicle accessways to properties adjoining the proposed designation boundaries which encompasses upgrades to Ōpāheke Road, particularly in proximity to the proposed rail overbridge. Consequently, submitters and the council are seeking further information on how these effects on affected public and private land will be addressed before hearings commence, noting that some of the affected properties are subject to existing constraints, such as floodplains, which limit options for providing alternative vehicles accessways during and after the completion of construction works for the NoR D5 project (raised as a specific matter of concern by submission 06 received from owner of 174 Opaheke Road).

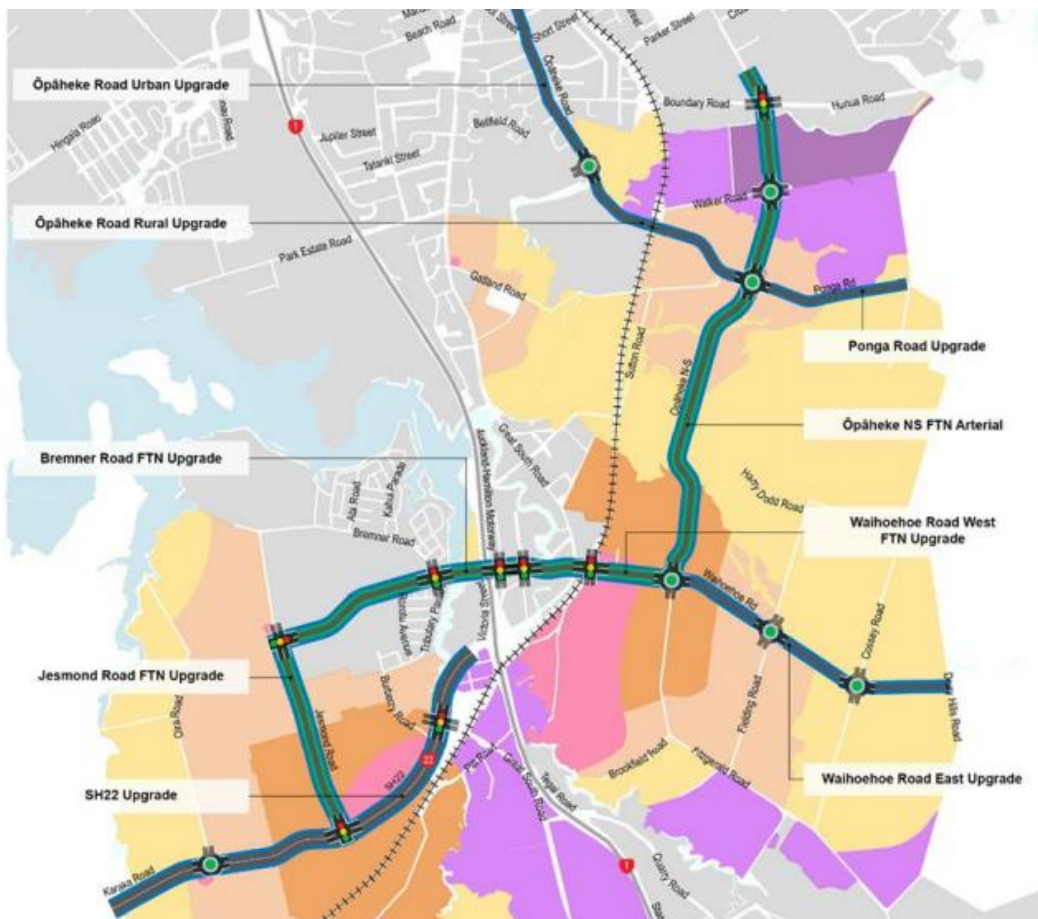
12. Please provide further details regarding how the proposed roundabout at the intersection between Opaheke Road and Otuwairoa Esplanade will provide for safe and efficient vehicle movements to and from the neighbourhood centre adjoining this intersection (**NoR D5**).

Explanation:

Submission 09 received on NoR D5 from the affected landowner have raised this as a specific matter of concern which the submitter and the council are seeking further information on before hearings commence.

(3) Urban design/landscape and visual effects

13. Please provide further analysis of the interface between the designation boundaries proposed for each NoR project and adjacent indicative land use zoning signalled by the Drury-Ōpāheke Structure Plan (as shown in figure 2-3 of the lodged AEE and provided below), including how this interface will achieve an efficient land-use pattern and positive urban interface with future sites adjoining the proposed and upgraded arterial route corridors (**Project-wide**).



Explanation:

Submissions received on the NoR projects have raised this as a specific matter of concern which submitters are seeking further information on before hearings commence, particularly in relation to urban development adjoining the proposed designation boundaries preceding implementation of the NoR projects. For example, the submissions from Kāinga Ora on the NoR projects have noted that the Auckland Unitary Plan's definition of 'front yard' includes the area along the full length of a front boundary of a site that is between a line parallel to that front boundary, restriction or designation. Consequently, application of the Auckland Unitary Plan's front yard building setback standards to urban development preceding implementation of the NoR projects would be from the proposed designation boundaries, and this may result in undesirable urban design outcomes where these boundaries encompass land which is not required for construction purposes (note that the NoR projects designation review conditions refers to surplus designated land as not being required for operational, maintenance or mitigation purposes following implementation of the NoR projects).

14. Please provide further analysis to identify the implications of batter slopes within the designation corridors on achieving suitable urban interfaces with adjacent land (**Project-wide**).

Explanation:

The designation boundaries proposed by the NoR projects pass through land with some topographical undulations which will consequently require cut and fill with batter slopes to tie into the surrounding landform. The Urban Design Framework and Evaluation report (UDFE) lodged in support of the NoR projects does not make any reference to the constraints batter slopes will place on achieving suitable urban interfaces between adjacent sites and the proposed and upgraded arterial route corridors, and this is a matter of concern which the Council and submissions received on the NoR projects are seeking further information on before hearings commence.

15. As the lodged UDFE does not address this matter, please provide further analysis on whether roundabouts are an appropriate intersection treatment in terms of achieving positive urban form and pedestrian amenity outcomes, particularly where they will adjoin high density residential and business centre areas, as anticipated by the Drury-Ōpāheke Structure Plan (refer to figure 2-3 of the lodged AEE provided within preceding item 12 which indicates the locations of proposed roundabout intersections for each NoR project) (**Project-wide**).

Explanation:

Several submissions from Drury landowners on the NoR projects have raised concerns regarding the use of multi-lane roundabouts at intersections, and instead seek signalised intersections. The indicative design drawings for each NoR project extensively use roundabouts at intersections and the proposed designation boundaries reflects this intersection design typology. Despite this, the lodged UDFE does not provide a comparative analysis between roundabouts and signalised intersections and their associated urban form and pedestrian amenity outcomes where they adjoin high density residential and business centre areas anticipated by the Drury-Ōpāheke Structure Plan. Consequently, further information is sought on these matters before the hearings commence.

(4) Noise and vibration

(5) Archaeology and heritage (built and historic)

16. In relation to the Commissariat Redoubt and Runciman Homestead, please explain the methodology underpinning the values/significance assessment for all historic places within the proposed designation (p.16 Drury Arterial Network Assessment of Effects on Historic Heritage) and consider revising this assessment to be consistent with the Auckland Unitary Plan Regional Policy Statement criteria for identifying and evaluating historic heritage places (B5.2.2) (**NoR D2**).

Explanation:

The values/significant assessment undertaken in the Assessment of Effects on Historic Heritage appears to be inconsistent with the AUP RPS Historic Heritage Criteria. It appears that this has resulted from a misreading of the 'Methodology and guidance for evaluating Auckland's historic heritage' (Auckland Council, August 2020).

Specifically:

- the inclusion and exclusion indicators have been treated as criteria. They are not criteria. The criteria are set out in the PAUP historic heritage RPS;*
- some indicators have been applied to places for which they are not relevant and,*
- guidance regarding intangible heritage values has not been followed.*

17. Please consider revising the assessment of the Commissariat Redoubt to acknowledge the likely presence of archaeological features beyond the defensive perimeter (**NoR D2**).

Explanation:

The extent of the Commissariat redoubt site is treated in the report as being the defensive perimeter. 3 Redoubts were typically built as a defensive refuge and were surround by campsites, ablution facilities, rubbish disposal areas and the sites of other activities (including in this case wharves). Therefore, the place extent of the redoubt site should be regarded as significantly larger .

18. Please explain whether any mitigation measures are warranted for the building at 6 Flanagan Road, Drury (**NoR D2**).

Explanation:

An additional property of interest within the proposed extent of NoR D2 is a California bungalow at 6 Flanagan Road, Drury. This building was identified in the preliminary study list for the Drury-Ōpāheke Structure Plan (but not added to the Cultural Heritage Inventory) but was not assessed in the Assessment of Effects on Historic Heritage. It appears to be a reasonably intact bungalow retaining features such as its chimney, window hoods, casement, and semi-circle bay windows. It is a reasonably good representative example of its type locally.

(6) Parks Planning

19. Please provide an assessment of specific locations where the project will interact with the Drury-Ōpāheke Structure Plan blue-green network to demonstrate how the intent of this network will be given effect to (**NoRs D1 and D2**).

Explanation:

The section 92 response dated 7 April 2021 does not provide the requested assessment of effects upon the blue-green network identified in the Drury-Ōpāheke Structure Plan. Such an assessment is expected to include identification of where the blue-green network is located with respect to the NOR and explanation of how the NOR is consistent (or not) with the locations and outcomes expected.

For parts D1 and D2, the s92 response describes the Assessment Landscape and Visual Effects ('ALVE') report as an assessment of the NOR on the blue-green network. An assessment is not apparent in this document. In section 6.3.1 Positive Effects of the ALVE, the report only provides high level comments:

"Improved and/or new opportunities for active modes of transport and the ability to provide improved connectivity to Ngakoroa Reserve and the Drury Sports Complex. Also, the ability to tie into the proposed Greenways and recreational corridors anticipated by the Drury -Ōpāheke Structure Plan, Blue-Green Network;"

(7) Stormwater and flooding

20. Please explain to what extent NoR D1 enables stormwater infrastructure to be integrated with development occurring on Future Urban zoned land to the north, with particular reference to development enabled by Plan Changes 51 (Drury West) and 61 (Waipupuke) **(NoR D1)**.

Explanation:

Submissions on NoR D1 from landowners in Drury West (submission 9 from Jenny Joyce and submission 11 from Karaka and Drury Limited) seek that the SH22 upgrade integrate with surrounding development in terms of management of stormwater. Healthy Waters consider it to be an effective use of infrastructure to direct overland flows and flood flows from Auranga B2 (PC51) to be conveyed to Ngakaroa Stream through the SH22 corridor. We seek to understand whether integrated stormwater management has been considered by SGA and Waka Kotahi when determining the spatial extent of the designation for NoR D1.

21. Please clarify the meaning of “existing authorised habitable floors” in relation to proposed Flood Hazard conditions (reference example NoR D1 Condition 12(a)(i)) **(Project-wide)** .

Explanation:

Submission 9 on NoR D1 (para 3.12) notes that Condition 12 to NoR D1 requires flood risks to be managed on existing authorised habitable floors”, but does not define the term ‘existing’. It is therefore unclear whether ‘existing’ refers to when the NoR is confirmed, or at the outline plan of works stage.

Advice note: *It would be helpful for all parties (applicants, submitters, council and future landowners) to note from what date ‘existing authorised habitable floor levels’ apply within the conditions. It is recommended that this apply from the date of designation lodgement, and for this date to be accompanied by a map of the existing properties/habitable floors.*

22. Please explain whether the bridge over the no name stream at 341 Jesmond Road is high enough for the flood level, and whether conditions specific conditions are required in order to ensure that flooding effects appropriately avoided, remedied or mitigated. **(NoR D2 / Project-wide)**.

Explanation:

Submissions 17 on NoR D2 from Elly Pan raises concerns that the preliminary design of the bridge crossing of the no name stream at 341 Jesmond Road anticipate an increase in the upstream floodwater depth of approximately 500mm. Healthy Waters are concerned that the bridge elevation might not be sufficient to provide clearance over flood levels, and therefore operational issues on the use of the road may arise.

Advice note *A condition similar to “no significant increase in risk to the operation or structural integrity of infrastructure in a 1% AEP event” could be an appropriate way to ensure that the bridge (and other bridges within the project) are designed to have sufficient clearance over the flood level.*

(8) Ecology

23. Please provide further details demonstrating how the NoR D4 project is not contrary to the National Policy Statement for Freshwater Management (NPSFM), particularly in relation to avoiding adverse effects on existing wetland areas within the properties at 76A and 116 Waihoehoe Road which qualify for protection under the NPSFM **(NoR D4)**.

Explanation:

Submissions 02 and 07 on NoR D4 from the landowner and prospective developer of the properties at 76A and 116 Waihoehoe Road in Drury West have raised this as a specific matter of concern which the submitters and the council are seeking further information on before hearings commence.

The above information must be provided within fifteen (15) working days from the date of this letter unless you advise Council in writing that:

- a) you agree to provide the information but cannot do so within fifteen working days, or
- b) you refuse to provide the information.

If you agree to provide the requested information but cannot do so within 15 working days Council may accept any suggested alternative date or may set any other “reasonable” date by which the information is to be provided, in accordance with s92A(2).

These provisions are in accordance with sections 92, 92A, and 95C of the Resource Management Act 1991 as amended by the Resource Management (Simplifying and Streamlining) Amendment Act 2009.

In accordance with section 357A of the Resource Management Act 1991 you may object, within fifteen (15) working days from the date of this letter, to this request for further information. On receiving an objection in writing, the Council shall hear the objection and may uphold the objection wholly or partly.

If you have any queries regarding the above, please contact Nicholas Lau on 021 897 429 | nicholas.lau@aucklandcouncil.govt.nz, or Sanjay Bangs at 021 619 327 | Sanjay.bangs@aucklandcouncil.govt.nz.

Yours sincerely,

Insert signature



Nicholas Lau,
Senior Policy Planner, Central and South
Planning



Sanjay Bangs,
Senior Policy Planner, Central and South
Planning

Initial Response to Auckland Council Draft s92 dated 25 June 2021 (noting this is not a formal request by Council)

#	Request	Response
Planning and General Matters		
1	<p>With reference to the lodged indicative design drawings, please provide further information which explains why the spatial extent of designations proposed for the NoR projects extend beyond construction areas adjoining the designated road corridors, noting that this resulted in a number of properties for each NoR project having significant portions of land coming within the proposed designation boundaries, including existing vehicle accessways which these properties are dependent on to access the surrounding road network (Project-wide).</p>	<p>The proposed designation boundaries are informed by:</p> <ul style="list-style-type: none"> • areas required for the operation and maintenance acknowledging that where appropriate the proposed corridor provides for a level of design flexibility required to facilitate detailed design of the project in the future (permanent land requirement) of the projects; • areas required for the construction (temporary use) of the projects; • areas required to mitigate potential effects; • property access requirements; and • property acquisition and residual land consideration <p>These items are discussed briefly below:</p> <p><u>Operation and maintenance of the projects:</u></p> <p>Based on indicative design in the existing topography.</p> <p><u>Construction of the projects:</u></p> <p>See section 4.4 of the AEE which covers the indicative construction methodology and the typical areas required for these activities (in particular section 4.4.8), which have informed the proposed designation boundaries, including:</p> <ul style="list-style-type: none"> • Site establishment activities including site facilities, site clearance (including to allow for building demolition – this is particularly relevant for dwellings surrounding proposed intersections), sediment control, traffic management and access (including haul roads). • Network utility works • Bridge, culvert and stream works (including bridge staging areas, working room at each end of culverts) • Earthworks <p>Additionally, sections 6.4, 13.4, 20.4, 27.4 and 34.4 (for each NoR, respectively) provide a more detailed overview of construction requirements for each NoR including (but not limited to) the location of indicative site compound and</p>

		<p>laydown areas, location of sediment controls including sediment retention ponds, construction access, and the location of bridge staging areas and compounds. These sections of the AEE provide more detail to that shown on the indicative design drawings.</p> <p><u>Areas required to mitigate effects:</u></p> <p>Includes some stormwater infrastructure such as diversion drains and stormwater wetlands (these are also required for the operation of the projects). Temporary sediment retention ponds for erosion and sediment control measures have also been identified within construction areas. Where appropriate, some additional land has been designated adjacent to streams where this is necessary to provide areas for future ecological mitigation.</p> <p><u>Property access requirements:</u></p> <p>Existing accessways (driveways) that are affected by the projects have been assessed based on the indicative design so that access can be maintained. This includes where the level of the new or upgraded road is proposed to change and where regrading (shaping of the driveway) is likely required to tie into the road. These driveways have been included in the proposed designation boundary and the details will be confirmed at detailed design.</p> <p><u>Property acquisition and residual land consideration:</u></p> <p>Where the indicative design affects or is very close to an existing dwelling (as is the case for some of the proposed roundabouts on existing roads) the dwelling has generally been included in the proposed designation. In some instances, where there has been a small area of residual land left over within the land parcel required for the project works, this residual/severed land has been included in the designation boundary as under the Public Works Act, the full property would likely need to be acquired from the land owner so as not to leave them with that severed/unusable land. Closer to the time of construction, the requiring authority will discuss the extent of land acquisition with property owners (under the Public Works Act).</p>
2	<p>Please identify the 'key destinations' in Drury East which the NOR D3 project seeks to improve connectivity between, as referenced in the reasons provided in the lodged documents for the proposed project works being reasonably necessary to achieve its stated objectives (NoR D3).</p>	<p>The Waihoehoe Road East Upgrade will connect urban development in the Future Urban Zone adjoining the corridor to key destinations in Drury east including:</p> <ul style="list-style-type: none"> • Proposed Drury Central Train Station • Proposed Frequent Transit Network (on Waihoehoe Road west and Ōpāheke North South) • The existing Drury Village and business area • The proposed Drury town centre

		<ul style="list-style-type: none"> • Drury Domain • Potential new parks developed in the future by developers or Auckland Council and any neighbourhood centres.
Transport		
3	<p>Please detail mitigation methods/measures for addressing vehicle access restrictions proposed by each NoR project upon implementation and how these methods/measures will be applied to sites affected by these restrictions which either adjoin or come within the proposed designation boundaries, including existing vehicle accessways (Project-wide).</p>	<p>As the Drury Arterial Network is at the route protection stage, detailed design has not yet occurred, including detail regarding how individual vehicle access restrictions will be mitigated. This should be assessed at the time of implementation of the projects, based on what vehicle accessways exist at the time and the movements required to operate both the transport corridors and property access safely and efficiently.</p> <p>We consider that this matter would be better addressed via an outcome-based condition which we will consider as a team and report back to Council. We would like to discuss potential condition wording at a meeting with Auckland Council Transport and Planning specialists.</p>
4	<p>With reference to the lodged indicative design drawings, please detail mitigation methods/measures for ensuring existing and future vehicle access is still feasible from sites adjoining the new and upgraded roads proposed by the NoR projects, particularly where the drawings indicate large changes in relative levels between the roads and adjoining sites, as shown by the longitudinal cross-sections which indicate steep slopes up to a 1 in 3 gradient along certain road sections (Project-wide).</p>	<p>As mentioned in query 1, existing accessways have been assessed and included in the designation where works are required to tie the driveway into an upgraded or new transport corridor. Future accessways from development will generally not be routed to the arterials – unless specifically approved by Auckland Transport or Waka Kotahi. Within new development areas, there will be no direct driveway access on to the arterials. Local or collector roads will be constructed by developers to provide access, which is standard practise.</p> <p>The 1:3 design provides a practicable and stable slope that meets the relevant standards and minimises the impact on the property and the environment. A 1:3 slope is walkable. Flatter slopes could have a greater effect on the existing terrain in terms of additional land requirement. This is because a 1:3 slope only impacts 3m of land for every 1m climb/fall of the land whereas something flatter e.g. a 1:8 slope, will affect 8m for every 1m climb/fall of the land.</p>
5	<p>Please explain how pedestrian and/or cyclist connectivity across the proposed road corridors will be achieved for each NoR project, and whether conditions are required (such as within the Urban Design and Landscape Management Plan) to ensure that crossing opportunities are provided where adjacent land development identifies pedestrian/cycling desire lines (Project-wide).</p>	<p>The Urban Landscape and Design Management Plan (for each NoR) specifically identifies how walking and cycling will be provided.</p> <p>For NoR D1 see proposed condition 9(d)(ii).</p> <p>For NoRs D2 to D5 see proposed condition 9(c)(ii).</p>

6	<p>With respect to the Stakeholder and Communication Management Plan condition proposed for each NoR project, please detail how direct and ongoing engagement between affected landowners and the requiring authorities will be enabled during project construction works to manage localised effects (Project-wide).</p>	<p>Condition 14(b) identifies the objective of the SCMP “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”. In addition, the CTMP condition requires the inclusion of methods to communicate traffic management measures to affected road users (e.g. residents/ public/ stakeholders/ emergency services). The CNVMP condition requires procedures for communication and engagement with nearby residents and stakeholders.</p> <p>The SCMP condition can be further discussed with Council in terms of how the conditions are proposed to provide for the matters identified and/or whether amendments to the condition may be appropriate.</p>
7	<p>As it is predicted in lodged application documents that NoR D2 and D3 projects will be implemented by 2028, please confirm whether any material changes would be required to the NoRs transport effects assessment if the Mill Road corridor project was not implemented by 2028, noting that the assessment identifies project construction works likely starting in late 2022 and being completed in stages between 2025 to 2030, which will no longer be the case given the project’s deferment resulting from recently announced changes to the New Zealand Upgrade Programme (NZUP) (although no deferment date was provided, the NZUP factsheet for South Auckland projects made publicly available following the government’s announcement includes a projects timeline up to 2026 which does not include the Mill Road corridor project, and it is therefore assumed that any future implementation will not occur before 2028) (NoR D2 and D3).</p>	<p>No material changes are required to the transport effects assessment for the NoRs.</p> <p>Despite funding for the full corridor being deferred in the recent NZUP announcement, the Mill Road corridor remains a part of the Supporting Growth South Indicative Transport Network, similar to a number of other unfunded projects included in potential future-year scenarios used in the assessments such as Pukekohe Expressway.</p> <p>The intended function and broad form of the NoR corridors have been confirmed following consideration of constraints, place, and movement functions. Mill Road was identified as necessary for both strategic functions and to release growth in Drury. As such, it is the SGA position that the full amount of growth in some areas should not be released if such projects are not in place. Those are land use planning decisions and it is not intended that these NoR corridors would change to replace the function of Mill Road.</p> <p>It is suggested this is clarified at a meeting with Auckland Council Transport and Planning specialists.</p>
8	<p>In the likely scenario that the arterial road proposed by the NoR D3 project is implemented prior to any future implementation of the Mill Road corridor project, please confirm and provide supporting information (where applicable) that:</p>	<p>(a) As above.</p> <p>It is noted that providing a connection to Mill Road is not the only intent of Waihoehoe Road East. As noted in section 20.1, paragraph 2 of the AEE: <i>The functional intent of the Project is to provide strategic east-west connectivity between the strategic north-south corridors (Great South Road, the Opāheke N-S FTN Upgrade (NoR</i></p>

