

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

Date: Monday 15 May to Thursday 18 May 2023
Time: 9:30am
Meeting Room: Uxbridge Theatre
Venue: 35 Uxbridge Road, Howick, Auckland 2014

HEARING REPORT

**207 TI RAKAU DRIVE, PAKURANGA HEIGHTS
(EB3R)**

**AUCKLAND TRANSPORT
IN CONJUNCTION WITH
EASTERN BUSWAY ALLIANCE**

COMMISSIONERS

Chairperson Sarah Shaw (Chairperson)
Commissioners Ian Munro
Nigel Mark-Brown

Patrice Baillargeon
Kaitohutohu Mataamua Whakawā /
Senior Hearings Advisor

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

Note: The reports contained within this 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 hearing procedure 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 **applicant** will be called upon to present their case. They may be represented by legal counsel or consultants and call witnesses in support of the application. The hearing panel may ask questions of the speakers.
- The **local board** may wish to present comments. These comments do not constitute a submission however the Local Government Act allows the local board to make the interests and preferences of the people in its area known to the hearing panel.
- **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 **applicant** 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.
- If adjourned the hearing panel will decide when they have enough information to make a decision and close the hearing. The hearings advisor will contact you once the hearing is closed.
- Decisions are usually available within 15 working days of the hearing closing.

Please note

- that the hearing will be audio recorded and this will be publicly available after the hearing
- catering is not provided at the hearing.

**A NOTIFIED NON-COMPLYING ACTIVITY RESOURCE CONSENT APPLICATION
BY AUCKLAND TRANSPORT IN CONJUNCTION WITH EASTERN BUSWAY ALLIANCE**

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Celia Wong, Senior Planner - Resource Consents, South

Reporting on a resource consent application for the construction, operation, and maintenance of the Eastern Busway Stage 3 Residential (EB3R) generally located on Ti Rakau Drive between the intersection of Ti Rakau Drive/South-Eastern Highway (SEART) and Riverhills Park, Pakuranga.

At this time, the reporting officer is not in a position to support the granting of the resource consents as notified. If the outstanding matters can be satisfactorily addressed at the hearing, the reporting officer may recommend that the application be consented to, subject to certain conditions.

APPLICANT: AUCKLAND TRANSPORT IN CONJUNCTION WITH
EASTERN BUSWAY ALLIANCE

SUBMITTERS:	
Page 311-314	Grant Hewison & Associated Ltd
Page 315-318	Equal Justice Project
Page 319-326	Ministry of Education – Te Tāhuhu o te Mātauranga
Page 327-333	Pakuranga Plaza Limited
Page 334-339	Metlifecare Limited

LOCAL BOARD VIEWS:	
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Report on an application for resource consent under the Resource Management Act 1991 (RMA)



Non-complying activity

To: Independent Hearing Commissioners
From: Celia Wong, Senior Planner – Resource Consents, South
Scheduled Hearing date: 15 – 18 May 2023

Note:

- This is not the decision on the applications.
- This report sets out the advice and recommendation of the reporting planner.
- This report has yet to be considered by the independent hearing commissioners delegated by Auckland Council to decide these resource consent applications.
- The decision will be made by the independent hearing commissioners only after they have considered the applications and heard from the applicant, submitters and council officers.
- **This report is intended to be read in conjunction with the combined hearing report for the notice of requirement and resource consent applications for Eastern Busway 2 (EB2)**

List of Abbreviations and Definitions

Abbreviation and definitions	Description
AEE	Assessment of Effects on the Environment, prepared by Nathan Keyte of the Eastern Busway Alliance, Rev C, dated 27-06-22
AC	Auckland Council
AT	Auckland Transport
AUP	Auckland Unitary Plan (Operative in part) 2016
BPO	Best Practicable Option
bgl	Below Ground Level
CCP	Communication and Consultation Plan
CEMP	Construction Environmental Management Plan
CLMP	Contaminated Land Management Plan
CMA	Coastal Marine Area
CNVMP	Construction Noise and Vibration Management Plan
CTMP	Construction Traffic Management Plan
EB1	Eastern Busway 1 (Panmure to Pakuranga)
EB2	Eastern Busway 2 (Pakuranga Town Centre)
EB3 Commercial / EB3C	Eastern Busway 3 (Pakuranga Creek to Botany)
EB3 Residential/ EB3R	Eastern Busway 3 (SEART to Pakuranga Creek)
EB4	Eastern Busway 4 (Botany Town Centre Station)
EBA	Eastern Busway Alliance
ESCP	Erosion and Sediment Control Plan
HNZPT	Heritage New Zealand Pouhere Taonga
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
km	Kilometre(s)
LMP	Lizard Management Plan
m	Metre(s)
m ²	Square Metre(s)
m ³	Cubic Metre(s)
MCA	Multi Criteria Analysis
MSE	Mechanically Stabilised Earth (Wall)
NDC	Network Discharge Consent
NES-CS	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
NES-ET	Resource Management (National Environmental Standard for Electricity Transmission Activities) Regulations 2009
NES-FW	Resource Management (National Environmental Standards for Freshwater) Regulations 2020
NPS-ET	National Policy Statement for Electricity Transmission
NPS-FM	National Policy Statement for Freshwater Management 2020