	<p>(a) the functional intent of NoR D3 "...to provide strategic east-west connectivity between the strategic north-south corridors...", including Mill Road, will remain unaffected, with NoR D3 also being identified in lodged application documents as "... a critical east-west walking and cycling connection to the proposed Mill Road corridor for longer inter-regional routes..."; and</p> <p>(b) the intersection with Drury Hills Road will not need to be upgraded and that the proposed designation and/or existing legal road boundaries would be sufficient to accommodate anticipated traffic volumes under this scenario (NoR D3).</p>	<p><i>D4) and Mill Road), providing multi-modal access to the wider network for the planned growth area as well as providing access to the existing Drury township and proposed rail station (a NZUP project).</i></p> <p>Pursuant to s171(1)(c) the territorial authority must have regard to whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought (not the functional intent). The objectives of NoR D3 are outlined in section 20.2 of the AEE.</p> <p>(b) We have retested our design with respect to this intersection and do not consider any upgrade is required beyond the current footprint. We can discuss our findings directly with Auckland Council Transport and Planning specialists</p>
<p>9</p>	<p>Regarding the change in access to Tui Street, from its current arrangement allowing all directions access from Waihoehoe Road to a realigned intersection with Great South Road that is restricted to left turns in and left turns out:</p> <p>(a) please provide a road safety audit which assesses potential safety effects in relation to:</p> <ol style="list-style-type: none"> the intersection of Great South Road and Tui Street; and inbound trips to Tui Street approaching from the south and outbound trips from Tui Street leaving towards the north, including the potential for U-turn manoeuvres occurring on Great South Road or Waihoehoe Road, and whether these can occur safely. <p>(b) please detail methods/measures to mitigate the proposed vehicle access restrictions on:</p>	<p>Realignment of Tui Street was recommended following a safety audit of the indicative design. We are completing some additional work on operational effects following review of submissions and the findings of this work can be discussed further at a meeting with Auckland Council Transport and Planning specialists.</p> <p>The project is not yet at detailed design stage or a timeframe where the construction methodology has been finally determined. However, construction traffic effects will be further assessed and mitigated by the outcomes required under the proposed CTMP condition.</p>

	<p>i. recreational users of Drury Domain and adjoining community facilities, including the existing clubroom facilities used by the Drury and Districts Rugby Football and Recreation Club; and</p> <p>ii. Parks contractors responsible for the maintenance of Drury Domain;</p> <p>(c) please detail methods/measures to mitigate the loss of access to the Drury Domain from Tui Street during construction works for the NoR D2 project, including the provision of multi-modal temporary access to Drury Domain and the availability of adjoining temporary parking spaces if existing parking is not available during construction works (NoR D2).</p>	
10	<p>Please detail mitigation methods/measures for addressing vehicle access restrictions and detours proposed during construction works for the Bremner Road frequent transit network (FTN) project, including the temporary closure of a section of State Highway 1 resulting in the detour of traffic to Great South Road (NoR D2).</p>	<p>AT and Waka Kotahi are seeking to route protect these corridors for future growth, and detailed design has not yet occurred. As a result, we are not able to confirm the construction methodology at this stage. However, construction traffic effects will be further assessed, and effects mitigated by the outcomes required by the CTMP condition. This is the appropriate time to further assess and mitigate such effects as it will depend on the operation of the local network and its component parts at the time of construction.</p>
11	<p>Regarding the change in relative levels between the upgraded Opāheke Road carriageway proposed by the NoR 5 project and adjoining sites in proximity to the proposed rail overbridge (shown in indicative design drawings lodged for the project), please detail mitigation methods/measures for ensuring vehicle access is still feasible from these sites, including the property at 174 Opāheke Road and Opāheke Reserve which would likely require alternative vehicle access being provided from Opāheke Road.</p>	<p>Access to these properties is feasible and has been provided for within the indicative design. This can be discussed further at a meeting with Auckland Council Transport and Planning specialists.</p> <p>As above construction traffic effects are covered by the CTMP condition.</p>

	<p>In relation to Ōpāheke Reserve, the Council's Parks Planning department have requested further details regarding how full and functional recreational vehicle access to Ōpāheke Reserve will be maintained during construction and operation of the upgraded Ōpāheke Road carriageway (including pedestrian and cycle access), and if this cannot be achieved, then an assessment detailing the effects of access restrictions on community and recreational use of Ōpāheke Reserve is requested, including the duration and timing of construction works, consequential access restrictions (including any restrictions on vehicles turning right) and methods/measures to mitigate these effects if required (NoR D5).</p>	
12	<p>Please provide further details regarding how the proposed roundabout at the intersection between Ōpāheke Road and Otuwairoa Esplanade will provide for safe and efficient vehicle movements to and from the neighbourhood centre adjoining this intersection (NoR D5).</p>	<p>The purpose of the proposed roundabout in this location is deliver a safe and efficient traffic outcome for the intersection with the Bellfield Development. This can be discussed at a meeting with Auckland Council Transport and Planning specialists if there are any remaining concerns.</p>
Urban design / landscape and visual effects		
13	<p>Please provide further analysis of the interface between the designation boundaries proposed for each NoR project and adjacent indicative land use zoning signalled by the Drury-Ōpāheke Structure Plan (as shown in figure 2-3 of the lodged AEE and provided below), including how this interface will achieve an efficient land-use pattern and positive urban interface with future sites adjoining the</p>	<p>Section 3.3 of the AEE outlines Waka Kotahi and AT's commitment to working with landowners and developers to where development is undertaken prior to the implementation of the Drury Arterial Network designations noting this may be some time in the future once land use patterns and proposed zoning in the growth areas is likely to be better established. It is also important to note that the purpose of the Drury Arterial Network is to support growth in the Drury-Ōpāheke Structure Plan area.</p> <p>Sections 9.13, 16.13, 23.13, 30.13 and 37.13 of the AEE (for each NoR respectively) summarise the Urban Design evaluation for each project and identifies design principles which have been built into the ULDMP condition. The ULDMP condition and any outstanding concerns regarding the interface between the projects and adjacent land uses can be discussed further at a meeting with Auckland Council Urban Design and Planning specialists.</p>

	<p>proposed and upgraded arterial route corridors (Project-wide).</p>	<p>Regarding the submission point made by Kainga Ora on the setback from a designation for road widening purposes, we do not interpret the front yard definition in the AUP as relating to the proposed designations for the Drury Arterial Network and the alteration to the SH22 designation. For the Auckland Transport proposed designations the purpose is for the construction, operation and maintenance of an arterial transport corridor. For the Waka Kotahi alteration, there is no change to the existing purpose which is for State Highway 22. The AUP definition for front yards specifically refers to designations for “road widening purposes” for which there are designations with this specific purpose in the AUP. These designations are generally in existing built up, urban areas and are narrow designations adjacent to existing roads which signals the operational extent of the proposed road widening.</p> <p>The proposed Drury Arterial Network designations will protect the land for the construction of the future arterial network (and includes construction areas) which generally traverse rural zoned land for future urban development. As stated above, Auckland Transport and Waka Kotahi are committed to working with landowners and developers to ensure appropriate integration between land use and the future transport corridors and will consider the appropriateness of works within the designation extent prior to construction - where this doesn't prevent or hinder the requiring authorities' works. Following construction, as is standard practise, both requiring authorities will take proactive measures to review the designation extent and either roll back the designation to the operational portion of the corridor, or remove it, which is a condition on the proposed designations.</p>
14	<p>Please provide further analysis to identify the implications of batter slopes within the designation corridors on achieving suitable urban interfaces with adjacent land (Project-wide).</p>	<p>In addition to the comments in response to the previous query, where development occurs prior to construction of the projects, developers can undertake earthworks and create building platforms within the designations to create a suitable urban interface with approval from AT or Waka Kotahi under s176 of the RMA. Where the Drury Arterial Network projects are constructed first, the earth worked batter slopes will generally not be purchased from a landowner. The designation will be rolled back or removed (nothing this is a condition on the proposed designations) and the batter slopes will remain part of the land parcel and available for future development adjacent to the transport corridor.</p>
15	<p>As the lodged UDFE does not address this matter, please provide further analysis on whether roundabouts are an appropriate intersection treatment in terms of achieving positive urban form and pedestrian amenity outcomes, particularly where they will adjoin high density residential and business centre areas, as anticipated by the Drury-Ōpāheke Structure Plan (refer to figure 2-3 of the lodged AEE provided within preceding item 12 which indicates the</p>	<p>Section 7 of the Assessment of Alternatives summarises the methodology for determining intersection form across the Drury Arterial Network.</p> <p>The form and function of intersections across the Drury Arterial Network were assessed on: safety, function, form, level of service, quality of service, land use integration and constraints.</p> <p>The assessment of the intersections in the Drury Arterial Network can be discussed in a meeting with urban design and planning specialists.</p>

	locations of proposed roundabout intersections for each NoR project) (Project-wide).	
Archaeology and heritage (built and historic)		
16	In relation to the Commissariat Redoubt and Runciman Homestead, please explain the methodology underpinning the values/significance assessment for all historic places within the proposed designation (p. 16 Drury Arterial Network Assessment of Effects on Historic Heritage) and consider revising this assessment to be consistent with the Auckland Unitary Plan Regional Policy Statement criteria for identifying and evaluating historic heritage places (B5.2.2) (NoR D2).	We acknowledge that the RPS is a matter to have regard to under s171. While the assessment may not be consistent with all specific indicators from the RPS, this does not affect the assessed value of the Commissariat Redoubt and Runciman Homestead. Revising the assessment will not change the anticipated effects or mitigation measures proposed as part of the HAMP condition. We also note that our assessment methodology and key findings were previously approved and discussed with Council experts and have also been endorsed by Heritage NZ subject to some minor condition changes.
17	Please consider revising the assessment of the Commissariat Redoubt to acknowledge the likely presence of archaeological features beyond the defensive perimeter (NoR D2).	The historic heritage assessment does specifically acknowledge the likely presence of archeologically features beyond the defensive perimeter of the Redoubt. In relation to the Southern extent of Commissariat Redoubt R12/756 Wharves and Bridges (which our specialist believes extends further than the scheduled extent), section 7.3.2.2, p.93 of the Assessment of Effects on Historic Heritage does note that: <i>“Widening of the existing road and bridge spanning the Ngakoroa Stream and associated construction works may encounter unrecorded evidence such as rubbish pits, tent footprints, drains, infilled latrines, and similar deposits that have been found at other redoubts”</i> and that <i>“There is some potential for adverse effects on unidentified subsurface archaeological remains exposed during construction.”</i> In addition, the proposed HAMP condition is proposed to protect historic heritage and to remedy and mitigate any residual effects as far as practicable.
18	Please explain whether any mitigation measures are warranted for the building at 6 Flanagan Road, Drury (NoR D2). NOTE THIS SHOULD BE 6 FITZGERALD ROAD	Mitigation measures are not warranted for the building at 6 Fitzgerald Road as it is not an item of historic heritage identified by the AUP or CHI.

Parks Planning	
19	<p>Please provide an assessment of specific locations where the project will interact with the Drury-Ōpāheke Structure Plan blue-green network to demonstrate how the intent of this network will be given effect to (NoRs D1 and D2).</p> <p>Consideration of interactions between the Drury Arterial Network and future opportunities to integrate with the Blue-Green Network has been made throughout the lodged Assessment of Landscape and Visual Effects (see in particular positive effects in sections 6.3.1, 7.3.1, 9.3.1 and 10.3.1). Urban Design Framework and Evaluation and AEE.</p> <p>The ULDMP condition includes provisions for the design of the projects to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment, landscape character, and open space zones. This also includes opportunities for walking and cycling connections.</p> <p>It is noted that the Drury-Ōpāheke Structure Plan is a non-statutory document. While it is useful to inform the likely future environment, the Drury Arterial Network projects are not required to “give effect to” the structure plan and as a transport corridor has limited opportunity to do so. The corridor can integrate with that network where it traverses it but that will also depend on the land use pattern that is ultimately developed around the corridors</p>
Stormwater and Flooding	
20	<p>Please explain to what extent NoR D1 enables stormwater infrastructure to be integrated with development occurring on Future Urban zoned land to the north, with particular reference to development enabled by Plan Changes 51 (Drury West) and 61 (Waipupuke) (NoR D1).</p> <p>The stormwater wetlands proposed for the SH22 Upgrade are sized to mitigate flooding and stormwater effects of the SH22 Upgrade.</p> <p>Section 3.3 of the AEE outlines Waka Kotahi and AT’s commitment to working with landowners and developers to enable development and integrate development responses including that integrated stormwater solutions may be delivered in partnership with developers. Future opportunities for integration with wetlands proposed for the SH22 Upgrade can be discussed and agreed with Waka Kotahi separate to the NoR process when further design details of the road corridor and adjacent development are known. We note this is an opportunity but not an effects mitigation requirement of the project.</p>
21	<p>Please clarify the meaning of “existing authorised habitable floors” in relation to proposed Flood Hazard conditions (reference example NoR D1 Condition 12(a)(i)) (Project-wide)</p> <p>This query can be discussed with the Healthy Waters Team and confirmed in evidence.</p>
22	<p>Please explain whether the bridge over the no name stream at 341 Jesmond Road is high enough for the flood level, and whether specific conditions are</p> <p>The bridge level as shown in the lodgement documents is indicative but has been based on flood modelling. The final levels of the bridge will be decided at detailed design based on the most up to date flood modelling. The bridge will be designed to meet the specified flood risk outcomes identified in condition 12. It is Auckland Transport’s responsibility</p>

	<p>required in order to ensure that flooding effects appropriately avoided, remedied or mitigated. (NoR D2 / Project-wide).</p>	<p>as the road controlling authority to ensure resilience of the infrastructure it is providing. This can be discussed with the Healthy Waters Team.</p>
<p>Ecology</p>		
<p>23</p>	<p>Please provide further details demonstrating how the NoR D4 project is not contrary to the National Policy Statement for Freshwater Management (NPSFM), particularly in relation to avoiding adverse effects on existing wetland areas within the properties at 76A and 116 Waihoehoe Road which qualify for protection under the NPSFM (NoR D4).</p>	<p>The alignment of Ōpāheke N-S was agreed with Oyster prior to lodgement of the NoR to align with their development plans. Oyster have offered to construct a transport corridor along this alignment that can be upgraded by AT in the future for the Frequent Transit Network.</p> <p>When considering the effects of allowing a requirement, section 171(1)(a) of the RMA requires that particular regard be had to any relevant provisions of a national policy statement. An assessment of the Ōpāheke N-S FTN Arterial against the objectives and policies of the NPSFM is provided in Table 41-1 of the AEE (p. 515).</p> <p>Resource consents (regional and NES Freshwater) are not being sought for the Ōpāheke N-S FTN Arterial at this time. Therefore ecological effects on wetlands do not need to be assessed or mitigated during the NoR process. However, as documented in the lodgement documentation, potential ecological effects of activities that require consents have been considered to inform alternatives assessment, the design and the proposed designation. There are opportunities to minimise ecological effects as part of detailed design which can be explored at detailed design when the necessary consents are sought (assuming Oyster has not constructed the corridor itself which is currently its intention) We can report back to Council following further discussions with that submitter.</p>

APPENDIX THREE

SUMMARY OF SUBMISSIONS

Sub #	Submitter Name	Oppose / Support	Wish to be heard	Key Topics / Themes	Relief Sought	Comment
NoR D1: Alteration to Designation 6707 – State Highway 22 Upgrade						
D1.1	KiwiRail Holdings Limited (KiwiRail)		No	Planning	Supports the NoR, subject to asset and project interests being addressed through a suitable NUMP.	
D1.2	Fire and Emergency New Zealand	Neutral	Yes	Transport	Transport: Seeks direct access to SH22 for a fire station and regional headquarter for FENZ. Seeks that Waka Kotahi work collaboratively with submitter.	
D1.3	Kiwi Property No. 2 Limited	Support with amendments	Yes	Transport, Network Utilities	Transport: Opposes the use of multi-lane roundabouts and instead prefers signalised intersections. Planning and transport: That the extent of the designation boundary of NOR D1 be reviewed and reduced; and.	PC48 applicant, land interests in Drury East
D1.4	Oyster Capital	Oppose	Yes	Transport	Transport: Opposes the use of multi-lane roundabouts and instead prefers signalised intersections. Planning: Seeks that the designation boundary is reviewed and reduced.	PC50 applicant, land interests in Drury East
D1.5	Drury South Limited	Support with amendments	Yes	Transport	Transport: Confirm the designation subject to resolving DSL concerns, primarily ensuring that the SH22/Great South Road upgrades are sufficient to accommodate future traffic demands Planning: confirm an implementation date	Subsidiary of Stevensons, owns land in Drury South precincts
D1.6	Lynette Erceg	Oppose	Yes	Landowner effect on property	Opposes the NoR due to adverse effect on property	
D1.7	Lomai Properties Ltd	Support	Yes	Transport, Urban Design, Noise and Vibration	Transport and Noise and Vibration: Supports the NoR and seeks ongoing engagement with Waka Kotahi throughout the project, and at OPW stage, particularly for traffic, noise and vibration. Urban Design: Seeks a high quality interface between its site frontage and SH22.	PC61 applicant, land interests in Drury West
D1.8	Fletcher Residential Limited	Oppose	Yes	Transport	Transport: Opposes the use of multi-lane roundabouts and instead prefers signalised intersections. Planning: Seeks that the designation boundary is reviewed and reduced.	Build partner for Oyster Capital
D1.9	Anthony and Jennifer Joyce	Support with amendments	Yes	Stormwater, Urban Design, Noise and Vibration	All: Supports the NoRs but concerned with loss of developable land, compensation, timing of works, stormwater approach (particularly in relation to designation extent), future amenity/interface	Landowner of 15 Burberry Road
D1.10	Firstgas Limited	Neutral	Yes	Planning	Firstgas seeks that if approved, a framework for both enabling and protecting the gas transmission network (including ancillary equipment) is established. Firstgas	

Sub #	Submitter Name	Oppose / Support	Wish to be heard	Key Topics / Themes	Relief Sought	Comment
D1.11	Karaka and Drury Limited	Support with amendments	Yes	Transport, Urban Design, Stormwater, Noise and Vibration	<p>notes such a framework is generally provided for in the Application</p> <p>Supports the NoRs but concerned with: Transport: form and location of intersections (+ consistency with Plan Change 51 and structure plan), Urban design: visual integration of SH22 with surrounds, Stormwater: stormwater infrastructure, Noise and vibration: H20appropriate consideration of construction noise/vibration and operational noise effects on future environment.</p>	PC51 applicant, land interests in Drury West
D1.12	Kāinga Ora Homes and Communities	Support with amendments	Yes	Transport, Urban Design	<p>Planning: Seeks that the spatial extent of the NoR is reviewed and refined to minimise the extent of affected land Planning: Seeks that Condition 3 include a timeframe for when the extent of the designation will be removed, and when the RA will give notice to under s182 RMA to remove the parts of the designation no longer required. Urban Design: Seeks that the ULDMMP take into account that land will be used for temporary works and subsequently removed from the designation upon completion Urban Design: Review and minimise the gradient of the land adjoining the road corridor to ensure safe pedestrian and vehicle access and manage potential stormwater effects. Noise and Vibration: Seeks that the applicant comply with the WHO's community noise standards report in relation to Operational Noise Limits. Transport: Seeks the provision of suitable pedestrian and/or cyclist access to avoid severance effects.</p>	
D1.13	Heritage New Zealand Pouhere Taonga	Support with amendments	Yes	Heritage	Heritage: Seeks amendments to the Condition 22 HAMP	

APPENDIX FOUR

COPIES OF SUBMISSIONS AND LOCAL BOARD VIEWS

13 May 2021

Auckland Council
Plans and Places
Private Bag 92300
Auckland 1142
Attn: John Duguid

By email to: unitaryplan@aucklandcouncil.govt.nz

COPY TO: Supporting Growth Alliance (on behalf of Waka Kotahi) - info@supportinggrowth.nz

SUBMISSION ON NOTICE OF REQUIREMENT BY WAKA KOTAHI NZ TRANSPORT AGENCY FOR AN ALTERATION TO DESIGNATION 6707 STATE HIGHWAY 22 TO UPGRADE STATE HIGHWAY 22 BETWEEN STATE HIGHWAY 1 DRURY INTERCHANGE AND OIRA CREEK, IN DRURY (PART OF THE DRURY ARTERIAL NETWORK PACKAGE).

NAME OF SUBMITTER:

KiwiRail Holdings Limited (KiwiRail)

ADDRESS FOR SERVICE:

Level 1
Wellington Railway Station
Bunny Street
PO Box 593
WELLINGTON 6140
Attention: Andrew Cave

Ph: 027 256 1246

Email: andrew.cave@kiwirail.co.nz

KiwiRail Submission on Notice of Requirement (NoR) for Drury Arterials Network

KiwiRail is the State-Owned Enterprise responsible for the management and operation of the national railway network. This includes managing railway infrastructure and land, as well as rail freight and passenger services within New Zealand. KiwiRail is also the requiring authority for land designated "Railway Purposes" (or similar) in district plans throughout New Zealand.

KiwiRail is interested in the above NoR for several reasons;

1. The arterials lie adjacent to one of New Zealand's key main railway lines, the North Island Main Trunk line (**NIMT**). This carries both rail freight traffic and Metro passenger services and forms part of the golden triangle network for rail freight between Auckland, Tauranga and Hamilton. KiwiRail seeks to protect the railway corridor to enable ongoing use for operational purposes.
2. KiwiRail has commenced planning and design work for the Papakura to Pukekohe electrification (P2P) project as well as the platforms, signals and electric structures for three new stations



between Drury and Paerata. The investment will extend the electrified rail network from Papakura to Pukekohe, and include a range of supporting network upgrades:

- Electrification of 19km of track, including installation of overhead equipment (OLE), new traction power feed and signalling upgrades.
 - Potential lowering of tracks at a number of road overbridges (including SH1 Drury Interchange) to provide sufficient clearance for the OLE.
 - Provision of two additional platform faces and stabling for twelve 3-car Electric Multiple Units at Pukekohe.
 - Passive provision for future construction of three new stations and additional tracks.
 - Safety enhancements at level crossings.
3. The NZUP programme allocated \$247m to KiwiRail to build new Drury-Paerata stations including station structures, access and parking, by 2024. KiwiRail is working closely with the Te Tupu Ngatahi Supporting Growth Programme in planning designations to enable the transport system to be protected and delivered over the short and longer term. In particular, a Drury Central railway station is included in the New Zealand Upgrade Programme (NZUP), with work expected to start in 2022.
4. In reference to this notification of the NoR by Waka Kotahi, KiwiRail supports the proposed grade separation and new overbridge at Opaheke Road and the proposed improvements to Waihoehoe Road overbridge. The designs take into account the said electrification and function of the NIMT.
5. The scope of KiwiRail's submission relates to the protection of the NIMT and the operational efficiency of rail activities. KiwiRail supports the NoR, subject to our asset and project interests being addressed through a suitable Network Utilities Management Plan (NUMP) for the arterials' construction delivery work. Through the development and implementation of an NUMP and in consultation with KiwiRail, we expect that any potential adverse effects on the rail corridor can be appropriately managed (e.g., while deconstructing and replacing an overbridge).

KiwiRail could not gain an advantage in trade competition through this submission and does not wish to be heard in respect of this submission of support.

If you have any queries, please feel free to contact me.

Yours faithfully,



Andrew C. Cave
Senior RMA Advisor



Before you fill out the attached submission form, you should know: # 02

You need to include your full name, an email address, or an alternative postal address for your submission to be valid. Also provide a contact phone number so we can contact you for hearing schedules (where requested).

By taking part in this public submission process your submission will be made public. The information requested on this form is required by the Resource Management Act 1991 as any further submission supporting or opposing this submission is required to be forwarded to you as well as Auckland Council. Your name, address, telephone number, email address, signature (if applicable) and the content of your submission will be made publicly available in Auckland Council documents and on our website. These details are collected to better inform the public about all consents which have been issued through the Council.

Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least one of the following applies to the submission (or part of the submission):

- It is frivolous or vexatious.
- It discloses no reasonable or relevant case.
- It would be an abuse of the hearing process to allow the submission (or the part) to be taken further.
- It contains offensive language.
- It is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

Submission on a requirement for a designation or an alteration to a designation subject to full or limited notification

Sections 168A, 169, 181, 189A, 190, and 195A of the Resource Management Act 1991
FORM 21



Send your submission to unitaryplan@aucklandcouncil.govt.nz or post to :

Attn: Planning Technician
Auckland Council
Level 24, 135 Albert Street
Private Bag 92300
Auckland 1142

For office use only
Submission No:
Receipt Date:

Submitter details

Full Name or Name of Agent (if applicable)

Mr/Mrs/Miss/Ms(Full Name) Mr Rui Huang - The Property Group Limited

Organisation Name (if submission is made on behalf of Organisation)

Fire and Emergency New Zealand

Address for service of Submitter

PO Box 104, Shortland Street, Auckland 1140

Telephone: Fax/Email:

Contact Person: (Name and designation if applicable)

This is a submission on a notice of requirement:

By:: Name of Requiring Authority

For: A new designation or alteration to an existing designation (describe)

The specific parts of the above notice of requirement that my submission relates to are: (give details):

Future access arrangements and the proposed construction compound for 67 Mercer Street, Drury.

My submission is:

In support of the notice of requirement

In opposition to the notice of Requirement

Neutral

The reasons for my views are:

Please refer to the attached submission letter.

(continue on a separate sheet if necessary)

I seek the following recommendation or decision from the Council (give precise details including the general nature of any conditions sought).

Ensure any conditions relating to management of construction traffic (e.g. Construction Traffic Management Plan) contain clear objectives and requirements, to ensure vehicle access to property and state highway for emergency services are maintained where practicable.

- I wish to be heard in support of my submission
- I do not wish to be heard in support of my submission
- If others make a similar submission, I will consider presenting a joint case with them at a hearing



Signature of Submitter
(or person authorised to sign on behalf of submitter)

19 May 2021
Date

Notes to person making submission:

If you are making a submission to the Environmental Protection Authority, you should use Form 16B.

You must serve a copy of your submission on the person who gave the notice of requirement as soon as reasonably practicable after you have served your submission on the Council (unless the Council itself, as requiring authority, gave the notice of requirement)

If your submission relates to a notice of requirement for a designation or alteration to a designation and you are a trade competitor of the requiring authority, you may make a submission only if you are directly affected by an effect of the activity to which the requirement relates that:

- (a) Adversely affects the environment, and
- (b) Does not relate to trade competition or the effects of trade competition.

19 May 2021
Our Job no. 714942

The Property Group Limited
Auckland Office
PO Box 104 Auckland 1140
Level 14, 55 Shortland Street
Auckland 1010

Auckland Council
Attn: Central/South Planning Unit – Plans and Places
Private Bag 92300
35 Graham Street
Auckland 1142

Dear Sir/Madam

Submission on the Drury Arterials Network: Alteration to Designation 6707 State Highway 22 Upgrade (NZTA)

1. On behalf of Fire and Emergency New Zealand (FENZ) as the prospective purchaser of 67 Mercer Street, Drury, we provide submission in neutral of the proposed alteration to Designation 6707 – State Highway 22 by Waka Kotahi NZ Transport Agency (Waka Kotahi), to upgrade State Highway 22 between State Highway 1 Drury Interchange and Oira Creek, in Drury.
2. FENZ is a single, integrated fire and emergency services organisation. Under the Fire and Emergency New Zealand Act 2017, FENZ has a mandate to provide a range of services for communities with the principal objectives of reducing the incidence of unwanted fires and the associated risk to life and property, protecting and preserving life, and preventing or limiting injury, damage to property, land and the environment.

Submission Points

3. In response to the anticipated population growth in Drury, FENZ is looking to acquire the site at 67 Mercer Street, Drury (legally described as Sections 1, 3 & 4 SO Plan 61999), to establish a three-bay fire station and a regional headquarter in the future. The proposed alteration to Designation 6707 – State Highway 22 presents potential risks for the safe and efficient operation of a future fire station on the site, particularly in terms of access arrangements.
4. It is understood that the proposed alteration would provide for the widening of SH22 road corridor from its current general width of 20m to enable a 30m wide four-lane road with separated active transport facilities, localised widening around the existing intersections, and reconstruction of the existing Ngakoroa Stream bridge.
5. FENZ had undertaken several workshops with Waka Kotahi to determine the potential implications from the road corridor widening and motorway on-ramp realignment works for 67 Mercer Street. It is of the utmost importance for FENZ to have direct access to the State Highway 22 for the future fire station, in order to minimise response time. In addition, FENZ would like to see traffic lights to be provided to help ease the traffic from the fire station into the state highway.

6. The NOR application proposes to use the western side of 67 Mercer Street as a bridging staging area or a construction compound to house a satellite office for the bridge construction crew, as well as construction plant, equipment and materials. FENZ supports the proposed use of area around the creek in the western section of 67 Mercer Street as a construction area.

Outcome sought from the Requiring Authority (Waka Kotahi)

7. Given that neither the design for the fire station and State Highway 22 upgrade have been finalised, Waka Kotahi shall agree to work collaboratively and transparently with FENZ to reach an acceptable arrangement for both parties.
8. In the event that the fire station is established before the proposed state highway upgrade works, Waka Kotahi must provide measures to enable direct access to the state highway where practicable, or to provide alternative access arrangements when it will not be.

We appreciate the opportunity to submit on this Notice of Requirement application by Waka Kotahi NZ Transport Agency for an alteration to Designation 6707 Stage Highway 22, to upgrade State Highway 22 between State Highway 1 Drury Interchange and Oira Creek in Drury.

Yours sincerely



Raymond Huang

Planning Consultant

09 309 8526 / 027 288 2372
rhuang@propertygroup.co.nz

Before you fill out the attached submission form, you should know: #03

You need to include your full name, an email address, or an alternative postal address for your submission to be valid. Also provide a contact phone number so we can contact you for hearing schedules (where requested).

By taking part in this public submission process your submission will be made public. The information requested on this form is required by the Resource Management Act 1991 as any further submission supporting or opposing this submission is required to be forwarded to you as well as Auckland Council. Your name, address, telephone number, email address, signature (if applicable) and the content of your submission will be made publicly available in Auckland Council documents and on our website. These details are collected to better inform the public about all consents which have been issued through the Council.

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Submission on a requirement for a designation or an alteration to a designation subject to full or limited notification

Sections 168A, 169, 181, 189A, 190, and 195A of the Resource Management Act 1991
FORM 21



Send your submission to unitaryplan@aucklandcouncil.govt.nz or post to :

Attn: Planning Technician
Auckland Council
Level 24, 135 Albert Street
Private Bag 92300
Auckland 1142

For office use only
Submission No:
Receipt Date:

Submitter details

Full Name or Name of Agent (if applicable)

Mr/Mrs/Miss/Ms(Full Name)

Nick Roberts - Barker and Associates

Organisation Name (if submission is made on behalf of Organisation)

Kiwi Property No.2 Limited

Address for service of Submitter

Kiwi Property no.2 Limited
c/- Barker and Associates (Attn: Nick Roberts)
PO Box 1986, Shortland Street, Auckland 1140

Telephone:

029 666 8330

Fax/Email:

nickr@barker.co.nz

Contact Person: (Name and designation if applicable)

This is a submission on a notice of requirement:

By:: Name of Requiring Authority

Waka Kotahi New Zealand Transport Agency

For: A new designation or alteration to an existing designation (describe)

NoR D1: Alteration to Designation 6707 State Highway 22 Upgrade

The specific parts of the above notice of requirement that my submission relates to are: *(give details):*

Refer to attached submission.

My submission is:

In support of the notice of requirement

In opposition to the notice of Requirement

Neutral

The reasons for my views are:

As set out in the attached submission.

(continue on a separate sheet if necessary)

I seek the following recommendation or decision from the Council (give precise details including the general nature of any conditions sought).

As set out in the attached submission.

I wish to be heard in support of my submission



I do not wish to be heard in support of my submission



If others make a similar submission, I will consider presenting a joint case with them at a hearing



Signature of Submitter
(or person authorised to sign on behalf of submitter)

19/05/2021

Date

Notes to person making submission:

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- (b) Does not relate to trade competition or the effects of trade competition.

Submission on a Requirement for a Designation or an Alteration to a Designation

To: Auckland Council

SUBMITTER DETAILS

Name of Submitter: Kiwi Property No.2 Limited ("**Kiwi Property**")

1. Kiwi Property makes this submission on an alteration to Designation 6707 State Highway 22 Upgrade ("**NOR D1**") lodged by Waka Kotahi NZ Transport Agency to the Auckland Unitary Plan – Operative in Part (AUP) in accordance with Sections 168A,169, 181, 189A, 190, and 195A of the Resource Management Act (RMA) 1991 as follows.
2. Kiwi Property could not gain advantage in trade competition through this submission.
3. Kiwi Property is directly affected by effects of the subject matters of the submission that –
 - a. adversely affects the environment; and
 - b. do not relate to trade competition or the effects of trade competition.
4. Kiwi Property wishes to be heard in support of their submission.
5. If any other submitters make a similar submission, Kiwi Property will consider presenting a joint case with them at the hearing.

OVERVIEW OF KIWI PROPERTY

6. Kiwi Property is one of the leading property development and investment companies in New Zealand. Over the last 30 years Kiwi Property has developed a number of New Zealand's largest developments and currently owns and manage multiple large-scale retail and office developments in Auckland including existing centres such as Sylvia Park, Lynn Mall and The Base (Hamilton). Kiwi Property focuses on delivering the best retail and workplace experiences possible.
7. Kiwi Property has an interest in the Drury Arterials Network that is greater than the interest of the general public. Kiwi Property has a significant landholding of 52 hectares of land on Flanagan Road, Fitzgerald Road and Brookfield Road, Drury that would be directly affected by the Drury Arterials Network. By way of background, Kiwi Property has requested a private Plan Change (**PC48**) to the AUP to rezone 95 hectares of Future Urban zoned land

in Drury East to a mix of Business - Metropolitan Centre, Business - Mixed Use and Open Space-Informal Recreation zones. The Drury Arterials Network NORs therefore have the potential to give rise to adverse effects that would directly affect Kiwi Property given the proximity of Kiwi Property's land interests to NOR D1 and PC48.

SCOPE OF SUBMISSION

8. The submission relates to NOR D1 as a whole.
9. Kiwi Property generally supports the purpose and intent of the Drury Arterials Network as they would support the future urbanisation and development of Drury. However, Kiwi Property **opposes** NOR D1 for the reasons below which include but are not limited to:
 - a. The use of multi-lane roundabouts as opposed to a signalised intersection which is considered to result in better outcomes in terms of road safety, adjusting to uneven traffic flows and more efficient use of land.
 - b. Kiwi Property also opposes the extent of the designation boundary, which extends far beyond the anticipated extent of works. It is recognised that an extended designation boundary is required to accommodate the road widening (from two to four lanes) and associated works, such as cut/fill batters, proposed wetlands and site compound and construction areas. However, in some locations, the proposed designation boundary appears to unnecessarily extend 10-26m beyond the area identified in the NOR D1 documentation as required for road widening and associated works. Rationale for the extent of the designation boundaries could not be found within the AEE. As a consequence of such a wide designation boundary, there is the unnecessary exercise and cost of acquiring additional land take. This will also unduly restrict the future development potential of a significant portion of land in this part of Drury which would restrict any person to do anything in relation to the designated land without the written consent of the requiring authority (as section 176 of the RMA would apply).

RELIEF SOUGHT

10. Kiwi Property seeks the following relief on NOR D1:
 - a. that the use of multi-lane roundabouts within NOR D1 be reviewed and reduced;
 - b. That the extent of the designation boundary of NOR D1 be reviewed and reduced; and
 - c. That Schedule 1 of the proposed conditions of NOR D1 be amended following review of the use of multi-lane roundabouts and the extent of the designation boundary.

Address for Service:

Barker & Associates Ltd
Attn: Nick Roberts
PO Box 1986
Shortland Street
Auckland 1140

Contact Number: 029 666 8330

Email: nickr@barker.co.nz

Copied to:

Kiwi Property No.2 Limited
c/- David Schwartfeger, Development Manager
Email: David.Schwartfeger@kp.co.nz

Before you fill out the attached submission form, you should know: #04

You need to include your full name, an email address, or an alternative postal address for your submission to be valid. Also provide a contact phone number so we can contact you for hearing schedules (where requested).

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- It would be an abuse of the hearing process to allow the submission (or the part) to be taken further.
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- It is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

Submission on a requirement for a designation or an alteration to a designation subject to full or limited notification

Sections 168A, 169, 181, 189A, 190, and 195A of the Resource Management Act 1991
FORM 21



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Auckland Council
Level 24, 135 Albert Street
Private Bag 92300
Auckland 1142

For office use only
Submission No:
Receipt Date:

Submitter details

Full Name or Name of Agent (if applicable)

Mr/Mrs/Miss/Ms(Full Name)

Nick Roberts - Barker and Associates

Organisation Name (if submission is made on behalf of Organisation)

Oyster Capital

Address for service of Submitter

Oyster Capital
c/- Barker and Associates (Attn: Nick Roberts)
PO Box 1986, Shortland Street, Auckland 1140

Telephone:

029 666 8330

Fax/Email:

nickr@barker.co.nz

Contact Person: (Name and designation if applicable)

This is a submission on a notice of requirement:

By:: Name of Requiring Authority

Waka Kotahi New Zealand Transport Agency

For: A new designation or alteration to an existing designation (describe)

NoR D1: Alteration to Designation 6707 State Highway 22 Upgrade

The specific parts of the above notice of requirement that my submission relates to are: *(give details):*

Refer to attached submission.

My submission is:

In support of the notice of requirement

In opposition to the notice of Requirement

Neutral

The reasons for my views are:

As set out in the attached submission.

(continue on a separate sheet if necessary)

I seek the following recommendation or decision from the Council (give precise details including the general nature of any conditions sought).

As set out in the attached submission.

I wish to be heard in support of my submission



I do not wish to be heard in support of my submission



If others make a similar submission, I will consider presenting a joint case with them at a hearing



Signature of Submitter
(or person authorised to sign on behalf of submitter)

19.05.2021

Date

Notes to person making submission:

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You must serve a copy of your submission on the person who gave the notice of requirement as soon as reasonably practicable after you have served your submission on the Council (unless the Council itself, as requiring authority, gave the notice of requirement)

If your submission relates to a notice of requirement for a designation or alteration to a designation and you are a trade competitor of the requiring authority, you may make a submission only if you are directly affected by an effect of the activity to which the requirement relates that:

- (a) Adversely affects the environment, and
- (b) Does not relate to trade competition or the effects of trade competition.

Submission on a Requirement for a Designation or an Alteration to a Designation

Attn: Planning Technician
 Auckland Council
 Level 24, 135 Albert Street
 Private Bag 92300
 Auckland 1142

Name of Submitter: Oyster Capital Limited (“Oyster”)

1. Oyster makes this submission on an alteration to Designation 6707 State Highway 22 Upgrade (“NOR D1”) lodged by Waka Kotahi NZ Transport Agency in accordance with Sections 168A, 169, 181, 189A, 190, and 195A of the Resource Management Act (RMA) 1991 as follows.
2. Oyster could not gain advantage in trade competition through this submission.
3. Oyster is directly affected by effects of the subject matters of the submission that –
 - a. Adversely affects the environment; and
 - b. Do not relate to trade competition or the effects of trade competition.
4. Oyster wish to be heard in support of their submission.
5. If any other submitters make a similar submission, Oyster will consider presenting a joint case with them at the hearing.

Overview of Oyster

6. Oyster is a proudly New Zealand owned company specialising in the predevelopment and development of land for both residential and commercial property projects across New Zealand. Oyster was formed in 2003, has since continuously and successfully delivered a number of master-planned greenfield residential subdivisions, including residential developments in Whenuapai, Beachlands and Bishop Hill.
7. Oyster has an interest in the Drury Arterials Network that is greater than the interest of the general public. Oyster has unconditional and conditional sale and purchase agreements in place for a significant landholding of approximately 34.65 hectares of land at 76, 76A, 116, 136 and 140 Waihoeoe Road, Drury East. In addition, by way of background, Oyster has also submitted private plan change 50 (“PC50”) to the Auckland Council to rezone 48.9 hectares of Future Urban Zone land (inclusive of the 34.65 hectares noted above) to Residential – Terrace Housing and Apartment Building.

8. For the reasons given above, Oyster has an interest in NOR D1 that is greater than the interest of the general public, given the proximity of Oyster's landholding on Waihoehoe Road adjacent to NOR D1 and the PC50 area. It is considered that NOR D1 has the potential to give rise to adverse effects on the environment that would directly affect Oyster.

Scope of Submission

9. The submission relates to NOR D1 as a whole.
10. Oyster generally supports the purpose and intent of the Drury Arterials Network as they would support the future urbanisation and development of Drury. However, Oyster opposes NOR D1 for the reasons below which include but are not limited to:
 11. The use of multi-lane roundabouts is opposed for the following reasons:
 - a. Multi-lane roundabouts struggle to achieve safe system speeds for users due to the large carriageway arrangement and required large central island radii;
 - b. A multi-lane roundabout loses the simplicity of a single circulatory lane to give way to, thereby undermining a number of the key safety benefits of roundabouts;
 - c. There is little to no ability to provide for bus priority at a multi-lane roundabout without requiring a full approach and departure lane;
 - d. Roundabouts are unable to adjust to unequal / single approach dominant flows; and
 - e. Significant land take is required for roundabouts, resulting in significant costs and a reduction of land available for housing and other uses.
 12. Signalised intersections are considered to result in better outcomes in terms of road safety, adjusting to uneven traffic flows and enabling more efficient use of land.
 13. Oyster also opposes the extent of the designation boundary, which extends far beyond the anticipated extent of works. It is recognised that an extended designation boundary is required to accommodate the road widening (from two to four lanes) and associated works, such as cut/fill batters, proposed wetlands and site compound and construction areas. However, in some locations, the proposed designation boundary appears to unnecessarily extend 10-26m beyond the area identified in the NOR D1 documentation as required for road widening and associated works. Rationale for the extent of the designation boundaries could not be found within the AEE. As a consequence of a such a wide designation boundary, there is the unnecessary exercise and cost of acquiring additional land take. This will also unduly restrict the future development potential of a significant portion of land in this part of Drury as Section 176 of the RMA would apply, which prevents any person from subdividing or changing the character, intensity, scale or use of designated land without the written consent of the requiring authority.

Decision Sought

14. Oyster seeks the following relief on NOR D1:

- a. That the use of multi-lane roundabouts within NOR D1 be reviewed;
- b. That the extent of the designation boundary of NOR D1 be reviewed; and
- c. That Schedule 1 of the proposed conditions of NOR D1 be amended following review of the use of multi-lane roundabouts and the extent of the designation boundary.

Address for Service:

Barker & Associates Ltd
Attn: Nick Roberts
PO Box 1986
Shortland Street
Auckland 1140

Contact Number: 029 666 8330

Email: nickr@barker.co.nz

Copied to:

Oyster Capital Limited
c/- Andrew McCarthy, Planning and Development Manager
Email: andrew@oystercapital.co.nz

**SUBMISSION ON REQUIREMENT FOR DESIGNATION
UNDER THE RESOURCE MANAGEMENT ACT 1991**

TO: Auckland Council

SUBMITTER: Drury South Limited ("**DSL**")

SUBMISSION ON: A Notice of Requirement by Waka Kotahi NZ Transport Agency to alter Designation 6707 to provide for widening of the existing State Highway 22 ("**SH22**") from the Drury Interchange at State Highway 1 to Oira Creek to a four lane arterial with active transport facilities ("**Notice of Requirement**")

Introduction

1. This submission is made on behalf of DSL. DSL owns approximately 257ha of land within the Drury South Industrial Precinct ("**Precinct**") and is underway with the progressive development of its land. The Precinct is located to the South-East of the Notice of Requirement route.
2. DSL could not gain an advantage in trade competition through this submission.

Scope of submission

3. This submission relates to the Notice of Requirement in its entirety.

Nature of submission

4. DSL generally supports the works proposed in the Notice of Requirement which are intended to provide for the necessary transport infrastructure to support and integrate with the planned urban growth in Drury-Ōpāheke. However, DSL is concerned to ensure that the transportation effects of the Notice of Requirement are appropriately managed so as to not adversely affect other developments in the area, including DSL's development.
5. Traffic was a key consideration in the development of the Precinct provisions which include various transport upgrades external to the Precinct to ensure that transport effects are appropriately managed.
6. DSL is particularly concerned to ensure that the proposed upgrades at the SH22/Great South Road intersection are sufficient to accommodate:
 - (a) future traffic demands in the area, including if the Pukekohe Expressway is delayed; and
 - (b) future traffic demands in the area if the New Zealand Upgrade Programme projects do not go ahead (State Highway 1 improvements and Mill Road Corridor); and
 - (c) the proposed collector road included in Plan Change 51 to the Auckland Unitary Plan.

7. In addition, DSL is concerned that the implementation timeframe for the Notice of Requirement has yet to be determined but is anticipated to be implemented by 2028. The urbanisation along part of the SH22 corridor has been identified as Future Urban Zone along both sides of the corridor in the Auckland Unitary Plan and Auckland Council's Future Urban Land Supply Strategy shows that development of land on the northern side of SH22 corridor is planned to come forward in 2018-2022. Given the significant urban growth surrounding the SH22 corridor, as well as the increased demand associated with current and future planned growth in Pukekohe, DSL considers that it would be beneficial if the Notice of Requirement was implemented sooner rather than later.
8. Overall, subject to any such amendments to address its concerns set out above, DSL considers that the Notice of Requirement:
- (a) will promote the sustainable management of resources;
 - (b) is consistent with Part 2 and other provisions of the Resource Management Act 1991;
 - (c) will meet the reasonably foreseeable needs of future generations;
 - (d) will enable social, economic and cultural wellbeing; and
 - (e) will avoid, remedy or mitigate adverse effects on the environment.

Decision sought

9. The following decision is sought from the local authority:
- (a) confirm the Notice of Requirement subject to any amendments necessary to satisfy DSL's concerns; and
 - (b) such further other orders, relief or other consequential or other amendments as considered appropriate and necessary to address the concerns set out above.
10. DSL wishes to be heard in support of this submission.
11. If others make a similar submission consideration would be given to presenting a joint case with them at any hearing.