NPS-UD	National Policy Statement for Urban Development 2020
NZCPS	New Zealand Coastal Policy Statement 2010
NoR	Notice of Requirement
PWA	Public Works Act 1981
RTN	Rapid Transit Network
RRF	Reeves Road Flyover
RMA	Resource Management Act 1991
SCR	Site Completion Report
SEART	South-Eastern Highway (Pakuranga Highway)
UDLP	Urban Design and Landscape Plan

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- Appendix 4: Proposed Resource Consent Conditions

1. Application description

Application numbers:

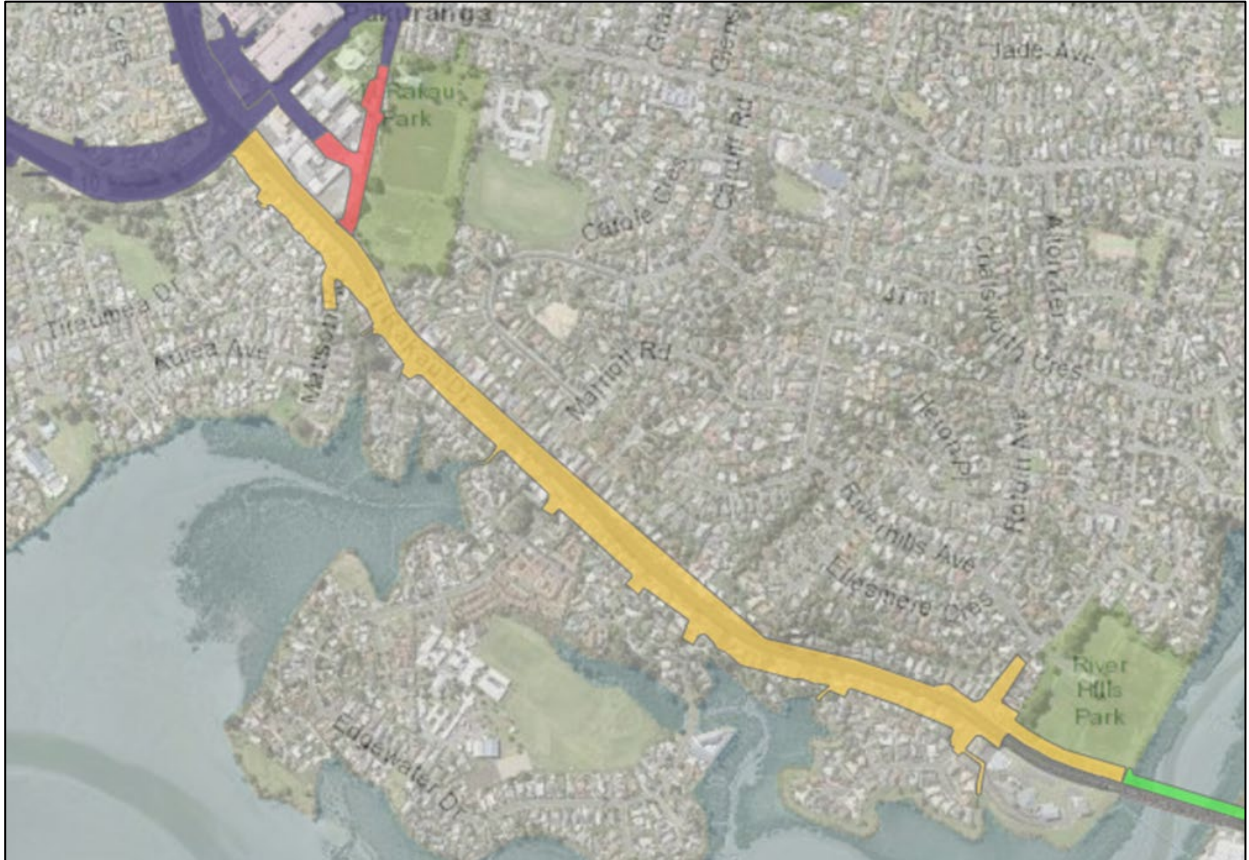
Bundled consent number: BUN60407121		
RMA	Consent type	Consent no.
Section 9	Land use	LUC60407123
Section 12	Coastal permit	CST60408460 (occupation)
Section 12	Coastal permit	CST60408461 (disturbance)
Section 14 Section 15	Discharge permit	DIS60407122 (stormwater discharge)
Section 14 Section 15	Discharge permit	DIS60407493 (contaminated site discharge)
Section 14 Section 15	Streamworks	LUS60412895