DRURY SOUTH LIMITED by its solicitors and authorised agents Russell McVeagh:



Signature:

Daniel Minhinnick

Date:

20 May 2021

Address for Service:

C/- Lauren Rapley
Russell McVeagh
Barristers and Solicitors
Level 30
Vero Centre
48 Shortland Street
PO Box 8/DX CX10085
AUCKLAND 1140

Telephone:

+64 9 367 8000

Email:

lauren.rapley@russellmcveagh.com

From: NoticeOfRequirementOnlineSubmissionForm@donotreply.aucklandcouncil.govt.nz
To: [Unitary Plan](#)
Subject: [ID:233] Notice of Requirement online submission - Lynette Erceg
Date: Thursday, 20 May 2021 3:01:05 PM

The following customer has submitted a Notice of Requirement online submission.

Contact details

Full name of submitter: Lynette Erceg

Organisation name:

Full name of your agent: Alan Webb

Email address: webb@quaychambers.co.nz

Contact phone number: 021629964 093741653

Postal address:

c/- Quay Chambers Po Box 106215

Auckland

Auckland 1143

Submission details

Name of requiring authority: Waka Kotahi New Zealand Transport Agency

The designation or alteration: Drury Arterials Network: Alteration to Designation 6707 State Highway 22 Upgrade (NZTA)

The specific provisions that my submission relates to are:

All

Do you support or oppose the Notice of Requirement? I or we oppose the Notice of Requirement.

The reason for my or our views are:

Approving it will cause an adverse effect on my property and it will not be a sustainable use of natural and physical resources

I or we seek the following recommendation or decision from Auckland Council:

Decline the application or approve it in a modified form to avoid adverse effects on my property

Submission date: 20 May 2021

Attend a hearing

Do you wish to be heard in support of your submission? Yes

Would you consider presenting a joint case at a hearing if others have made a similar submission?

Yes

Declaration

I accept and agree that:

- by taking part in this public submission process that my submission (including personal details, names and addresses) will be made public,
- I or we must serve a copy of the submission on the person who gave the notice of requirement as soon as reasonably practicable after submitting to Auckland Council.

SUBMISSION ON NOTICE OF REQUIREMENT TO ALTER DESIGNATION 6707 (STATE HIGHWAY 22 UPGRADE) LODGED BY WATA KOTAHI / NZTA

To: Auckland Council

Waka Kotahi / NZTA

Name of Submitter: Lomai Properties Limited (**Lomai**)

INTRODUCTION

1. This is a submission on the Notice of Requirement (**NoR**) lodged by Waka Kotahi to alter designation 6707 to provide for widening of the existing State Highway 22 from State Highway 1 to Oira Creek. The NoR is known as 'Project D1' in the Drury Arterials Network package lodged by Te Tupu Ngātahi Supporting Growth Alliance (**D1 NoR**).
2. Lomai could not gain an advantage in trade competition through this submission.
3. This submission relates to the entire D1 NoR, but Lomai is particularly interested in traffic and transport effects (both construction and operational). To the extent that construction works are considered as part of the NoR, Lomai is also interested in remaining involved in construction management plans.
4. Lomai **SUPPORTS** the D1 NoR for the reasons outlined in this submission.

BACKGROUND

5. Lomai owns a 56 ha block of land in Drury West which adjoins Karaka Road, Oira Road and Jesmond Road (**Lomai Site**). The Lomai Site is identified in Figure 1 below.

Figure 1: Location of Lomai Site including proposed zoning through the Submitter's plan change



AUCKLAND: Level 27, Lumley Centre, 88 Shortland Street, Private Bag 92518, Auckland 1141, New Zealand. T +64 9 358 2222

WELLINGTON: Level 24, HSBC Tower, 195 Lambton Quay, PO Box 2402, Wellington 6140, New Zealand. T +64 4 499 4599

CHRISTCHURCH: Level 1, 151 Cambridge Terrace, PO Box 874, Christchurch, 8140, New Zealand. T +64 3 365 9914

6. The Lomai Site is zoned Future Urban Zone in the Auckland Unitary Plan (Operative in Part) and is within 'Stage 1' of the Drury-Opāheke Structure Plan area. The Lomai Site is identified in the Auckland Future Urban Land Supply Strategy 2017 (**FULSS**) as being 'development ready' from 2022.
7. In accordance with these strategic planning documents, Lomai has lodged a private plan change request with Auckland Council seeking to rezone its land to a mixture of Residential – Terrace Housing and Apartment Building, Residential – Mixed Housing Urban, Business – Neighbourhood Centre and Open Space zones (as shown in Figure 1 above). The development has been named by Mana Whenua as Waipupuke, meaning "*where the streams meet*". The Waipupuke development is generally in accordance with the Drury-Opāheke Structure Plan.
8. Auckland Council has referenced the Waipupuke development as Private Plan Change 61. Further submissions closed on 23 April 2021. PC61 is scheduled to be heard by a panel of independent hearing commissioners appointed by Auckland Council on 4-6 October 2021.

REASONS FOR SUBMISSION

9. The upgraded State Highway 22 runs directly along the southern boundary of the Lomai Site and will adjoin the Waipupuke Development. Approximately 0.21 ha on the southern side of the Lomai Site is proposed to form part of the upgraded State Highway 22 (but 0.62 ha is included in the NoR). This land will be acquired by Waka Kotahi in time.
10. Lomai supports the NoR and the proposed upgrade of State Highway 22 because it:
 - (a) enables the development and future growth of Drury, specifically the Waipupuke Development (in combination with other NoRs forming the Drury Arterials Network package);
 - (b) will provide a safe, reliable arterial network in Drury;
 - (c) improves travel times between Drury and other parts of Auckland;
 - (d) supports the development of new rail stations in Drury West which, together with the upgrade of State Highway 22, will add additional transport options for residents travelling to and from Drury West;
 - (e) includes allocated walking and cycling lanes which will increase travel mode options for residents in Drury, enabling them to walk or cycle between home, work, school, shops and recreational activities.
11. Lomai seeks to ensure a high-quality interface between its site frontage and State Highway 22 is achieved, in order to ensure a positive urban design outcome.
12. Lomai requests that Waka Kotahi continue to engage with landowners throughout the development of the Drury Arterials Network package and following confirmation of the NoR (assuming it is confirmed). Lomai requests to be consulted on the development of any Outline Plans of Works that are prepared for the upgrade package as and when they are developed, and in the preparation of construction management plans specifically in terms of traffic, noise and vibration.

RECOMMENDATION SOUGHT

13. Lomai seeks that Auckland Council recommends confirming the D1 NoR.
14. Lomai wishes to be heard in support of its submission.
15. Lomai would consider presenting a joint case if others make similar submissions.

21 May 2021

A handwritten signature in blue ink, appearing to be 'W. Loutit' with a large, stylized flourish at the end.

Bill Loutit / Rachel Abraham
On behalf of Lomai Properties Limited

Electronic address for service of submitter: bill.loutit@simpsongrierson.com
Telephone: +64 21 839 422
Postal address: Private Bag 92518, Auckland 1141, New Zealand
Contact person: Bill Loutit, Simpson Grierson

Before you fill out the attached submission form, you should know: #08

You need to include your full name, an email address, or an alternative postal address for your submission to be valid. Also provide a contact phone number so we can contact you for hearing schedules (where requested).

By taking part in this public submission process your submission will be made public. The information requested on this form is required by the Resource Management Act 1991 as any further submission supporting or opposing this submission is required to be forwarded to you as well as Auckland Council. Your name, address, telephone number, email address, signature (if applicable) and the content of your submission will be made publicly available in Auckland Council documents and on our website. These details are collected to better inform the public about all consents which have been issued through the Council.

Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least one of the following applies to the submission (or part of the submission):

- It is frivolous or vexatious.
- It discloses no reasonable or relevant case.
- It would be an abuse of the hearing process to allow the submission (or the part) to be taken further.
- It contains offensive language.
- It is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

Submission on a requirement for a designation or an alteration to a designation subject to full or limited notification

Sections 168A, 169, 181, 189A, 190, and 195A of the Resource Management Act 1991
FORM 21



Send your submission to unitaryplan@aucklandcouncil.govt.nz or post to :

Attn: Planning Technician
Auckland Council
Level 24, 135 Albert Street
Private Bag 92300
Auckland 1142

For office use only
Submission No:
Receipt Date:

Submitter details

Full Name or Name of Agent (if applicable)

Mr/Mrs/Miss/Ms(Full Name)

Barker and Associates (Attn: Nick Roberts)

Organisation Name (if submission is made on behalf of Organisation)

Fletcher Residential Limited

Address for service of Submitter

Fletcher Residential Limited
c/- Barker and Associates (Attn: Nick Roberts)
PO Box 1986, Shortland Street, Auckland 1140

Telephone:

+6429 666 8330

Fax/Email:

nickr@barker.co.nz

Contact Person: (Name and designation if applicable)

This is a submission on a notice of requirement:

By:: Name of Requiring Authority

Waka Kotahi New Zealand Transport Agency

For: A new designation or alteration to an existing designation (describe)

NoR D1: Alteration to Designation 6707 State Highway 22 Upgrade

The specific parts of the above notice of requirement that my submission relates to are: (give details):

Refer to attached submission.

My submission is:

In support of the notice of requirement

In opposition to the notice of Requirement

Neutral

The reasons for my views are:

As set out in the attached submission.

(continue on a separate sheet if necessary)

I seek the following recommendation or decision from the Council (give precise details including the general nature of any conditions sought).

As set out in the attached submission.

I wish to be heard in support of my submission



I do not wish to be heard in support of my submission



If others make a similar submission, I will consider presenting a joint case with them at a hearing



Signature of Submitter
(or person authorised to sign on behalf of submitter)

21/05/2021

Date

Notes to person making submission:

If you are making a submission to the Environmental Protection Authority, you should use Form 16B.

You must serve a copy of your submission on the person who gave the notice of requirement as soon as reasonably practicable after you have served your submission on the Council (unless the Council itself, as requiring authority, gave the notice of requirement)

If your submission relates to a notice of requirement for a designation or alteration to a designation and you are a trade competitor of the requiring authority, you may make a submission only if you are directly affected by an effect of the activity to which the requirement relates that:

- (a) Adversely affects the environment, and
- (b) Does not relate to trade competition or the effects of trade competition.

Submission on a Requirement for a Designation or an Alteration to a Designation

Attn: Planning Technician
 Auckland Council
 Level 24, 135 Albert Street
 Private Bag 92300
 Auckland 1142

Name of Submitter: Fletcher Residential Limited (“Fletcher Living”)

1. Fletcher Living makes this submission on an alteration to Designation 6707 State Highway 22 Upgrade (“NOR D1”) lodged by Waka Kotahi NZ Transport Agency in accordance with Sections 168A, 169, 181, 189A, 190, and 195A of the Resource Management Act (RMA) 1991 as follows.
2. Fletcher Living could not gain advantage in trade competition through this submission.
3. Fletcher Living is directly affected by effects of the subject matters of the submission that—
 - a. Adversely affects the environment; and
 - b. Do not relate to trade competition or the effects of trade competition.
4. Fletcher Living wish to be heard in support of their submission.
5. If any other submitters make a similar submission, Fletcher Living will consider presenting a joint case with them at the hearing.

Overview of Fletcher Living

6. Fletcher Living is the residential development and delivery arm of Fletcher Building. It is one of the largest developers of new residential communities in New Zealand, having built and sold thousands of homes in the last five years, providing a significant contribution to housing supply across Auckland and Canterbury.
7. Fletcher Living has an interest in the Drury Arterials Network that is greater than the interest of the general public as Fletcher Living is the build partner for Oyster Capital, which has sale and purchase agreements in place for a significant landholding at 76, 76A, 116, 136 and 140 Waihoehoe Road.

Scope of Submission

8. The submission relates to NOR D1 as a whole.



9. Fletcher Living generally supports the purpose and intent of the Drury Arterials Network as they would support the future urbanisation and development of Drury. However, Fletcher Living opposes NOR D1 for the reasons below which include but are not limited to:
10. The use of multi-lane roundabouts as opposed for the following reasons:
- a. Multi-lane roundabouts struggle to achieve safe system speeds for users due to the large carriageway arrangement and required large central island radii;
 - b. A multi-lane roundabout loses the simplicity of a single circulatory lane to give way to, thereby undermining a number of the key safety benefits of roundabouts;
 - c. There is little to no ability to provide for bus priority at a multi-lane roundabout without requiring a full approach and departure lane;
 - d. Roundabouts are unable to adjust to unequal / single approach dominant flows; and
 - e. Significant land take is required for roundabouts, resulting in significant costs and a reduction of land available for housing and other uses.
11. Signalised intersections are considered to result in better outcomes in terms of road safety, adjusting to uneven traffic flows and enabling more efficient use of land.
12. Fletcher Living also opposes the extent of the designation boundary, which extends far beyond the anticipated extent of works. It is recognised that an extended designation boundary is required to accommodate the road widening (from two to four lanes) and associated works, such as cut/fill batters, proposed wetlands and site compound and construction areas. However, in some locations, the proposed designation boundary appears to unnecessarily extend 10-26m beyond the area identified in the NOR D1 documentation as required for road widening and associated works. Rationale for the extent of the designation boundaries could not be found within the AEE. As a consequence of a such a wide designation boundary, there is the unnecessary exercise and cost of acquiring additional land take. This will also unduly restrict the future development potential of a significant portion of land in this part of Drury as Section 176 of the RMA would apply, which prevents any person from subdividing or changing the character, intensity, scale or use of the designated land without the written consent of the requiring authority.

Decision Sought

13. Fletcher Living seeks the following relief on NOR D1:
- a. That the use of multi-lane roundabouts within NOR D1 be reviewed;
 - b. That the extent of the designation boundary of NOR D1 be reviewed; and

- c. That Schedule 1 of the proposed conditions of NOR D1 be amended following review of the use of multi-lane roundabouts and the extent of the designation boundary.

Address for Service:

Barker & Associates Ltd
Attn: Nick Roberts
PO Box 1986
Shortland Street
Auckland 1140

Contact Number: 029 666 8330

Email: nickr@barker.co.nz

Copied to:

Fletcher Residential Limited
c/- Mitchell Tweedie, Development Manager
Email: mtweedie@frl.co.nz

SUBMISSION ON NOTICE OF REQUIREMENT D1: ALTERATION TO DESIGNATION 6707 STATE HIGHWAY 22 UPGRADE

To: Planning Technician
Auckland Council
Level 24, 135 Albert Street
Private Bag 92300
Auckland 1142

Name of Submitter: Anthony and Jennifer Joyce

Address of Properties: 15 Burberry Road

Address for Service: **15 Burberry road,
RD2,
Drury**

Telephone: 0274941084

Email: tjjoyce@xtra.co.nz

1. Introduction

- 1.1. This submission is made by Anthony and Jennifer Joyce ("the Submitter") on Notice of Requirement D1: Alteration to Designation 6707 State Highway 22 Upgrade ("NoR D1").
- 1.2. The submitter is not a trade competitor for the purposes of section 308B of the Resource Management Act 1991 ("RMA").
- 1.3. This submission relates to NoR D1 in its entirety.
- 1.4. The Submitters generally support NoR D1 as a necessary means to accommodating growth, however the NoR does have an adverse effect on the Submitter' land which requires suitable mitigation and compensation. The Submitter's concerns are raised in the following sections as well as the requested amendments to the NoR.

2. Submitter Landholdings

- 2.1. The Submitter is the owner of approximately 4.45 hectares of land located at 15 Burberry Road, Drury. The site is currently zoned Future Urban under the Auckland Unitary Plan ("AUP").

- 2.2. The site falls within a private plan change area to authorise another stage of the Auranga Development, known as Auranga B2, and Private Plan Change 51 ("PPC51") to the AUP.
- 2.3. PPC51 seeks to rezone 33.65 ha of land in Drury West from Future Urban Zone to a mix of Business: Town Centre zone, Residential: Terrace Housing and Apartment Buildings zone, and Residential: Mixed Housing Urban zone.
- 2.4. The Submitters landholdings are proposed to be zoned Residential: Terrace Housing and Apartment Buildings zone under PPC51.

3. Reasons for the Submission

Loss of Developable land

- 3.1. The extent of the land required by the NoR along the boundary of the Submitter's land has not sufficiently taken into consideration the anticipated urban development of the adjoining land.
- 3.2. Extensive land takes for construction areas and ponding have been identified within Submitter's landholding. The Submitter acknowledges that there is a provision/condition that these will be rationalised once more detail is known and construction works finished. However, the NoR effectively blights the development potential of submitters property for years (potentially up to the 10 year lapse period or longer if an extension is applied for) and causes uncertainty as to the actual yield that can be realised, until detailed design of the corridor is complete.
- 3.3. Furthermore, if the "rationalisation" of the designation land does not align with the development of the land, it will likely to create uneven development blocks (and an awkward development pattern) also resulting in inefficiencies in utilising the land resource for its intended proposed zone purpose.

Compensation

- 3.4. Appropriate compensation for the procurement of land should take into consideration the urban zonings being sought through the PPC (and any loss of commercial and/or residential densities/reduction in yield).

Timing

- 3.5. The NoR has requested a 10 year lapse date and makes no commitment to timing of the proposed works.

3.6. Drury West falls within the Stage 1 area of Auckland Council's Future Urban Land Supply Strategy which identifies land north of Karaka Road to be "development ready" by 2021.

3.7. The NoR should align with Auckland's growth timing.

Alignment with PPC51

3.8. The Submitter is concerned that the NoR fails to provide for connections/intersections which align with those identified on the PPC for Auranga B2.

Stormwater

3.9. The Submitter is concerned at the lack of integration with the Auranga B2 area including the potential co-location (and use of) of stormwater infrastructure which may have the potential to reduce land requirements on the Submitters land.

3.10. Furthermore, the Submitter does not consider that appropriate alternatives for location of pond/wetland treatment devices (or the option to utilise less land intensive options) have been considered.

3.11. For example, there are large areas of land located on the southern side of SH22 which are already "Council owned" which would be better suited to be set aside for treatment of stormwater runoff.

3.12. Condition 12 is also considered to be inappropriate for the developing urban context as it only requires flood risks to be managed on "existing authorised habitable floors". Existing authorised habitable floors is not a defined term and it is unclear if this refers to "existing" at the time of the NoR being confirmed or at the time of the outline plan of works.

3.13. The uncertainty around this condition means that there is a potential for future development on the Submitters land being placed at risk of being inundated to an unknown degree by the future works to implement the designation.

Future amenity/interface

3.14. It is acknowledged that proposed conditions 9-11 provides for the detailed design to be submitted with the outline plan of works phase and requires that design take into account the proposed urban environment, however there is no onus on the Requiring Authority to engage with and make changes to reflect any concerns raised by the adjoining landowners.

Noise Conditions

- 3.15. There is no certainty in the conditions that construction noise (and vibration) and future road noise will be measured for any development on the Submitters landholdings which may occur between the lodgement of the NoR and the implementation of the designation.
- 3.16. Given the extensive potential lapse period for the NoR and the fact that the land is earmarked for growth (which is scheduled to begin now based on Auckland Council's growth planning documents), it is inappropriate to exclude the realistic "future potential environment" – which in this case would include the land being development to accord with the proposed THAB zoning.

4. Relief sought

- 4.1. The Submitter seeks the following relief/decision:
- 4.1.1. The NoR be updated to take into account the urbanisation of the Drury West area, and necessary changes to address the concerns of the submitter raised above.
 - 4.1.2. The timing of NoR D1 is brought forward to align with current growth;
 - 4.1.3. Appropriate compensation for procurement of land by NZTA/Waka Kotahi to give effect to the NoR and any injurious affection to the Submitter's landholding;
- AND / OR
- 4.1.4. Any other such alternative and/or consequential relief as is necessary to satisfy the concerns of the Submitter.
- 4.2. The Submitter wishes to be heard in support of its submission.
- 4.3. If others make a similar submission, the Submitter will consider presenting a joint case with them at a hearing.



Submission by Firstgas Ltd

Drury Arterial Network - Ponga Road and Ōpāheke Road Upgrade // Ōpāheke North-South FTN Arterial // Waihoehoe Road East Upgrade // Jesmond to Waihoehoe West FTN Upgrade // Alteration to Designation 6707 State Highway 22 Upgrade

21 May 2021

Submission on Drury Arterial Network – Notice of Requirement

Submitter Details

Submitter:	Firstgas Limited
Address for service of submitter:	c/- Beca Limited, PO Box 264, Taranaki Mail Centre, New Plymouth 4340
Telephone // Mobile:	06 759 5744 // 027 463 3031
Email:	john.mccall@beca.com
Contact Person:	John McCall , Senior Planner

Submission

- This submission relates to the five Notice of Requirements (“**NoR**”s) in relation to the Drury Arterial Network (“**Project**”) – specifically, NoR D1 – D5.
- Firstgas Ltd’s (“**Firstgas**”) transmission lines and associated infrastructure are located within the Project area.
- This submission relates to parts of the project which potentially impact on the safe, efficient and effective operation, maintenance, replacement, upgrade, removal and/or development of the gas network within the Project area, as well as the ability to access that network.

General View

- Firstgas neither supports nor opposes the project.
- While further design refinement is required and much of the detail pertaining to enabling and protecting Firstgas’s assets within the Project area is yet to be discussed and agreed through detailed design, Firstgas is generally supportive of the framework presented in the Application for managing the effects on its assets, specifically:
 - (a) That the Project provides for the safe, efficient, and effective operation, maintenance, replacement, upgrade, removal and / or development of the gas transmission network (including ancillary equipment) within the Project area both during construction and the longer term;
 - (b) The provision of access for maintenance at all reasonable times, or emergency works at all times during construction activities is afforded to network utility operators through the Network Utilities Management Plan (“**NUMP**”); and
 - (c) The protection of the gas transmission network (including ancillary equipment) from third party land use and development both during construction and the longer term.

Decision Requested

- Firstgas seeks that if approved, a framework for both enabling and protecting the gas transmission network (including ancillary equipment) is established. Firstgas notes such a framework is generally provided for in the Application (as discussed further in this submission).

Public Hearing

- At this stage, and to protect its interests in the process, Firstgas would like to present its views at a public hearing.

Trade Competition Statement

- Firstgas is not a trade competitor.

Firstgas Ltd: Submission Documentation (NoR D1 – D5)

1 Introduction to Firstgas Ltd

Following the purchase of the gas transmission network from Vector Gas Ltd on 20 April 2016, Firstgas is now the owner and operator of approximately 2500km of high-pressure natural gas transmission pipelines throughout the North Island.

Pursuant to section 167 of the Resource Management Act 1991 ('RMA') (and section 15 of the Interpretation Act 1999), the Minister for the Environment gave notice on 5 July 2016 that the Amendment of Resource Management (Approval of National Gas Corporation of New Zealand Ltd as a Requiring Authority) Notice 1994, dated 22 July 2009 has been amended by replacing "Vector Gas Limited" with "Firstgas Limited". A copy of this notice can be supplied on request.

Firstgas' below ground gas transmission pipelines, supported by ancillary above-ground infrastructure, deliver gas from production stations in Taranaki through to various towns and locations throughout the North Island.

2 Understanding of the Project

Waka Kotahi NZ (formally the 'New Zealand Transport Agency') and Auckland Transport ("**AT**") have lodged five NoRs for the Project. These NoRs propose to alter an existing designation (no. 6707) for State Highway 22 in Drury (hereafter referred to as "**NoR D1**") and propose four new designations (referred to as "**NoR D2 – D5**") for future strategic transport corridors to support the planned urban growth in the Drury-Ōpāheke area of Auckland.

Firstgas understands the need for this route protection and agrees that it is critical to avoid a lack of certainty around private development investment, avoid disruption to future communities (e.g. if the infrastructure is developed following urbanisation) and / or avoid a loss in ability to influence good urban form.

However, as noted in the Drury Arterial Network Assessment of Effects on the Environment (Volume 2) report dated January 2021 (the "**Application**"), the Project will affect a range of utility providers including Firstgas.

Of note is the proposal to alter / relocate and potentially realign the existing Firstgas designation (no. 9104) which currently runs parallel to, and within, proposed NoR D4. However, Firstgas acknowledges it has been identified¹ as a Requiring Authority for which approval will be sought under section 177(1)(a) of the Resource Management Act 1991 ("**RMA**"), prior to any works being undertaken within its designation (no. 9104).

Firstgas understands that future design refinement is required and any potential impacts on utilities will be managed. In addition, the Application acknowledges that the requirement for ongoing

¹ Drury Arterial Network Assessment of Effects on the Environment (Volume 2) – Section 3.5, Table 3-3

engagement with affected utility providers (including Firstgas) will be covered in the designation conditions.

3 Firstgas assets within the Project area

Firstgas is the Requiring Authority for an area of land designated within the Auckland Unitary Plan as No. 9104 (identified as a gas transmission pipeline). The designation traverses Mill Road (Waikato District Council boundary), Pukekohe to 65 Highbrook Drive, East Tamaki. The designation includes both the underground gas transmission pipeline and above ground ancillary infrastructure. The 'purpose' of Designation 9104 is:

- The operation, maintenance, upgrade and renewal of the existing 350mm diameter gas transmission pipeline and all ancillary structures and activities associated with these works for transportation of natural gas; and
- The design, construction, operation, maintenance and renewal of a new pipeline generally alongside the existing pipeline and all ancillary structures and activities associated with these works for transportation of natural gas.

In addition to the aforementioned designation, Firstgas assets within the proposed Project area include both an aboveground valve site at 211 Waihoehoe Road (subject to NoR D3) and an additional gas transmission line which intersects both NoR D2 (Bremner Road) and NoR D1 (State Highway 22). It is noted that this gas transmission line is not designated. Protection is afforded to this gas transmission line via an easement only.

Firstgas is continuing discussions with Waka Kotahi and AT regarding the proposed programme of works. To date, these discussions have included the opportunity to review and provide comments on both the draft General Arrangement Drawings and draft condition for the NUMP for consideration.

4 Firstgas operating standards and codes

Firstgas has an obligation to ensure the safety of the pipeline network and the people living and working near this network. It operates under industry codes and standards which are strictly adhered to considering the nature of its assets and operations. Compliance with the technical requirements specified in these codes and standard ensures the protection and integrity of the pipeline is maintained.

Pipelines are required to meet the safety and operational requirements of the Health and Safety in Employment (Pipelines) Regulations 1999 and the operating code Standard AS2885 Pipelines – Gas and Liquid Petroleum (AS2885). In addition, Firstgas also have a number of in-house developed safety procedures that are applied to complete work that is commensurate with its' legislative requirements.

Adherence to these requirements ensures that Firstgas' maintenance and minor upgrading related activities will be undertaken safely - including for any works to relocate pipelines. Any changes to Firstgas' gas transmission network are required to be notified to Ministry of Business, Innovation & Employment under the requirements of the existing gas transmission pipeline authorisation.

Third party interference is one of the main risks to the safety and integrity of the underground pipelines. Activities which may affect the gas pipelines should take into account the location and protection requirements of the pipelines. Activities in the vicinity of gas transmission pipeline and ancillary equipment should be carried out in such a way so as not to compromise the safe and efficient operation of the gas transmission network.

The safety of its employees', contractors and the general public is of paramount importance to Firstgas.

5 Submission

Firstgas neither supports nor opposes the Project. Further design refinement is required and much of the detail pertaining to enabling and protecting Firstgas's assets within the Project area will be discussed and agreed through detailed design.

However, Firstgas is generally supportive of the framework presented in the Application for managing the effects on utility providers. In particular, Firstgas supports:

- 1) Recognition that the written consent of Firstgas (as the Requiring Authority for designation no. 9104) will be required under section 177(1)(a) of the RMA prior to any works being undertaken within its designation¹.
- 2) Confirmation that there are potential issues for the management and operation of the high-pressure transmission pipelines within the Project area – notably the planned growth surrounding these assets².
- 3) Acknowledgement that engagement with Firstgas will continue - particularly at the detailed design stage².
- 4) In principle, the proposed process for managing effects on the gas transmission network via a NUMP – subject to refinement of conditions through the ongoing engagement up to and during the detail design stage. Firstgas acknowledges that the NUMP will set out a process to be followed for Firstgas and Waka Kotahi / AT to work together during the detailed design and construction phases of the Project to manage construction and ongoing operational effects on the gas transmission network. In particular, Firstgas supports the proposed condition in the NUMP pertaining to the provision of access for maintenance at all reasonable times, or emergency works at all times during construction activities³.

Therefore, in principle, Firstgas **supports** the strategic objective of the Project and the framework presented in the Application regarding the management of effects on utility providers.

In the interest of transparency, the primary concerns of Firstgas regarding this Project are:

- 1) The maintenance of Firstgas' ability to ensure the safety of the pipeline network and the people living and working near this network (including the ability to undertake any operational and / or maintenance works without hinderance). This includes the provision of access for both maintenance and emergency works.
- 2) The management of any adverse effects of development or activities in close proximity to the existing gas network to the extent that adverse effects on the network are avoided or mitigated.

² Drury Arterial Network Assessment of Effects on the Environment (Volume 2) – Section 5.2.2.6.

³ Drury Arterial Network Assessment of Effects on the Environment (Volume 2) – Section 9.10.2.

- 3) In the event of the requirement to realign / relocate infrastructure, that a robust conditioned process (including agreements) is provided. It is Firstgas' expectation that its own contractors will undertake pipeline relocation works as a result of the nature of the work.
- 4) Any costs arising from the physical works, easement establishment, designation variations etc. associated with the Project are not allocated to Firstgas.

It is considered that adherence to the framework presented in the Application for managing the effects on utility providers will address these concerns.

IN THE MATTER of the Resource Management Act 1991
("RMA" or "the Act")

AND

IN THE MATTER of a submission to the **AUCKLAND COUNCIL** by **KARAKA AND DRURY LIMITED** in respect of **NOTICE OF REQUIREMENT D1: ALTERATION TO DESIGNATION 6707 STATE HIGHWAY 22 UPGRADE** by **WAKA KOTAHI**, being part of the **DRURY ARTERIAL NETWORK**

**SUBMISSION OF KARAKA AND DRURY LIMITED ON
NOTICE OF REQUIREMENT D1: ALTERATION TO DESIGNATION 6707
STATE HIGHWAY 22 UPGRADE**

TO: Planning Technician
Auckland Council
Level 24, 135 Albert Street
Private Bag 92300
Auckland 1142

Introduction

1. This submission is made by Karaka and Drury Limited ("KDL" or "the Submitter") on Notice of Requirement D1: Alteration to Designation 6707 State Highway 22 Upgrade ("NoR D1"). A similar submission has been lodged by KDL in respect of Notice of Requirement D2: Jesmond to Waihoehoe West Frequent Transit Network ("FTN") Upgrade ("NoR D2").
2. NoRs D1 and D2 were lodged on 28 January 2021 by Waka Kotahi and Auckland Transport respectively, as part of the package of Drury Arterial Network NoRs. In summary:
 - (a) NoR D1 seeks to widen the existing State Highway 22 from the Drury Interchange to Oira Creek, to a four-lane urban arterial with separated active transport facilities. It also includes installing signals at the Jesmond Road/State Highway 22 intersection.
 - (b) NoR D2 seeks to upgrade Jesmond Road, Bremner Road, Norrie Road and Waihoehoe Road West, to a four-lane FTN Arterial with separated active transport facilities.
3. KDL's position in relation to both NoRs is the same, as follows:
 - (a) KDL generally supports both NoR D1 and NoR D2, subject to:
 - (i) Such amendments as KDL considers are necessary to ensure that the NoRs adequately facilitate and provide for all transport infrastructure (in particular, intersections) and land use patterns as shown in the Drury Opaheke Structure Plan ("DOSP"); and

- (ii) Ensuring that any further amendments that are recommended be made to the NoRs do not adversely affect the planned (and consented) development already underway in Drury West.
- (b) KDL accordingly requests that Auckland Council ("the Council") recommend that both NoR D1 and NoR D2 be approved as notified, subject to the following:
 - (i) Such amendments as necessary to address KDL's concerns regarding consistency with the DOSP; and
 - (ii) Where any further amendments are recommended to address issues raised by other submitters, those amendments do not in any way impact on, impede or preclude the quality and timing of outcomes that KDL seeks to achieve for Drury West.
- 4. KDL is not a trade competitor for the purposes of section 308B of the Resource Management Act 1991 ("RMA").
- 5. This submission relates to NoR D1 in its entirety.

Context – KDL and MADE – the Auranga Development in Drury West

- 6. KDL is a related company of MADE Group Limited ("MADE"), which company has put in place the policy and planning framework that is enabling the development of a significant urban community, Auranga, in Drury West.
- 7. The first two stages of the Auranga Development have been authorised as follows:
 - (a) Drury Precinct 1 (Auranga A) via Plan Variation 15 ("PV15") to the then proposed Auckland Unitary Plan ("AUP"), which rezoned an area of approximately 84.6ha in Bremner Road, Drury, from Future Urban to a mix of Mixed Housing Suburban, Mixed Housing Urban, Terraced Housing and Apartment Building and Local Centre zones to facilitate residential development.
 - (b) Drury Precinct Expansion (Auranga B1) via Plan Change 6 ("PC6") to the AUP, which rezoned approximately 83ha of land in Drury West to the immediate west of Auranga A, known as Auranga B1, from Future Urban to a mix of Mixed Housing Suburban and Mixed Housing Urban to facilitate and support residential development on that land.
- 8. KDL has now applied for a further private plan change to authorise the next stage of the Auranga Development, Auranga B2, via Plan Change 51 ("PC51") to the AUP. PC51 has been set down for hearing in September 2021, and seeks to rezone 33.65 ha of land in Drury West from Future Urban Zone to 15.29 ha of Business: Town Centre zone, 13.75 ha of Residential: Terrace Housing and Apartment Buildings zone, and 4.61 ha of Residential: Mixed Housing Urban zone, and to introduce a new precinct.
- 9. Significant progress has already been made on the first two stages of the Auranga Development. At least 100 houses have already been built and are now occupied, with an additional 800 lots/houses consented and currently under construction. Overall, there is a community of 2,650 houses planned for the Drury 1 Precinct (and eventually approximately 6,000 to 8,000 houses in Drury West), whose needs must be catered for.
- 10. The provision of appropriate and sufficient infrastructure is therefore critical to KDL being able to progress its proposed development and ensure that it delivers a high quality and well connected urban community with sufficient transportation options and access. This includes the widening of State Highway 22 to enable a four-lane arterial road, and the construction of the Jesmond Road/State Highway 22 intersection (with signals).

Reasons for KDL's submission

11. KDL generally supports NoR D1, subject to such amendments as are required to address KDL's concerns regarding consistency with (and facilitation of) the DOSP.
12. In light of (and without limiting the generality of) the issues outlined above, the general reasons for KDL's position is that as notified and subject to satisfying the concerns of KDL, the NoR:
 - (a) Appropriately gives effect to or has regard to all applicable higher order planning instruments;
 - (b) Has adequately considered alternative sites, routes and methods for undertaking the proposed works;
 - (c) Is reasonably necessary for achieving Waka Kotahi's objectives for the proposed works;
 - (d) Promotes the sustainable management of natural and physical resources and is not contrary to Part 2 of the RMA, to the extent that it would:
 - (i) Ensure that any potential adverse effects are appropriately addressed;
 - (ii) Enable the social, economic and cultural well-being of the community in the Auckland Region; and
 - (iii) Meet the reasonably foreseeable needs of future generations; and
 - (e) Would enable quality planning outcomes to be achieved for Drury-Opaheke and Drury West in particular.
13. Without limiting the generality of the above, the particular reasons for KDL's submission are as follows.
14. KDL wishes to ensure that NoR D1 adequately recognises and integrates with both the transport network and land use pattern anticipated by the DOSP. KDL considers that as notified, NoR D1 will not adequately achieve this outcome. It therefore requires further amendment, in particular with respect to the following.

Recognition of road connections/intersections provided for in the DOSP

15. KDL has engaged with Supporting Growth and Waka Kotahi on several occasions regarding both the Drury Arterial Network project (in particular NoRs D1 and D2) and the development of Drury West. Waka Kotahi was also directly involved in the development of the DOSP.
16. As notified, KDL does not consider that the form and location of the intersections anticipated by the DOSP and PC51 are adequately provided for in (or facilitated by) NoR D1. Further, KDL considers that the form of intersections (in particular for the SH22/Jesmond Road intersection), being signals, should be specified as a condition of NoR D1.

Visual integration of SH22/Karaka Road with surrounding land use

17. The DOSP anticipates an urban form for Drury West which supports land use and transport integration, as well as creates a high quality pedestrian and cyclist environment. As such, NoR D1 must appropriately recognise that State Highway 22 will no longer be a highway in a rural context, but one which needs to visually integrate with the urban development that will occur adjacent to it, as anticipated through the DOSP.

As notified, KDL considers the NoR (and proposed conditions) are insufficiently robust to ensure that outcome.

Integration of stormwater infrastructure

18. Similarly, NoR D1 must appropriately recognise that all associated stormwater management/conveyance proposed for the State Highway 22 works should integrate with the development anticipated to occur on the surrounding land. In that regard, NoR D1 must ensure that all stormwater infrastructure required for the State Highway 22 works:
- (a) Recognises and integrates with the Stormwater Management Plan that KDL has already prepared for the PC51 land; and
 - (b) Avoids any risk of development on land adjacent to State Highway 22 (including within the PC51 area) being inundated to an unknown degree by the future works to implement the designation.

Appropriate recognition/assessment of receiving environment

19. With respect to the relevant receiving environment for NoR D1, the assessment of environmental effects for the Drury Arterial Network NoRs states (at page 74) as follows:

"The land surrounding the proposed alignment in Drury West is mostly zoned FUZ and forms part of the southern growth area and Drury-Ōpāheke Structure Plan area. The area is planned to undergo significant growth and change in the future. The FUZ is planned to urbanise in the next 10 years. The likely future land use environment in which NoR D1 will operate is therefore assumed to be an urban or developing urban environment. Based on the Drury-Ōpāheke Structure Plan and private plan changes lodged with Auckland Council, the land use pattern surrounding the Project is planned to be largely medium to high density residential, with a commercial centre east of Jesmond Road, a small centre at Oira Road and an industrial area to the north east of the alignment."

20. Consistent with this assessment, KDL considers that the conditions for NoR D1 must ensure that construction noise/vibration and operational noise limits from the SH22 works are appropriate for an urban environment (such as will likely exist when the designation is implemented), not a rural one. While KDL accepts that noise levels of future receivers cannot be predicted at this stage, it considers it would be inappropriate for the State Highway 22 works to be able to discount effects on likely future receivers.

Relief sought

21. For the foregoing reasons, KDL seeks the following outcome in relation to NoR D1:
- (a) That the Council recommend that NoR D1 be approved as notified, subject to such amendments as are necessary to address KDL's concerns as outlined above; and
 - (b) That the Council only recommend any further amendments be made to NoR D1 to address issues raised by other submitters, where those amendments would not in any way impact on, impede or preclude:
 - (i) The quality of planning outcomes that KDL seeks to achieve for Drury West; or
 - (ii) The timing in which those outcomes are delivered.
22. KDL wishes to be heard in support of its submission.

23. If others make a similar submission, KDL will consider presenting a joint case with them at a hearing.

KARAKA AND DRURY LIMITED, by its solicitors
and duly authorised agents, Berry Simons

H C Andrews

S J Berry / H C Andrews

Date: 21 May 2021

Karaka and Drury Limited's address for service in respect of this submission is as follows:

Karaka and Drury Limited
C/- Berry Simons
PO Box 3144
Auckland 1140

T: (09) 909 7316
E: helen@berrysimons.co.nz

SUBMISSION ON NOR PROJECT D1 – ALTERATION TO DESIGNATION 6707 STATE HIGHWAY 22 UPGRADE (NZTA) BY KĀINGA ORA HOMES AND COMMUNITIES

TO: Auckland Council
Private Bag 92300
Victoria Street West
Auckland 1010

Submission via email: unitaryplan@aucklandcouncil.govt.nz

KĀINGA ORA HOMES AND COMMUNITIES (“Kāinga Ora”) at the address for service set out below makes the following submission on Project D1 – Alteration to Designation 6706 State Highway 22 Upgrade (NZTA).

Background

1. Kāinga Ora was established in 2019 under the Kāinga Ora-Homes and Communities Act 2019. Kāinga Ora consolidates Housing New Zealand Corporation, HLC (2017) Ltd and parts of the KiwiBuild Unit. Under the Crown Entities Act 2004, Kāinga Ora is listed as a Crown entity and is required to give effect to Government policies.
2. Kāinga Ora is now the Government’s delivery entity for housing and urban development. Kāinga Ora will therefore work across the entire housing spectrum to build complete, diverse communities that enable New Zealanders from all backgrounds to have similar opportunities in life. As a result, Kāinga Ora has two core roles:
 - (a) being a world class public housing landlord; and
 - (b) leading and co-ordinating urban development projects.
3. Kāinga Ora’s statutory objective requires it to contribute to sustainable, inclusive, and thriving communities that:
 - (a) provide people with good quality, affordable housing choices that meet diverse needs; and
 - (b) support good access to jobs, amenities and services; and

- (c) otherwise sustain or enhance the overall economic, social, environmental and cultural well-being of current and future generations.
4. Kāinga Ora is focused on delivering quality urban developments by accelerating the availability of build-ready land, and building a mix of housing including public housing, affordable housing, homes for first home buyers, and market housing of different types, sizes and tenures.
 5. The public housing portfolio managed by Kāinga Ora in Auckland comprises approximately 29,500 dwellings¹. Auckland is a priority to reconfigure and grow Kāinga Ora's housing stock to provide efficient and effective public and affordable housing that is aligned with current and future residential demand in the area, and the country as a whole.
 6. Kāinga Ora has a shared interest in the community as a key stakeholder, alongside local authorities. Kāinga Ora's interests lie in the provision of public housing to persons who are unable to be sustainably housed in private sector accommodation, and in leading and co-ordinating residential and urban development projects. Kāinga Ora works with local authorities to ensure that appropriate services and infrastructure are delivered for its developments.
 7. In addition to its role as a public housing provider, Kāinga Ora also has a significant role as a landowner, landlord, rate payer and developer of residential housing. Strong relationships between local authorities and central government are key to delivering government's priorities on increasing housing supply.
 8. Policy decisions made at both central and local government level have impacts on housing affordability. The challenge of providing affordable housing will require close collaboration between central and local government to address planning and governance issues to reduce the cost of construction, land supply constraints, infrastructure provisions and capacity as well as an improved urban environment.
 9. Kāinga Ora is interested in all issues that may affect the supply and affordability of housing. These include the provision of services and infrastructure and how this may impact on Kāinga Ora existing and planned housing, community development and Community Group Housing ("CGH") suppliers.

¹ As of March 2021; <https://kaingaora.govt.nz/publications/housing-statistics/>

10. In addition to the above, Kāinga Ora will play a greater role in urban development in New Zealand. The legislative functions of Kāinga Ora, as outlined in the Kāinga Ora Act, illustrate this broad mandate and outline two key roles of Kāinga Ora in that regard:
- a) initiating, facilitating and/or undertaking development not just for itself, but in partnership or on behalf of others; and
 - b) providing a leadership or coordination role more generally.
11. Notably, Kāinga Ora’s statutory functions in relation to urban development extend beyond the development of housing (which includes public housing, affordable housing, homes for first time buyers, and market housing) to the development and renewal of urban environments, as well as the development of related commercial, industrial, community, or other amenities, infrastructure, facilities, services or works.

Scope of Submission

12. The submission relates to the Notice of Requirement (“**NoR**”) to Alter Designation 6707 (Project D1) in its entirety.

The Submission is:

13. Kāinga Ora **supports** the NoR **in part**, which seeks to widen the existing Stage Highway 22 from State Highway 1 to Oira Creek to a four lane arterial with active transport facilities (Project D1). This is subject to Kāinga Ora’s relief being granted and matters raised in its submission being addressed.
14. In particular, but without limiting the generality of the above:
- a) Kāinga Ora supports in part the proposed NoR Project D1. The NoR’s are critical to the delivery of transportation infrastructure that is necessary to give effect to the Drury Ōpāheke Structure Plan but also to support the live zoning sought by the various parties of the Drury Plan Change applications.
 - b) Kāinga Ora considers the designation process is appropriate due to their regional significance and the ability of the designation process to avoid unreasonable delay and the relatively certainty it will provide from a regulatory perspective in the wider context of infrastructure delivery in Drury.

- c) Kāinga Ora generally supports the proposed conditions of the designation and the use of the mechanisms outlined to avoid, remedy, or mitigate potential adverse effects, including but not limited to: Stakeholder and Communication Management Plans (SCMP), Construction Traffic Management Plan (CTMP), Cultural Advisory Report, Cultural Monitoring Plan, Heritage and Archaeological Management Plan (HAMP), Urban and Landscape Design Management Plan (ULDMP), Pre-construction survey, Bird Management Plan (BMP), Tree Management Plan (TMP), Construction Environmental Management Plan (CEMP), Construction Noise and Vibration Management Plan (CNVMP), Construction Noise and Vibration Monitoring Schedule (CNVMS) and Network Utility Management Plan (NUMP).
 - d) Kāinga Ora supports as-notified the use of the outlined mechanisms to regularly communicate with the community, stakeholders and land owners/occupiers during construction, including timeframes, including but not limited to: SCMP, CNVMP, CNVMS, CTMP, CEMP, S176(1)(b) RMA approval process.
15. Notwithstanding the general support of Project D1, Kāinga Ora opposes in part the proposed spatial extent of the amended designation 6706 (Project D1) where the spatial extent of the designation exceeds the land required for the works. It is likely that urban development may commence adjacent to the proposed alteration to the designation before Project D1 is complete. The timings for urbanisation of the Drury Ōpāheke plan change areas relative to the implementation of the Project is unconfirmed. Although the designation would not preclude the continued use of any affected land, anyone (other than the requiring authority with an earlier designation) would be restricted from carrying out work on the designated land that would prevent or hinder the designated work without first obtaining the requiring authority's consent. Therefore, Kāinga Ora suggest that the extent of land required for construction purposes is confirmed by the requiring authority at this time, which should be limited to only the amount of land necessary for construction purposes.
16. Additionally, it is noted in accordance with the definitions of the AUP, the front yard setback is "a line parallel to that front boundary, restriction or designation". Therefore, the front yard for sites adjoining the designation will set back from the designation extent and effect development on these sites. This may lead to unintended outcomes where cumulatively, large areas of land are inefficiently utilised for urban development as a result of the front yard application noted above.

17. The proposed alteration to the designation includes land required for temporary works. On completion of the works, the designation boundary will be reviewed and may be removed from any land not required for the on-going operation, maintenance, or mitigation of effects of the project. The removal of any land no longer required for the on-going operation, maintenance or mitigation of effects of the project, should be undertaken as soon as practicable to provide certainty to adjacent land owners. While Kāinga Ora generally supports this notion, it is sought that an indicative timeframe is incorporated into the designation conditions to provide better certainty to affected land owners as to when the requiring authority may seek to remove the designation from their land.
18. This has implications on potential development outcomes, as any redevelopment of sites adjoining the designation corridor may become significantly set back from the road frontage, leading to adverse urban design and streetscape outcomes.
19. The indicative designs do not appear to include frequent crossing points for pedestrians and/or cyclists across each arterial. Therefore, there is the potential for the proposed arterials to create a severance effect, which would negatively impact on future development of adjoining properties. Kāinga Ora recommend that the indicative design drawings are updated to confirm that access across the designated route is provided for. Otherwise, a condition should be included in the designation to the effect that pedestrian and cycling access be provided across the route to avoid severance of land on either side of the State Highway.
20. The indicative design drawings for D1 appear to propose steep slopes on either side of the road corridor as a result of battering slopes for construction purposes; resulting in a slope up to a 1 in 3 gradient. This land is likely to be relinquished once the construction is complete. However, the steepness of the land is likely to result in adverse effects to adjoining property owners as it is too steep for safe vehicular access to the site. Adverse effects associated with potential stormwater runoff may also be exacerbated by a steep gradient. Kāinga Ora seek that any battered slopes on private property be left to a permitted gradient for safe and efficient vehicle access as per the Auckland Unitary Plan (Operative in Part) standards, before land is relinquished from the designation.

Relief Sought

21. Kāinga Ora seeks the following decision from Auckland Council on NoR Project D1:

- (a) That the spatial extent of the NoR is reviewed so that it may be refined to minimise the extent of effected land, or methods are introduced to ensure that land set aside for construction staging does to compromise efficient land use development in the meantime. Only the area of land required for construction and infrastructure should be included in the NoR;
- (b) That the preparation of the Urban and Landscape Design Management Plan (ULDMP) will specifically address and account for land that will be used for temporary works and subsequently removed from the designation upon completion of construction works, so as to ensure an efficient land use outcome is achieved.
- (c) That condition 4 (Designation Review) should include a timeframe on both;
 - (i) When the extent of the designation will be reviewed; and
 - (ii) When the Requiring Authority will give notice to Auckland Council in accordance of section 182 of the RMA for the removal of those parts identified above;

to provide certainty to adjacent land owners and to ensure that the designation is expeditiously removed, ensuring that land being developed adjacent to the designation is not required to apply a yard setback arbitrarily, which may result in inefficient land use and poor frontage outcomes.
- (d) That the gradient of land adjoining the road corridor should be reviewed and minimised to ensure:
 - (i) safe pedestrian and vehicular access can be provided to the adjoining sites, following the completion of construction; and
 - (ii) no adverse effects associated with potential stormwater runoff from roads to adjoining sites.
- (e) For the avoidance of doubt, the applicant should be complying with the World Health Organisation's community noise standards report in relation to Operational Noise Limits. It is unclear as to whether the NZS noise standards incorporated into the proposed designation conditions comply with these limits.

- (f) The provision of suitable pedestrian and/or cyclist access across the proposed routes should be reviewed and included to avoid severance effects between land on either side of the State Highway.
 - (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.
 - (h) Any other alternative or consequential relief to give effect to this submission.
22. In the absence of the relief sought, Project D1:
- (a) is contrary to the sustainable management of natural and physical resources and is otherwise inconsistent with Part 2 of the Act;
 - (b) will compromise development outcomes;
 - (c) will in those circumstances impact on the ability of people and communities to provide for their social, economic and cultural wellbeing.
23. Kāinga Ora does not consider it can gain an advantage in trade competition through this submission.
24. Kāinga Ora wishes to be heard in support of its submission.
25. If others make a similar submission, Kāinga Ora would be willing to consider presenting a joint case with them at hearing.

Dated this 21st day of May 2021



Brendon Liggett
Manager – Development Planning
Kāinga Ora Homes and Communities

ADDRESSES FOR SERVICE:

Campbell Brown Planning Ltd

PO Box 147001

Auckland

Attention: Michael Campbell

Email: michael@campbellbrown.co.nz

Kāinga Ora – Homes and Communities

PO Box 74598

Greenlane, Auckland

Attention: Tammy Billman

Email: developmentplanning@hnzc.govt.nz

From: NoticeOfRequirementOnlineSubmissionForm@donotreply.aucklandcouncil.govt.nz
To: [Unitary Plan](#)
Subject: [ID:248] Notice of Requirement online submission - Susan Andrews
Date: Friday, 21 May 2021 4:46:03 PM
Attachments: [HNZPT Submission - NoR D1 - \(SH22\) - 21.05.21.pdf](#)

The following customer has submitted a Notice of Requirement online submission.

Contact details

Full name of submitter: Susan Andrews

Organisation name: Heritage New Zealand Pouhere Taonga

Full name of your agent:

Email address: sandrews@heritage.org.nz

Contact phone number: 09 302 9920

Postal address:

Submission details

Name of requiring authority: Waka Kotahi New Zealand Transport Agency

The designation or alteration: Drury Arterials Network: Alteration to Designation 6707 State Highway 22 Upgrade (NZTA)

The specific provisions that my submission relates to are:
Please see attached submission.

Do you support or oppose the Notice of Requirement? I or we support the Notice of Requirement.

The reason for my or our views are:
Please see attached submission.

I or we seek the following recommendation or decision from Auckland Council:
Please see attached submission.

Submission date: 21 May 2021

Supporting documents
HNZPT Submission - NoR D1 - (SH22) - 21.05.21.pdf

Attend a hearing

Do you wish to be heard in support of your submission? Yes

Would you consider presenting a joint case at a hearing if others have made a similar submission?
Yes

Declaration

I accept and agree that:

- by taking part in this public submission process that my submission (including personal details, names and addresses) will be made public,
- I or we must serve a copy of the submission on the person who gave the notice of

requirement as soon as reasonably practicable after submitting to Auckland Council.



21st May 2021

Auckland Council
Private Bag 92300
Auckland 1142

Dear Sir or Madam

SUBMISSION OF HERITAGE NEW ZEALAND POUHERE TAONGA TO NOTICE OF REQUIREMENT TO DESIGNATE LAND

To: Auckland Council

Name of submitter: Heritage New Zealand Pouhere Taonga

1. **This is a submission on a notice of requirement from Waka Kotahi (NZTA) for an alteration to Designation 6707:**
 - To provide for widening the existing State Highway 22 from State Highway 1 (SH1) to Oira Creek to a four lane arterial with active transport facilities.
2. **The specific parts of the application that this Heritage New Zealand submission relates to are:**
 - The entire proposal and its effects on historic heritage and Māori cultural values.
3. **Heritage New Zealand submission is:**
 - Heritage New Zealand supports the proposal with amendments.
4. **The reasons for Heritage New Zealand's position are as follows:**
 - Heritage New Zealand Pouhere Taonga (formerly New Zealand Historic Places Trust) is an autonomous Crown Entity with statutory responsibility under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) for the identification, protection, preservation and conservation of New Zealand's historical and cultural heritage. Heritage New Zealand is New Zealand's lead agency for heritage protection.
 - Heritage New Zealand supports the proposed Heritage and Archaeology Management Plan (HAMP) condition for the designation to undertake further desktop and field research to inform detailed design before construction commences; to confirm methods for identification and assessment of historic heritage and potential historic heritage sites; and to help determine the appropriate forms of mitigation such as interpretation within the designation, including setting out HNZPTA authority requirements.
 - Heritage New Zealand supports the specific recommendations for detailed design and construction work made in the Assessment of Effects on Historic Heritage as overarching principles to be followed:

- Wherever possible, known (historic heritage) sites should be avoided, (including in relation to temporary construction works areas, such as lay downs, silt fencing, water bunds and spoil heaps).
 - Where archaeological sites are suspected of extending into the works area, further research including non-invasive techniques and possible Section 56 authority investigations under the HNZPTA should be undertaken to clarify site extents and effects of construction.
- Heritage New Zealand considers that minor amendments to the proposed HAMP condition (as detailed in Appendix A), should be made to ensure historic heritage matters are considered and addressed in accordance with the RMA definition of historic heritage, and that archaeological resources are not split out as a separate consideration (whilst acknowledging the need to identify those places that have specific requirements as pre-1900 archaeological sites in accordance with HNZPTA), but are considered in the context of all historic heritage resources that contribute to an understanding and appreciation of New Zealand's history and culture.
 - Heritage New Zealand considers that the conditions should include provision for mitigation of adverse effects on historic heritage across the designation via interpretation of the heritage sites and landscapes that will be lost and/or altered by the project works, (including via incorporation into detailed design), to enable increased public awareness and amenity of the historic heritage of the area.
 - Interpretation should be inclusive of all layers of histories/narratives represented across the designation relating to the historic heritage of the area, in accordance with the ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value, 2010, specifically Principle 2. 'Understanding cultural heritage value'.

Cultural Values

- Heritage New Zealand supports proposed designation conditions which seek to ensure ongoing involvement of Mana Whenua in project design and construction and the continued recognition of Mana Whenua cultural values throughout the project lifecycle.

This includes provision for Mana Whenua involvement in the preparation of a Cultural Advisory Report, in the development of other management plans (including the HAMP and Urban and Landscape Design Management Plan), and in the preparation of a Cultural Monitoring Plan.
- The AEE states that the Historic Summary prepared by Ngāti Tamaoho has been used as a reference by the project team. While acknowledging the consultation that has occurred to this point and proposals for its continuation, along with the proposed Cultural Advisory Report, Heritage New Zealand considers the delivery of roading projects within the designations should be informed by Cultural Impact Assessments from all Iwi with interests in these areas. The current summary document is not an adequate substitute for the full documentation of Maori cultural values, interest and associations, and the potential impacts of the project on these.

5. **Heritage New Zealand seeks the following decision:**

- That the Notice of Requirement application be granted subject to amendments to the designation conditions as detailed in Appendix A attached.
- Any alternative, further or consequential relief necessary to address the matters outlined in this submission.

6. **Heritage New Zealand wishes to be heard in support of our submission.**

7. If others make a similar submission, Heritage New Zealand will consider presenting a joint case with them at the hearing.

Yours sincerely



Sherry Reynolds
Director Northern Region

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APPENDIX A – DESIGNATION CONDITIONS AMENDMENTS SOUGHT

22. Historic Heritage and Archaeology Management Plan (HHAMP)

- (a) A HHAMP shall be prepared in consultation with Council, HNZPT and Mana Whenua prior to the Start of Construction for a Stage of Work.
- (b) The objective of the HHAMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable appropriate. To achieve the objective, the HHAMP shall identify:
- (i) methods for the identification and assessment of potential historic built heritage and archaeological places and sites (including built and archaeological sites) within the Designation to inform detailed design.
 - (ii) known and potential historic heritage places and archaeological sites and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted;
 - (iii) any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded in the NZAA SRS (ArchSite) and/or the CHI;
 - (iv) roles, responsibilities and contact details of project personnel, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of project works, compliance with AUP accidental discovery rule, and monitoring of conditions;
 - (v) specific areas to be investigated, monitored and recorded to the extent these are directly affected by the project;
 - (vi) the proposed methodology for investigating and recording post-1900 historic heritage sites (including buildings) that need to be demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the HNZPT Archaeological Guidelines Series No. 1 (AGS 1A): Investigation and Recording of Buildings and Standing Structures (4 July 2014/November 2018), or any subsequent version; and in relation to built heritage, the International Council on Monuments and Sites New Zealand Charter 2010;
 - (vii) methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve Ngā Taonga Tuku Iho (treasures handed down by our ancestors) and where feasible and practicable to do so;
 - (viii) methods for protecting or minimising adverse effects on historic heritage and archaeological places and sites within the Designation during project works as far as practicable appropriate, (for example fencing around historic heritage and archaeological places and sites to protect them from damage during construction);
 - (ix) measures to mitigate adverse effects on historic heritage that enable increased public awareness and amenity if the historic heritage if the area, including interpretation, and donation of found items (as appropriate); and
 - (ix) training requirements and inductions for contractors and subcontractors on historic heritage and archaeological places and sites within the Designation (other than where an archaeological authority is in place), and legal obligations relating to accidental discoveries of human remains and kōiwi; an archaeological site; a Maori cultural artefact/taonga tuturu; or a protected New Zealand object as defined in the Protected Objects Act 1975 (including and fossil or sub fossil). The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified and Experienced Person and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 8).

Advice Note: *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.*

Papakura Local Board views

23 Local Board views on Notices of Requirement for the Drury Arterial Network

A memo was tabled at the meeting with additional information relating to Tui Street, Drury.

A copy has been placed on the official minutes and is available on the Auckland Council website as a minutes attachment.

Resolution number PPK/2021/112

MOVED by Chairperson B Catchpole, seconded by Member G Hawkins:

That the Papakura Local Board:

- a) **provide the following local board views on the Notices of Requirement for the Drury Arterial Network, being an alteration to Designation 6707 and four new designations**
 - 1) **The board supports the notices of requirement for the Drury Arterial Network.**
 - 2) **The board believe if four lane arterials are proposed, plans should be put in place now for the designation to include slip roads for future developments similar to that on Te Irirangi Drive.**
 - 3) **The board has concerns about the proposal to change the currently signalised Opāheke Road and Settlement Road intersection into a roundabout. The board believes the volumes of traffic on Settlement Road will not allow the Opāheke Road traffic to cross the intersection and vice versa once development occurs in Opāheke.**
 - 4) **The board requests Auckland Transport further investigate solutions for the Drury Domain car park. The board notes that the topography of this location is significantly higher than the rugby club, the library, the community hall and cenotaph. The board therefore requests that this also be taken into consideration at design stage in order to provide easy multi-modal access to these facilities.**
 - 5) **The board has concerns about the proposed left only turn when travelling south into Tui Street and left only out of Tui Street as many users of the Domain come from different directions and questions how these people will easily and safely access Tui Street. This would force people to do a u-turn manoeuvre if wishing to head north coming out of Tui Street.**
 - 6) **The board requests the Parks and Community Facilities staff explore potential mitigation options, taking into account that it would require relocating the existing playground to another location within the Drury Domain and that any costs for this relocation to be borne by the applicant.**
 - 7) **The board requests that the applicant be required to replace or replant any existing vegetation removed to align with the board's Urban Ngahere project.**
- b) **appoint Brent Catchpole (Chairperson) and Jan Robinson (Deputy Chairperson) to speak to the local board views at a hearing on the Notices of Requirement.**
- c) **delegate authority to the chairperson of Papakura Local Board to make a replacement appointment in the event the local board member appointed in resolution b) is unable to attend the hearing on the Notices of Requirement.**

CARRIED

Attachments

A 23 June 2021 - Memo – Drury Arterials Network NoRs

Franklin Local Board views

16 Local Board views on Notices of Requirement for the Drury Arterial Network

Resolution number FR/2021/93

MOVED by Member A Cole, seconded by Deputy Chairperson A Fulljames:

That the Franklin Local Board:

- a) **provide the following local board views on the Notices of Requirement for the Drury Arterial Network, being an alteration to Designation 6707 and four new designations:**
 - i) **The requirement area on State Highway 22 should include sufficient land area to facilitate future treatment of critical intersections including at Great South Road, the intersection of Burberry Road, Jesmond Road and Oira Road**
- b) **appoint the local board Chair to speak to the local board views at a hearing on the Notices of Requirement**
- c) **delegate authority to the chairperson of Franklin Local Board to make a replacement appointment in the event the local board member appointed in resolution b) is unable to attend the private plan change hearing.**

CARRIED

APPENDIX FIVE

PROPOSED NOTICE OF REQUIREMENT CONDITIONS

Abbreviations and Definitions

Acronym/Term	Definition
<u>Activity sensitive to noise</u>	<u>For the purpose of Condition 19, an activity sensitive to noise is 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.</u>
AUP	Auckland Unitary Plan
ARI	Annual Recurrence Interval
Average increase in flood hazard	Flow depth times velocity.
BMP	Bird Management Plan
BPO or Best Practicable Option	Has the same meaning as in section 2 of the RMA 1991.
CEMP	Construction Environmental Management Plan
<u>Certification of management plans</u>	<p><u>Confirmation from the Manager that a plan has been prepared in accordance with the condition to which it relates.</u></p> <p><u>A management plan shall be deemed certified:</u></p> <ul style="list-style-type: none"> (a) <u>where the Requiring Authority has received written confirmation from Council that a management plan is certified; or</u> (b) <u>twenty working days from the submission of a management plan where no written confirmation of certification has been received.</u>
<u>Certification of material changes to management plans</u>	<p>Confirmation from the Manager that a plan or material change to a plan has been prepared in accordance with the condition to which it relates.</p> <p>A management plan shall be deemed certified:</p> <ul style="list-style-type: none"> (a) where the Requiring Authority has received written confirmation from Council that a management plan is certified; or (b) five working days from the submission of a management plan where no written confirmation of certification has been received. <p>A material change to a management plan shall be deemed certified:</p> <ul style="list-style-type: none"> (a) where the Requiring Authority has received written confirmation from Council that the material change to the management plan is certified; or (b) ten working days from the submission of the material change to the management plan where no written confirmation of certification has been received.
<u>CHI</u>	<u>Auckland Council Cultural Heritage Inventory</u>
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.
Construction Works	Activities undertaken to construct the Project excluding Enabling Works.
Council	Auckland Council
CPTED	Crime prevention through environmental design
CTMP	Construction Traffic Management Plan
EIANZ Guidelines	Ecological Impact Assessment: EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, second edition, dated May 2018.
<u>Effect</u>	<u>Has the same meaning as in section 3 of the RMA 1991</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; and • establishment of mitigation measures (such as erosion and sediment control measures, temporary noise walls, earth bunds and planting).
Flood prone area	A potential ponding area that relies on a single culvert for drainage and does not have an overland flow path.
Habitable floor	Any room (floor) in an authorised building <u>existing at the start of detailed design for a Stage of Work which is used for residential living activity</u> , excluding a laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
Habitable floor level that has existing flooding	Where the flood level using the pre Project model scenario is above the existing authorised the habitable floor level.
<u>Heavy Vehicle</u>	<u>A motor vehicle having a gross laden weight exceeding 3500 kg</u>
<u>Historic heritage</u>	<u>Has the same meaning as in section 2 of the RMA 1991</u>
HAHMP	<u>Historic Heritage and Archaeology</u> Management Plan
HNZPT	Heritage New Zealand Pouhere Taonga
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
Manager	The Manager – Resource Consents of the Auckland Council, or authorised delegate.

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.
MID	Maintenance in Design
Network Utility Operator	Has the same meaning as set out in section 166 of the RMA.
Ngakeroa Ngākōroa Stream Wetlands	For the purpose of Condition 23 <u>26</u> and 24 <u>27</u> , the Ngakeroa Ngākōroa Stream Wetlands is the area shown in Schedule 2.
NOR	Notice of Requirement
NUMP	Network Utilities Management Plan
Outline Plan	An outline plan prepared in accordance with section 176A of the RMA.
Project	Upgrade of State Highway 22 (SH22) from the Drury Interchange at State Highway 1 to Oira Creek, including active transport facilities, and associated infrastructure.
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.

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).
Protected Premises and Facilities (PPF)	Protected Premises and Facilities as defined in New Zealand Standard NZS 6806:2010: <i>Acoustics – Road-traffic noise – New and altered roads</i> .
Requiring Authority	Has the same meaning as section 166 of the RMA and for this Designation is Waka Kotahi NZ Transport Agency (Waka Kotahi).
RMA	Resource Management Act (1991)
SECMP	Stakeholder <u>Engagement and</u> <u>Communications</u> Management Plan
SID	Safety in Design
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 and Experienced Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability and competence.
<u>UID</u>	<u>Unique Identifier</u>
ULDMP	Urban and Landscape Design Management Plan

General Conditions

1. Activity in General Accordance with Plans and Information

- (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project Description and Concept Plan in Schedule 1.
- (b) Where there is inconsistency between:
 - (i) the Project Description and Concept Plan in Schedule 1 and the requirements of the following conditions, the conditions shall prevail; and
 - (ii) the Project Description and Concept Plan in Schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail.

2. (a) Conditions 1 – 44 of this designation shall only apply to the work described in the Project Description and Concept Plan in Schedule 1.

- (b) Except where explicitly provided for, conditions 1 – 44 do not apply to works associated with on-going operation, safety improvements, and maintenance of the existing state highway, or the upgraded state highway following construction of the Project.

3. Project Information

- (a) A Project website, or equivalent virtual information source, shall be established by the Requiring Authority within 12 months of the date on which this designation is included in the AUP and maintained for the duration of the Project. The Project website or virtual information source shall as a minimum include, but not be limited to, making these conditions and finalised management plans required by the conditions publicly available; and ~~shall provide~~ information on:
 - (i) the status of the Project;
 - (ii) anticipated construction timeframes; and
 - (iii) contact details for enquiries and the relevant project Liaison Person.
- (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.

4. Designation Review

- (a) ~~As soon as practicable following~~ Within 6 months of the Completion of Construction the Requiring Authority shall:
 - (i) review the extent of the designation to identify any areas of designated land that it no longer requires for the on-going operation, maintenance or mitigation of effects of the Project; and
 - (ii) give notice to Auckland Council in accordance with section 182 of the RMA for the removal of those parts of the designation identified above.

5. Network Utility Operators (Section 176 Approval)

- (a) Prior to the start of Construction Works, Network Utility Operators with existing infrastructure located within the designation will not require written consent under section 176 of the RMA for the following activities:
 - (i) operation, maintenance and urgent repair works;
 - (ii) minor renewal works to existing network utilities necessary for the on-going provision or security of supply of network utility operations;
 - (iii) minor works such as new service connections; and
 - (iv) the upgrade and replacement of existing network utilities in the same location with the same or similar effects as the existing utility.
- (b) To the extent that a record of written approval is required for the activities listed above, this condition shall constitute written approval.

Pre-construction Conditions

6. Outline Plan(s)

- (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) Network Utilities Management Plan;
 - (ii) Construction Noise and Vibration Management Plan;
 - (iii) Urban and Landscape Design Management Plan;
 - (iv) Historic Heritage and Archaeology Management Plan;
 - (v) Bird Management Plan; ~~and~~
 - (vi) Tree Management Plan; ~~;~~
 - (vii) Construction Environmental Management Plan; and
 - (viii) Construction Traffic Management Plan.

7. Management Plans

- (a) Any management plan shall:
 - (i) be prepared and implemented in accordance with the relevant management plan condition (~~refer to Conditions 8 to 26~~);
 - (ii) be prepared by a Suitably Qualified and Experienced Person(s);
 - (iii) include sufficient detail relating to the management of effects associated with the relevant activities and/or Stage of Work to which it relates;
 - (iv) summarise comments received from Mana Whenua and other stakeholders as required by the relevant management plan condition, along with a summary of where comments have:
 - A. been incorporated; and
 - B. where not incorporated, the reasons why;
 - (v) be submitted as part of an Outline Plan pursuant to s176A of the RMA, with the exception of ~~SECMPs, CEMPs, CTMPs~~ and CNVMP Schedules; and
 - (vi) once finalised, uploaded to the Project website or equivalent virtual information source.
- (b) Any management plan developed in accordance with Condition 7(a) 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; and
 - (iii) if there is a material change required to a management plan which has been submitted with an Outline Plan in accordance with Condition 6, 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 ~~SECMPs, CEMPs or CTMPs~~ are to be submitted to the Council for information.

Advice Note: Material change will include amendment to any base information informing the management plan or any process, procedure or method of the management plan which has the potential to increase adverse effects on a particular value. For clarity changes to personnel and contact schedules do not constitute a material change.

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 ngā Taonga taonga Tuku tuku Iho iho nō ngā tūpuna ('treasures handed down by our ancestors')

affected by the Project, to inform their management and protection. To achieve the objective, Requiring Authority shall invite ManaWhenua 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; sets out the desired outcomes for management of potential effects on cultural sites, landscapes and values;
 - (ii) identifies traditional cultural practices within the area that may be impacted by the Project;
 - (iii) identifies opportunities for restoration and enhancement of identified cultural sites, landscapes and values within the Project area;
 - (iv) 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 and Archaeological Management Plan, and the Cultural Monitoring Plan referred to in Condition 16; and
 - (v) 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 8(c) above will cease to apply if:
- (i) Mana Whenua have been invited to prepare a Cultural Advisory Report by a date at least 6 months prior to start of Construction Works; and
 - (ii) Mana Whenua have not provided a Cultural Advisory Report within six months prior to start of Construction Works.

9. Urban and Landscape Design Management Plan (ULDMP)

- (a) A ULDMP shall be prepared prior to the Start of Construction for a Stage of Work.
- (b) The objective of the ULDMP(s) is to:
- (i) enable integration of the Project's permanent works into the surrounding landscape and urban context; and
 - (ii) ensure that the Project's ~~manages~~ potential adverse landscape and visual effects are avoided, remedied or mitigated as far as practicable and it contributes to a quality urban environment.
- (c) The ULDMP shall be prepared in general accordance with:
- (i) Waka Kotahi Urban Design Guidelines: Bridging the Gap (2013) or any subsequent updated version;
 - (ii) Waka Kotahi Landscape Guidelines (2013) or any subsequent updated version; and
 - (iii) Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version.
- (d) To achieve the objective, the ULDMP(s) shall provide details of how the Project:
- (i) is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character, and open space zones;
 - (ii) provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections;
 - (iii) promotes inclusive access (where appropriate); and
 - (iv) promotes a sense of personal safety by aligning with best practice guidelines, such as:
 - A. Crime Prevention Through Environmental Design (CPTED) principles;
 - B. Safety in Design (SID) requirements; and
 - C. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures.

10. (a) The ULDMP(s) shall include:
- (i) a concept plan which depicts the overall landscape and urban design concept, and explains the rationale for the landscape and urban design proposals;
 - (ii) developed design concepts, including principles for walking and cycling facilities and public transport; and landscape and urban design details that cover the following:
 - A. road design – elements such as intersection form, earthworks contouring including cut and fill batters, benching, spoil disposal sites, median width and treatment, roads width and treatment;
 - B. roadside elements – such as lighting, sign gantries and signage, fences, and median barriers;
 - 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. integration of open space linkages;
 - I. historic heritage items places with reference to the HA~~H~~M~~P~~ in Condition ~~22~~3; ~~and~~
 - J. re-instatement of construction and site compound areas, driveways, accessways and fences; ~~and~~
 - K. visual screening of temporary construction areas and site compound areas adjacent to urban properties.
11. (a) The ULDMP(s) 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 in Condition ~~25~~ 27. 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 and residual land to integrate with adjacent land uses, streams, riparian margins and open space zones, including ecological linkages identified in the Drury-Ōpāheke Structure Plan or any subsequent plan;
 - D. planting of stormwater wetlands;
 - E. identification of vegetation to be retained and any planting requirements under Conditions ~~23~~ 26 and ~~24~~ 27;
 - F. integration of any planting requirements required by conditions of any resource consents for the Project; and
 - G. reinstatement 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;
 - (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 for restoration purposes; ~~and~~
 - F. restoration planting which remedies the loss of ecosystem services provided by

vegetation identified for removal, including the replacement of planting which fails to establish

- (iv) a maintenance plan in accordance with the Waka Kotahi P39 Standard Specification for Highway Landscape Treatments (2013) or any subsequent updated version.
- (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 may be reflected in the ULDMP.
- (c) The Parks Planning Team Leader shall be invited to participate in the development of the ULDMP(s) to provide input into open space matters including how desired outcomes for avoiding, remedying or mitigating the Project's adverse effects on open space zoned land and associated linkages may be reflected in the ULDMP.

12. Flood Hazard

- (a) The Project shall be designed to achieve the following flood risk outcomes:
 - (i) no increase in flood levels for ~~existing authorised~~ habitable floors that are already subject to flooding;
 - (ii) no increase in the number of habitable floors subject to flooding;
 - (iii) no more than a 10% reduction in freeboard for ~~existing authorised~~ habitable floors;
 - (iv) no increase of more than 50mm in flood level on land zoned for urban or future urban development where there is no existing dwelling;
 - (v) no new flood prone areas; and
 - (vi) no more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to ~~authorised~~ habitable dwellings existing at the start of detailed design for a Stage of Work.
- (b) Compliance with this condition shall be demonstrated in the Outline Plan, which shall include flood modelling of the pre-Project and post-Project 100 year ARI flood levels (for Maximum Probable Development land use and including climate change).
- (c) Where the above outcomes can be achieved through alternative measures outside of the designation such as flood stop banks, flood walls, raising ~~existing authorised~~ habitable floor level and new overland flow paths, the Outline Plan shall include confirmation that any necessary landowner and statutory approvals have been obtained for that work.

13. Existing property access, on-site parking and manoeuvring areas

Where the accessibility, location and/or design of property vehicle access (including vehicle crossings and accessways), on-site parking and manoeuvring areas which exist at the time the Outline Plan is submitted are altered by the project, the Requiring Authority shall consult with the directly affected landowner regarding the required changes at least 6 months prior to the Start of Construction, and the Outline Plan shall demonstrate how the affected areas will be relocated or reinstated to achieve compliance with relevant AUP standards (or any subsequent standards) or to a similar location and standard to that existing, unless otherwise agreed with the affected landowner.

Construction Conditions

14. Construction Environmental Management Plan (CEMP)

- (a) A CEMP shall be prepared prior to the Start of Construction for a Stage of Work.
- (b) A CEMP shall be implemented during the Stage of Work to which it relates.
- (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) the proposed site layouts (including construction yards), 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) measures to mitigate flood hazard effects such as siting stockpiles out of floodplains, minimising obstruction to flood flows, actions to respond to warnings of heavy rain;
- (viii) procedures for incident management;
- (ix) procedures for the refuelling and maintenance of plant and equipment to avoid discharges of fuels or lubricants to watercourses;
- (x) measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean up;
- (xi) procedures for responding to complaints about Construction Works; and
- (xii) methods for amending and updating the CEMP as required.

~~(c) Any CEMP prepared for a Stage of Work shall be submitted to Council for information at least ten working days before the Start of Construction for a Stage of Work.~~

(d) The CEMP shall be prepared having regard to the NZ Transport Agency Guideline for Preparing Environmental and Social Management Plans (April 2014), or any subsequent version.

15. Stakeholder Engagement and Communications Management Plan (SECMP)

(a) A SECMP shall be prepared in consultation with Council at least 6 months prior to the Start of Construction for a Stage of Work.

(b) A SECMP shall be implemented during the Stage of Work to which it relates.

(c) The objective of the SECMP is to identify how the public and stakeholders (including directly affected and adjacent owners and occupiers of land) will be engaged and communicated with throughout the Construction Works. To achieve the objective, the SECMP shall include:

- (i) the contact details for the Project Liaison Person. These details shall be on the Project website, or equivalent virtual information source, and prominently displayed at the main entrance(s) to the site(s);
- (ii) the procedures for ensuring that there is a contact person available for the duration of Construction Works, for public enquiries or complaints about the Construction Works;
- (iii) methods for engaging with Mana Whenua, to be developed in consultation with Mana Whenua;
- (iv) a list of stakeholders, organisations, businesses (including representative groups) and persons who will be ~~communicated~~ engaged with such as directly affected landowners and immediately adjoining landowners, educational facilities, community groups and facilities, residents' organisations, Council and the Franklin and Papakura Local Boards.
- (v) methods to communicate key 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) above surrounding businesses and residential communities; and
- (vi) linkages and cross-references to engagement, consultation and communication methods set out in other conditions and management plans where relevant.; and
- (vii) methods for amending and updating the SECMP as required.

(d) Any SECMP 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.

16. 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; ~~and~~
- (v) the weather conditions at the time of the complaint (as far as reasonably practicable), including wind direction and approximate wind speed if the complaint relates to air quality or noise and where weather conditions are relevant to the nature of the complaint; and
- (vi) 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) The Requiring Authority will acknowledge receipt of a complaint related to Construction Works within 24 hours and shall respond in full to such complaint as soon as practicable and no later than 10 Days after the complaint was received, except where urgency is indicated, in which case the Requiring Authority shall use its best endeavors to respond within 2 hours.

(c) 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.

17. Cultural Monitoring Plan

- (a) Prior to the start of Construction Works, a Cultural Monitoring Plan shall be prepared by a Suitably Qualified and Experienced 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; and details of personnel to assist with management of any cultural effects identified during cultural monitoring, including implementation of any accidental discovery protocols under Condition ~~22~~ 25.
- (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 and Experienced 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.

18. Construction Traffic Management Plan (CTMP)

- (a) A CTMP shall be prepared in consultation with the Parks Planning Team Leader prior to the Start of Construction for a Stage of Work based on traffic volumes and movements and the transport network that is in place immediately prior to the start of Construction Works and shall take into account any other transport works that are planned to occur during the Construction Works.
- (b) A CTMP shall be implemented during the Stage of Work to which it relates.
- (c) 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 and

minimise delays to road users during peak traffic periods, and particularly public transport at all times, especially bus travel times;

- (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 open spaces and schools or to manage traffic congestion;
- (iv) site access routes and access points for ~~H~~Heavy ~~V~~ehicles, 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, with road closures to be carried out at times of lowest traffic;
- (vi) methods to maintain access, turnaround locations and set down areas for bus routes (including school buses);
- (vii) methods to maintain vehicle access to public and private property and/or private roads where practicable, or to provide alternative access arrangements when it will not be;
- (viii) the management approach to loads on ~~H~~Heavy ~~V~~ehicles, 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
- (ix) methods that will be undertaken to communicate traffic management measures to affected road users (e.g. residents/public/stakeholders/emergency services), in addition to the consultation requirements set out in Condition 15.

(d) 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.

~~(e) 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.~~

19. 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 18-19.1: Construction noise standards

Day of week	Time period	L _{Aeq} (15min)	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 the Table 48 19.1 above is not practicable, and unless otherwise provided for in the CNVMP, then the methodology in Condition 21 shall apply.

20. 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 49-20.1 Construction vibration criteria

Receiver	Details	Category A*	Category B*
Occupied Activities sensitive to noise	Night-time 2000h - 0630h	0.3mm/s ppv	1mm/s ppv
	Daytime 0630h - 2000h	1mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h - 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times	5mm/s ppv	BS 5228-2**
	Vibration transient		Table B2
	At all other times Vibration continuous	5mm/s ppv	BS 5228-2** 50% of Table B2 values

**Refer Waka Kotahi State highway construction and maintenance noise and vibration guide for further explanation regarding Category A and B criteria*

***BS 5228-2:2009 'Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration'*

- (b) Where compliance with the vibration standards set out in Table 49-20.1 is not practicable, and unless otherwise provided for in the CNVMP, then the methodology in Condition 21 shall apply.
- (c) If measured or predicted vibration from construction activities exceeds the Category A criteria, a Suitably Qualified and Experienced Person shall assess and manage construction vibration during those activities.
- (d) If measured or predicted vibration from construction activities exceeds the Category B criteria those activities must only proceed if vibration effects on affected buildings are assessed, monitored and mitigated by a Suitably Qualified and Experienced Person.

21. Construction Noise and Vibration Management Plan (CNVMP)

- (a) A CNVMP shall be prepared prior to the Start of Construction for a Stage of Work.
- (b) A CNVMP shall be implemented during the Stage of Work to which it relates.
- (c) The objective of the CNVMP is to provide a framework for the development and implementation of

the Best Practicable Option for ~~the management of~~ preventing or minimising construction noise and vibration effects to achieve the construction noise and vibration standards set out in Conditions ~~48 19~~ and ~~49 20~~ to the extent practicable. To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of the New Zealand Standard NZS6803:1999 'Acoustics – Construction Noise' (NZS6803:1999) and the Waka Kotahi State highway construction and maintenance noise and vibration guide (version 1.1, 2019), 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 prioritising the management of construction activities to avoid night works and other sensitive times; and
- (vi) identification of the Best Practicable Option;
- (vii) methods and frequency for monitoring and reporting on construction noise and vibration;
- (viii) procedures for communication and engagement with nearby residents and stakeholders, including notification of proposed construction activities, the period of construction activities, and management of noise and vibration complaints;
- (ix) contact details of the Project Liaison Person;
- (x) procedures for the regular training of the operators of construction equipment to minimise noise and vibration as well as expected construction site behaviours for all workers;
- (xi) identification of areas where compliance with the noise [Condition ~~48-19~~] and/or vibration standards [Condition ~~49-20~~] Category A or Category B will not be practicable and the specific management controls to be implemented in accordance with the methodology in Condition 22 and consultation requirements with owners and occupiers of affected sites;
- (xii) procedures and requirements for the preparation of a Schedule to the CNVMP (Schedule) for those areas where compliance with the noise [Condition ~~48-19~~] and/or vibration standards [Condition ~~49-20~~] Category A or Category B will not be practicable ~~and where sufficient information is not available at the time of the CNVMP to determine the area specific management controls [Condition 20(e)(x) CNVMP];~~
- (xiii) procedures and trigger levels for how remedial works will be undertaken, should they be required as a result of building condition surveys before and after works to determine whether any cosmetic or structural damage has occurred as a result of construction vibration;
- (xiv) methodology and programme of desktop and field audits and inspections to be undertaken to ensure that CNVMP, Schedules and the best practicable option for management of effects are being implemented; and
- (xv) requirements for review and update of the CNVMP.

22. 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 activity to which it relates by a Suitably Qualified and Experienced Person, in consultation with the owners and occupiers of sites subject to the Schedule to the CNVMP, when,:
 - (i) construction noise is either predicted or measured to exceed the noise standards in Condition ~~48-19~~;
 - (ii) construction vibration is either predicted or measured to exceed the Category A standard at the receivers in Condition ~~49 20~~.
- (b) The objective of the Schedule is to set out the Best Practicable Option measures for ~~the management of preventing or minimising~~ noise and/or vibration effects for the duration of the construction activity to which it relates beyond those measures set out in the CNVMP. The Schedule shall as a minimum set out ~~include details such as:~~
 - (i) construction activity location, start and finish times;
 - (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 in Conditions ~~48 19~~ and ~~49 20~~ and the 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 proposed communication with neighbours documentation of the consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation has and has not been taken into account. The consultation shall be in addition to the requirements set out in Condition 15; and
 - (vi) location, times and types of monitoring.
- (c) When construction vibration from a construction activity is either predicted or measured to exceed the Category B standard at the receivers in Condition 20, the construction activity shall not commence until a Suitably Qualified and Experienced Person has undertaken a building condition survey (provided the affected owners and/or occupiers have agreed to such survey). The building condition survey shall as a minimum include, but not be limited to, the following:
- (i) determination of building classification: commercial, industrial, residential or a historic or sensitive structure;
 - (ii) determination of building specific vibration damage risk thresholds; and
 - (iii) recording (including photographs) the major features of the buildings including location, type, construction (including foundation type), age and present condition, including existing levels of any aesthetic damage or structural damage.
- (d) The building condition survey and specific Best Practicable Option measures to prevent and minimise vibration effects for the duration of the construction activity to which it relates beyond those measures set out in the CNVMP shall be added as a Schedule. The Schedule shall be prepared in consultation with the owners and occupiers of buildings subject to the Schedule, and as a minimum, contain the information set out in (b) above and the findings of the building pre-condition survey.
- (e) Vibration monitoring shall be undertaken and continue throughout the construction activity covered by the Schedule. Following completion of the activity, a building condition survey shall be undertaken to determine if any damage has occurred as a result of construction vibration, and any such damage shall be repaired by the Requiring Authority
- (f) The Schedules 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 Schedules and shall form part of the CNVMP.
- (g) Where changes are made to a certified 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 (d) 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.

23. Historic Heritage Outcomes

- (a) The Requiring Authority shall design and implement the construction, operation and maintenance of the Project to achieve the following historic heritage outcomes:
- (i) To deliver positive historic heritage opportunities and outcomes.
 - (ii) To avoid as far as practicable, adverse effects on historic heritage places.
 - (iii) Where avoidance of adverse effects cannot be achieved; remedy or mitigate all adverse effects on historic heritage places as far as practicable.
- (b) To achieve the outcomes listed in (a) above, the Requiring Authority shall engage a suitably qualified and experienced person or persons (the nominated heritage specialist(s)) to supervise Construction Works affecting historic heritage places, and these details shall be provided to the Manager (in consultation with the Manager: Heritage Unit) prior to Construction Works commencing.

24. Historic Heritage and Archaeology Management Plan (HAHMP)

- (a) A HAHMP shall be prepared by the nominated heritage specialist(s) in consultation with Council, and HNZPT and in engagement with Mana Whenua prior to the Start of Construction for a Stage of Work and provided to the Manager (in consultation with the Manager: Heritage Unit) for certification.
- (b) The objective of the HAHMP is to protect historic heritage and to remedy and mitigate any residual effects as far as practicable set out methods and procedures to achieve the historic

heritage outcomes listed in Condition 23(a).

- (c) The HHMP shall be prepared with up-to-date information. This additional information shall be provided to council prior to the lodgment of the HHMP to streamline the certification process. This includes, but not limited to:
- (i) Any archaeological assessments, heritage impact or cultural assessments, granted authorities, final archaeological reports and updated site record forms (CHI and New Zealand Archaeological Association ArchSite) prepared/submitted since time of the granting of any designation;
 - (ii) Additional areas of survey and investigation undertaken as part of the project; and
 - (iii) Further assessment and field survey of historic heritage by the nominated heritage specialist(s) which include (but are not limited to) the following:
 - A. locations proximate to waterways adjacent to Oira Creek and the Ngākōroa Stream.
- (d) The HHMP shall be consistent with all relevant statutory requirements, including the conditions of any Archaeological Authority granted by HNZPT for the Project.
- (e) To achieve the objective stated in (b) above, the HAHMP shall as a minimum identify and include:
- (i) any adverse direct and indirect effects on historic heritage sites and measures to appropriately avoid, remedy or mitigate any such effects, including a tabulated summary of these effects and measures;
 - (ii) methods for the identification and assessment of potential ~~built~~ historic heritage and archaeological sites places within the Designation to inform detailed design;
 - (iii) known historic heritage places and archaeological sites and potential archaeological sites within the Designation, including identifying any archaeological sites for which an Archaeological Authority under the HNZPTA will be sought or has been granted;
 - (iv) any unrecorded archaeological sites or post-1900 heritage sites within the Designation, which shall also be documented and recorded;
 - (v) roles, responsibilities and contact details of Project personnel, Council and NZHPT representatives, Mana Whenua representatives, and relevant agencies involved with heritage and archaeological matters including surveys, monitoring of Project Construction Works, compliance with AUP accidental discovery rule, and monitoring of conditions;
 - (vi) specific areas to be investigated, monitored and recorded to the extent these are directly affected by the Project
 - (vii) the proposed methodology for investigating and recording post-1900 historic heritage sites places (including buildings) that need to be destroyed, demolished or relocated, including details of their condition, measures to mitigate any adverse effects and timeframe for implementing the proposed methodology, in accordance with the:
 - A. HNZPT Archaeological Guidelines Series No. 1 (AGS 1A): Investigation and Recording of Buildings and Standing Structures (4 July 2014 November 2018), or any subsequent version; and
 - B. International Council on Monuments and Sites New Zealand Charter 2010 or any subsequent version.
 - (viii) methods to acknowledge cultural values identified through Condition 8 where archaeological sites also involve Ngā ngā Taonga taonga Tuku tuku the iho nō ngā tūpuna (treasures handed down by our ancestors) and where feasible and practicable to do so;
 - (ix) methods for ~~protecting~~ avoiding, remedying or minimising mitigating adverse effects on historic heritage places and archaeological sites within the Designation identified as part of the detailed design of the Project and during Project Construction Works as far as practicable. These methods shall include, but are not limited to:
 - A. (for example security fencing or hoardings around historic heritage and archaeological sites places to protect them from damage during construction or unauthorised access); and
 - B. using construction methods that minimise vibration or other potentially adverse effects
 - (x) training requirements and inductions for contractors and subcontractors on historic heritage and archaeological sites places within the Designation, methods and procedures in the HHMP, and legal obligations relating to accidental discoveries, the AUP Accidental Discovery Rule

(E11.6.1) and accidental discovery protocols in Condition 26 below. The training shall be undertaken prior to the Start of Construction, under the guidance of a Suitably Qualified and Experienced Person the nominated heritage specialist(s) and Mana Whenua representatives (to the extent the training relates to cultural values identified under Condition 8).

- (xi) measures to mitigate adverse effects on historic heritage sites that achieve positive historic heritage outcomes. Measures may include, but not be limited to: increased public awareness and amenity of historic heritage sites, interpretation, repatriation, donation of historic heritage material to suitable repositories, publication of heritage stories, and active conservation/restoration of heritage features;
 - (xii) definitions of terms used to identify and assess historic heritage places and alignment with relevant statutory definitions as far as practicable;
 - (xiii) reporting requirements for historic heritage places during and after the completion of Construction Works and at the completion of projects works, including a plan for dissemination of reports resulting from these requirements; and
 - (xiv) measures for the interim stabilisation/conservation (where necessary), storage and curation of objects and artefacts (including taonga tūturu) and any other physical or documentary material that forms part of the wider historic heritage places archive.
- (f) Any material changes made to the HHMP either prior to or during Construction Works shall be prepared by the nominated heritage specialist(s) and submitted to the Manager (in consultation with the Manager: Heritage Unit) for certification.

Advice Notes:

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.

1. The council acknowledges that the HHMP is intended to provide flexibility both for the Requiring Authority and the council for the management of historic heritage places. Accordingly, the HHMP may need to be reviewed over time. Any reviews should be in accordance with the stated objectives of the HHMP and limited to the scope of this Designation.
2. Certification of the HHMP 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 HNZPTA.
3. The historic heritage places archive consists of the records and finds made during Construction Works, including written or drawn documentation, digital files, and artefacts and materials such as taonga tūturu.

25. Accidental discovery during construction works and documenting requirements (including post-construction)

- (a) Prior to the start of Construction for a Stage of Works, the Requiring Authority shall prepare an Accidental Discovery Protocol for any accidental historic heritage discoveries which occur during Construction Works. The protocol:
- (i) Shall be consistent with the Waka Kotahi NZ Transport Agency Minimum Standard P45 Accidental Archaeological Discovery Specification, or any subsequent version and the Auckland Unitary Plan Accidental Discovery Rule (E11 Land disturbance regional – E11.6.1) or any amended version of this rule;
 - (ii) Shall be prepared in engagement with Mana Whenua and in consultation with Auckland Council and HNZPT and modified as necessary to reflect the site-specific project detail. The Requiring Authority shall undertake engagement and consultation for a period of not less than 30 days; and
 - (iii) Shall be implemented for the duration of Construction Works.
- (b) Electronic copies of all historic heritage reports relating to historic heritage investigations (evaluation, excavation and monitoring etc.), including interim reports, shall be submitted to the Manager (in consultation with the Manager: Heritage Unit) within 12 months of being produced.

- (c) The nominated heritage specialist(s) shall record and log any heritage discovery and on-going compliance with the conditions of this Designation. This log shall be provided to the Manager: Compliance Monitoring (in consultation with the Manager: Heritage Unit) quarterly.
- (d) In the event that any unrecorded historic heritage places are exposed as a result of the work, these shall be recorded and documented by a suitably qualified and experienced person for inclusion in the CHI or any subsequent heritage database. The information and documentation shall be forwarded to the Manager: Heritage Unit (heritageconsents@aucklandcouncil.govt.nz) or other address nominated by the Manager: Heritage within twelve months of the works being completed on site.
- (e) Within 12 months of Construction Works being completed, the nominated heritage specialist(s) shall prepare and submit a report to the Manager (in consultation with the Manager: Heritage Unit) which includes the log required by Condition 25(c) and certify that all Construction Works have been completed in accordance with the Conditions of this Designation.

26. Pre-Construction Wetland Bird Survey

- (a) Prior to the Start of Construction for a Stage of Work within 500m of the ~~Ngakoroa~~ Ngākōroa Stream Wetlands, a survey and assessment of Threatened or At-Risk wetland birds and their habitat in the area shown in Schedule 2 shall be undertaken by a Suitably Qualified and Experienced Person.
- (b) The purpose of the survey and assessment is to:
 - (i) confirm the ecological value of the ~~Ngakoroa~~ Ngākōroa Stream Wetlands for Threatened or At-Risk wetland birds; and
 - (ii) confirm whether the Project will or may have a moderate or greater level of ecological effect on Threatened or At-Risk wetland birds and their habitat prior to implementation of impact management measures, as determined in accordance with the EIANZ Guidelines for Use in New Zealand: Terrestrial and Freshwater Ecosystems (May 2018) or subsequent revision.
- (c) If the wetland bird survey in (a) above confirms that the Project will or may have a moderate or greater level of ecological effect on Threatened or At Risk Wetland birds without impact management, then Condition ~~24-27~~ applies.

27. Bird Management Plan (BMP)

- (a) If required under Condition ~~23~~ 26, prior to the start of construction for a Stage of Work within 500m of the ~~Ngakoroa~~ Ngākōroa Stream Wetlands, a BMP shall be prepared and implemented.
- (b) The objective of the BMP is to avoid and/or minimise impacts of construction activities on Threatened or At-Risk wetland birds in the ~~Ngakoroa~~ Ngākōroa Stream Wetlands. The BMP shall set out the methods that will be used to achieve this objective. These methods may include:
 - (i) commencing Construction Works outside of the wetland bird breeding season (September to February) where practicable, in order to discourage bird nesting in the construction areas within the designation;
 - (ii) a nesting bird survey of Threatened or At-Risk wetland birds undertaken by a Suitably Qualified and Experienced Person. This should occur prior to any Construction Works taking place within a 50m radius of the ~~Ngakoroa~~ Ngākōroa Stream Wetlands (including establishment of the site compound adjacent to the ~~Ngakoroa~~ Ngākōroa Stream Wetlands). Surveys should be repeated at the beginning of each wetland bird breeding season and following periods of construction inactivity;
 - (iii) protection and buffer measures if nesting Threatened or At-Risk Wetland birds are identified within 50m of any construction area (including laydown areas). This could include:
 - A. a 20 m buffer area around the nest location and retaining vegetation. The buffer areas should be demarcated where necessary to protect birds from encroachment. This might include the use of marker poles, tape and signage;
 - B. monitoring of the nesting Threatened or At-Risk wetland birds by a Suitably Qualified and Experienced Person. Construction works within the 20m nesting buffer areas should not occur until the Threatened or At-Risk wetland birds have fledged from the nest location (approximately 30 days from egg laying to fledging)

- as confirmed by a Suitably Qualified and Experienced Person; and
 - C. minimising the disturbance from the works if construction works are required within 50 m of a nest, as advised by a Suitably Qualified and Experienced Person;
 - (iv) a 10m setback where practicable, between the edge of the ~~Ngakeroa~~ Ngākōroa Stream Wetlands and the construction area (along the edge of the stockpile/laydown area). This could be achieved by retaining existing vegetation or by planting unvegetated areas with native coastal forest/riparian/wetland species (as appropriate). Marker poles, tape and signage could also be used to clearly delineate the wetland area to prevent encroachment; and
 - (v) minimising light spill from construction areas into the ~~Ngakeroa~~ Ngākōroa Stream Wetlands.
- (c) The BMP shall be consistent with any ecological management measures to be undertaken in compliance with conditions of any resource consents granted for the Project.

Advice Note:

Depending on the potential effects of the Project, the resource consents for the Project may include the following monitoring and management plans:

- (a) Stream and/or wetland restoration plans;
- (b) Vegetation restoration plans; and
- (c) Fauna management plans (e.g. herpetofauna, bats).

28. Tree Management Plan

- (a) Prior to the Start of Construction for a Stage of Work, a Tree Management Plan shall be prepared in consultation with the Parks Planning Team Leader.
- (b) The objective of the Tree Management Plan is to mitigate effects of construction activities on trees identified in Schedule 3.
- (c) The Tree Management Plan shall:
 - (i) confirm that the trees listed in Schedule 3 still exist; and
 - (ii) demonstrate how the design and location of Project works has avoided, remedied or mitigated any effects on the trees listed in Schedule 3. This may include:
 - A. planting to replace trees that require removal (with reference to the ULDMP planting design details in Condition 11);
 - B. tree protection zones and tree protection measures such as protective fencing, ground protection and physical protection of roots, trunks and branches; and
 - C. methods for work within the rootzone of trees that are to be retained in line with accepted arboricultural standards.
 - (iii) demonstrate how the tree management measures (outlined in A – C above) are consistent with conditions of any resource consents granted for the project in relation to managing construction effects on trees.

29. 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; and AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines.

- (c) The NUMP shall be prepared in consultation with the relevant Network Utility Operator(s) who have existing assets that are directly affected by the Project.
- (d) The NUMP shall describe how any comments from the Network Utility Operator in relation to its assets have been addressed.
- (e) Any comments received from the Network Utility Operator shall be considered when finalising the NUMP.
- (f) Any amendments to the NUMP related to the assets of a Network Utility Operator shall be prepared in consultation with that asset owner.

Operational Conditions

30. Traffic Noise

For the purposes of Conditions ~~28 30~~ to ~~41 43~~:

- (a) Building-Modification Mitigation – has the same meaning as in NZS 6806;
 - (b) Detailed Mitigation Options – means the fully detailed design of the Selected Mitigation Options, with all practical issues addressed;
 - (c) Habitable Space – has the same meaning as in NZS 6806;
 - (d) Identified Noise Criteria Category – means the Noise Criteria Category for a PPF identified in Schedule 4: Identified PPFs Noise Criteria Categories;
 - (e) ~~Mitigation – has the same meaning as in NZS 6806:2010 Acoustics – Road traffic noise – New and altered roads;~~
 - (e) 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);
 - (f) NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads;
 - (g) P40 – means Waka Kotahi NZTA P40:2014 Specification for noise mitigation;
 - (h) Protected Premises and Facilities (PPFs) – means only the premises and facilities identified in Schedule 4: Identified PPFs Noise Criteria Categories;
 - (i) Selected Mitigation Options – means the preferred mitigation option resulting from a Best Practicable Option assessment undertaken in accordance with NZS 6806; ~~and~~
 - (j) Structural Mitigation – has the same meaning as in NZS 6806; and
 - (k) The design year means 2048
- 31.** The Noise Criteria Categories identified in Schedule 4: Identified PPFs Noise Criteria Categories at each of the PPFs shall be achieved ~~where~~ by adopting the Best Practicable Option and subject to Conditions ~~27 30~~ to ~~41 44~~.
- Achievement of the Noise Criteria Categories for PPFs shall be by reference to a traffic forecast for a high growth scenario in ~~a~~ the design year ~~at least 10 years after the programmed opening of the Project.~~
- 32.** As part of the detailed design of the Project, a Suitably Qualified and Experienced Person shall ~~determine~~ develop the Selected Mitigation Options for the PPFs identified ~~in~~ Schedule 4: Identified PPFs Noise Criteria Categories. The Best Practicable Option shall be determined from the Selected Mitigation Options, including noise barriers where practicable and low noise road surfaces on the carriageways of the Project, except where not practicable for engineering or safety reasons.
- 33.** Prior to construction of the Project, a Suitably Qualified and Experienced Person shall determine the Detailed Mitigation Options for the PPFs identified ~~in~~ Schedule 4: Identified PPFs Noise Criteria Categories, taking into account the Selected Mitigation Options.
- 34.** ~~If the Detailed Mitigation Options~~ it is not practicable to implement a particular Structural Mitigation measure

included in the Selected Mitigation Options, a changed design can be included in the Detailed Mitigation Options if the changed design would result in the Identified Noise Criteria Category remaining the same or 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 and Experienced Person shall provide confirmation certifies 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

35. Prior to the Start of Construction for a Stage of Work, a Noise Mitigation Plan shall be prepared by a Suitably Qualified and Experienced Person written in accordance with P40 and shall be provided to the Manager for certification information.

The purpose of the Noise Mitigation Plan is to confirm that the Detailed Mitigation Options meet the requirements of Conditions 30 to 44. The Noise Mitigation Plan shall include confirmation that consultation has been undertaken with affected property owners for site specific design requirements and the implementation programme

36. 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 and the Identified Noise Criteria Category at any relevant PPF shall remain the same prior to implementation.
37. Prior to the Start of Construction, a Suitably Qualified and Experienced Person shall identify those PPFs which, following implementation of all the Detailed Mitigation Options, will not be Noise Criteria Categories A or B and where Building-Modification Mitigation might be required to achieve 40 dB $L_{Aeq(24h)}$ inside Habitable Spaces ('Category C Buildings').

If windows must be closed to achieve 40dB LAeq (24h), a mechanical ventilation system will be provided that:

- (a) For habitable rooms for a residential activity, achieve the following requirements:
- (i) Provide mechanical ventilation to satisfy clause G4 of the New Zealand Building Code; and
 - (ii) Is adjustable by the occupant to control the ventilation rate in increments up to a high air flow setting that provides at least 6 air changes per hour; and
 - (iii) Provides relief for equivalent volumes of spill air; and
 - (iv) Provides cooling and heating that is controllable by the occupant and can maintain the inside temperature between 18°C and 25°C; and
 - (v) Does not generate more than 35dB LAeq(30s) when measured 1 metre away from any grille of diffuser.
- (b) For other spaces, is as determined by a suitably qualified and experienced person.
38. 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 twelve months of the date of the Requiring Authority's letter, the Requiring Authority shall instruct a Suitably Qualified and Experienced Person to visit the building and assess the noise reduction performance of the existing building envelope.
39. For each Category C Building identified, the Requiring Authority is deemed to have complied with Condition ~~35~~ 38 above if:
- (a) the Requiring Authority's Suitably Qualified and Experienced 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 twelve months of the date of the Requiring Authority's letter sent in accordance with Condition 35 above (including where the owner did not respond within that period); or
 - (d) the building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.

If any of (b) to (d) above apply to a Category C Building, the Requiring Authority is not required to implement Building-Modification Mitigation to that building.

- 40.** Subject to Condition ~~36~~ 39 above, within six months of the assessment undertaken in accordance with Conditions ~~35~~ 38 and ~~36~~ 39, the Requiring Authority shall write to the owner of each Category C Building advising:
- (a) if Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and
 - (b) the options available for Building-Modification Mitigation to the building, if required; and
 - (c) that the owner has three months to decide whether to accept Building-Modification Mitigation to the building and to advise which option for Building-Modification Mitigation the owner prefers, if the Requiring Authority has advised that more than one option is available.
- 41.** 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.
- 42.** Subject to Condition ~~36~~ 39, where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with Condition ~~38~~ 41 if:
- (a) the Requiring Authority has completed Building Modification Mitigation to the building; or
 - (b) an alternative agreement for mitigation is reached between the Requiring Authority and the building owner; or
 - (c) the building owner did not accept the Requiring Authority's offer to implement Building- Modification Mitigation within three months of the date of the Requiring Authority's letter sent in accordance with Condition ~~36~~ 39 (including where the owner did not respond within that period); and
 - (d) The building owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project.
- 43.** (a) Within twelve months of completion of construction of the Project, the Requiring Authority shall prepare and provide to the Manager a post-construction review report written in accordance with, taking into account P40 Specification for Noise Mitigation 2014, shall be provided to the Manager, which demonstrates compliance with conditions 28-42. The report shall be prepared and certified by a Suitably Qualified and Experienced Person and shall include:
- (i) a description of, and the results from, a computer noise model of the Project as constructed; and
 - (ii) results of field measurements undertaken in accordance with NZS 6806 at a minimum of six representative PPFs identified in Schedule 4 Identified PPFs Noise Criteria Categories to verify the computer noise model.
- (b) If the reports concludes that the sound levels exceed the Identified Noise Criteria Category at any relevant PPF, the Requiring Authority must, in consultation with the owners and occupiers of sites subject to the exceedance, provide further noise mitigation to reduce noise levels to meet the Identified Noise Criteria Category (subject to reasonable access to allow any mitigation to be implemented), and the details of any mitigation shall be certified to the Manager.
- 44.** The Detailed Mitigation Options shall be maintained so they retain their noise reduction performance ~~as far as practicable~~
- 45.** Vibration from road-traffic shall not exceed 0.3mm/s v_{w95} at any building.

Schedule 1: General Accordance Plans and Information

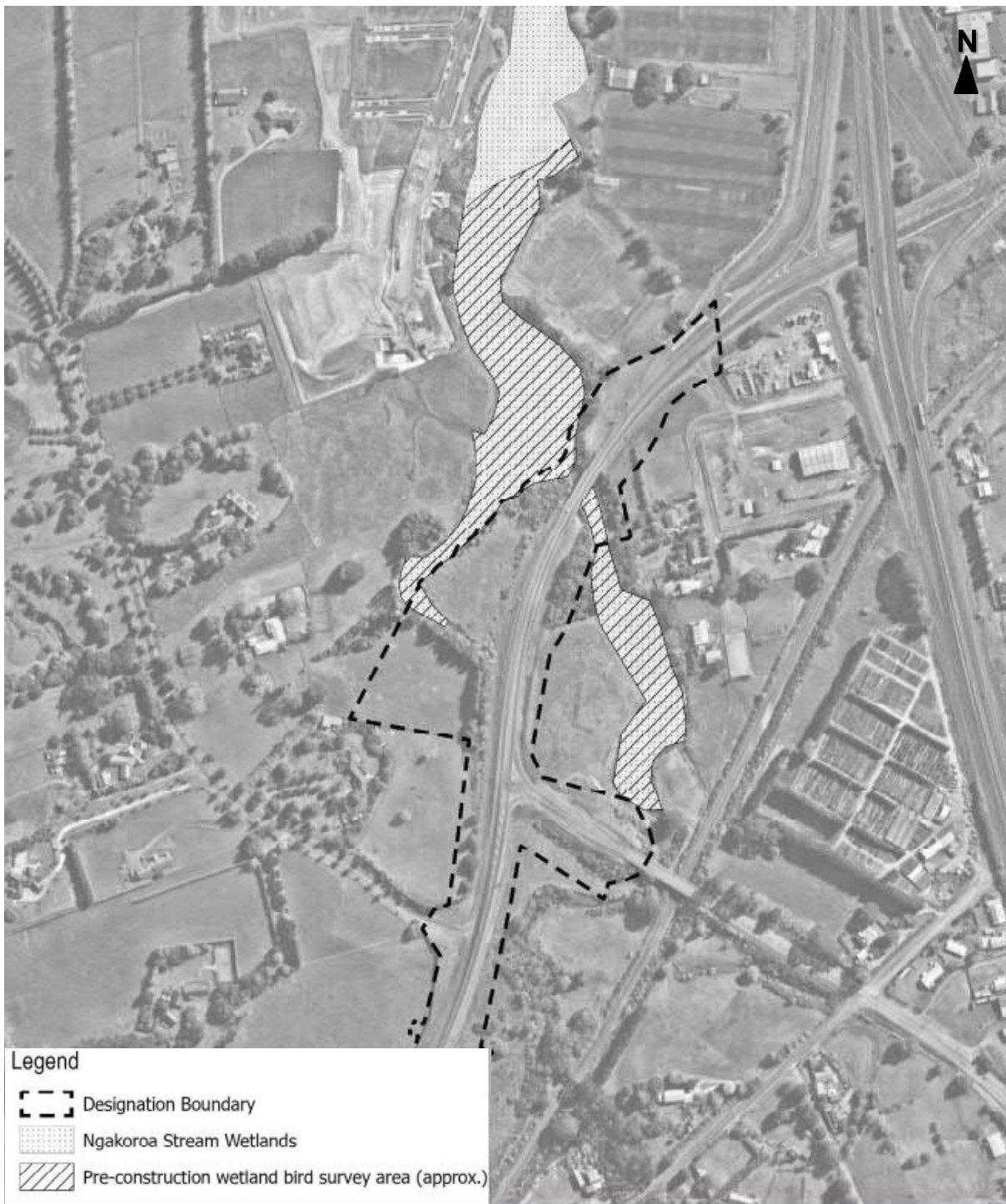
Project Description

The proposed work is the construction, operation and maintenance of an upgrade of the existing State Highway 22 (SH22) from the Drury Interchange at State Highway 1 Drury to Oira Creek, including active transport facilities, and associated infrastructure. The proposed work is shown in the following Concept Plan and includes:

- a) Widening SH22 for two additional lanes and active transport facilities;
- b) Associated works including intersections, bridges, embankments, retaining, culverts and 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, lay down areas, bridge works area, construction traffic management and the re-grade of driveways.



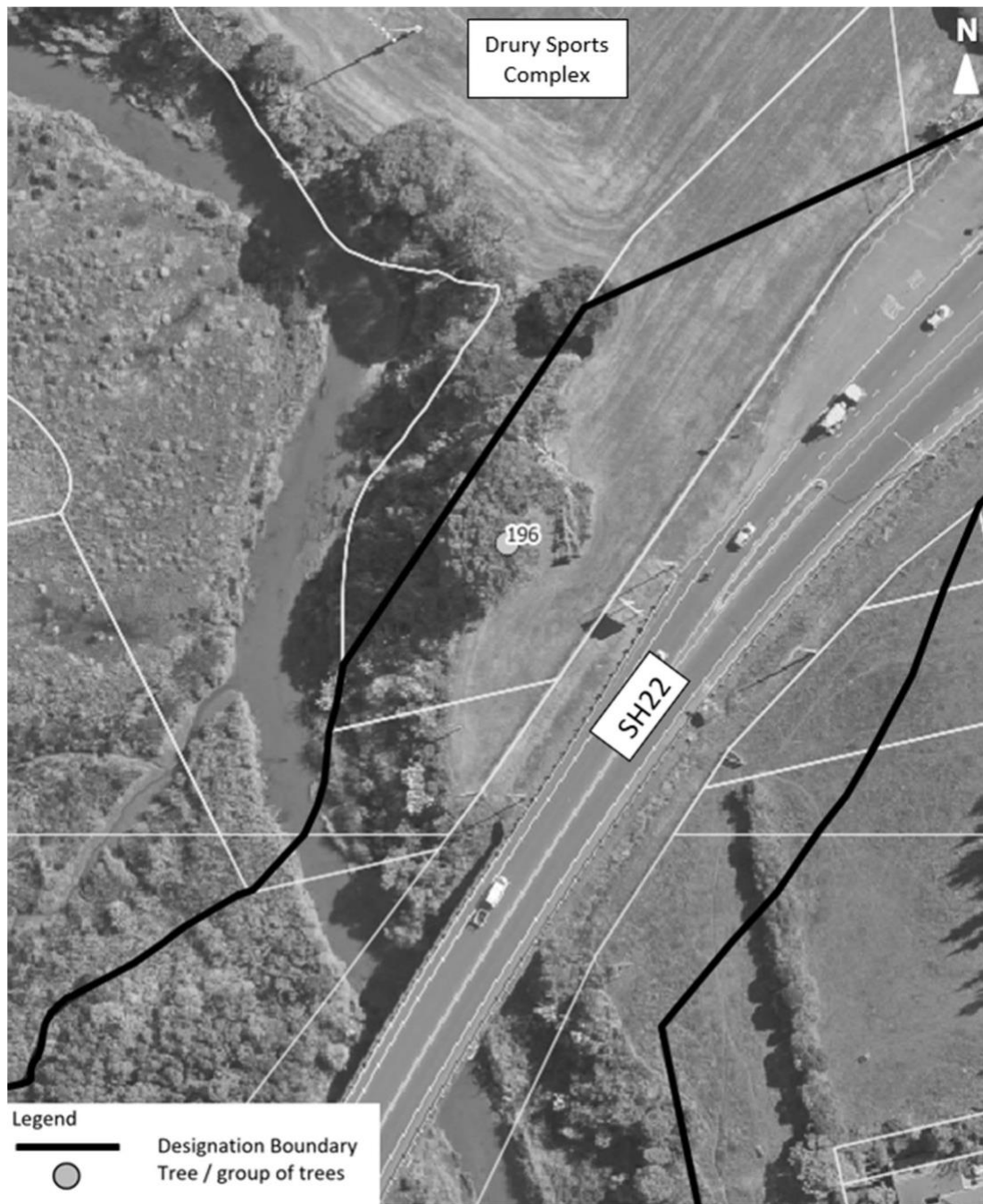
Schedule 2: Pre-construction Wetland Bird Survey



Schedule 3: Trees to be Included in the Tree Management Plan

Tree Number	Tree or Group	Number of trees	Species List	Location (refer to Tree Location Plan)	Reason for protection in the AUP (District Plan rules) as at January 2021 when the alteration to designation 6707 was lodged
196	Tree group	7	Eucalyptus sp., Acacia mearnsii	Within 67 Mercer Street (Section 5 SO 61999). South of Drury Sports Complex and east of Ngakoroa Ngākōroa Stream.	Open space (note also protected under the regional plan rules as in the riparian margin)

Tree Location Plan



Schedule 4: Identified PPFs Noise Criteria Categories

Address	New or Altered Road	Noise Criteria Category
5 Burberry Road	Altered	A
14 Burberry Road	Altered	A
15 Burberry Road	Altered	A
18 Burberry Road	Altered	A
41 Jesmond Road	Altered	A
160 Karaka Road	Altered	A
200 Karaka Road	Altered	A
250 Karaka Road	Altered	A
332A Karaka Road	Altered	A
351 Karaka Road	Altered	A
370 Karaka Road	Altered	A
373 Karaka Road	Altered	A
411 Karaka Road	Altered	A
415 Karaka Road	Altered	A
435 Karaka Road	Altered	A
458 Karaka Road	Altered	A
462 Karaka Road	Altered	A
7 Woodlyn Drive	Altered	A

PPE Location Plans