As set out in section 10, the application was notified as requiring consent under the NES-FW for water permit WAT60412894 and discharge permit DIS60412893 in relation to earthworks within 10m of a wetland. Due to a change in the definition of a wetland, consent is no longer required in this regard.

Applicant:	Auckland Transport
Site address:	Various - Refer to the AEE: Appendix 5 Properties and Record of Titles within EB3R Footprint ¹ <i>Referred to as 207 Ti Rakau Drive, Pakuranga</i>
Lodgement date:	12 August 2022
Notification date:	13 December 2022
Submission period ended:	1 February 2023
Number of submissions received:	2 in support 2 neutral 1 in opposition

¹ In addition to this information, this Appendix contains details of each site's legal description, zoning, extension of occupation and acquisition/occupation status as of 11 August 2022.

2. Locality Plan



Location of Works for EB3R shown in Yellow

Location of Works for EB2 shown in Purple

Location of Works for EB3C shown in Green

Source: Auckland Transport AEE (Figure 3-1)

3. Application documents

The list of application documents and drawings are set out below.

- EB3 Application Form
- EB3 Application Form 9
- EB234-1-PL-RP-Z3-000018 Eastern Busway 3 Residential Assessment of Effects on the Environment
- Appendix 1: Land Requirement Plans
- Appendix 2: Proposed Design Plans
- Appendix 3: Landscape, Ecological and Arboricultural Mitigation Plans
- Appendix 4: Proposed Conditions
- Appendix 5: Properties and Record of Titles within EB3R Footprint
- Appendix 6: Stormwater Effects Assessment

- Appendix 7: Operational Noise and Vibration Effects Assessment
- Appendix 8: Open Spaces Effects Assessment
- Appendix 9: Construction Methodology
- Appendix 10: Construction Environmental Management Plan
- Appendix 11: Integrated Transport Assessment
- Appendix 12: Erosion and Sediment Control Effects Assessment
- Appendix 13: Erosion and Sediment Control Plan
- Appendix 14: Contaminated Land Management Plan
- Appendix 15: Contaminated Land Effects Assessment
- Appendix 16: Arboricultural Effects Assessment
- Appendix 17: Lizard Management Plan
- Appendix 18: Natural Character, Landscape and Visual Effects Assessment
- Appendix 19: Terrestrial and Freshwater Ecological Effects Assessment
- Appendix 20: Marine Ecology and Coastal Avifauna Effects Assessment
- Appendix 21: Air Quality Effects Assessment
- Appendix 22: Construction Noise and Vibration Effects Assessment
- Appendix 23: Groundwater Permitted Activity Assessment
- Appendix 24: Archaeological Effects Assessment
- Appendix 25: Community Facilities Approval in Principle
- Appendix 26: Healthy Waters Approval in Principle
- Appendix 27: Construction Traffic Management Plan
- Appendix 28: Communication and Consultation Plan
- Appendix 29: Construction Noise and Vibration Management Plan
- Appendix 30: Social Impacts Assessment

Given the large number of supporting documents, these have not been attached to this report. Instead, these can be accessed from the Auckland Council website as follows:

<https://www.aucklandcouncil.govt.nz/have-your-say/have-your-say-notified-resource-consent/notified-resource-consent-applications-open-submissions/Pages/ResourceConsentApplication.aspx?itemId=546&applNum=BUN60407121>

Section 92 of the RMA allows councils to request further information from a requiring authority or consent applicant 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 9 September 2022	First section 92 response on 3 November 2022. Social Impact Assessment section 92 response on 7 February 2023. Noise and vibration section 92 response on 21 February 2023 Further response 3 March 2023

This information has also been uploaded to the below address:

<https://www.aucklandcouncil.govt.nz/have-your-say/have-your-say-notified-resource-consent/notified-resource-consent-applications-open-submissions/Pages/ResourceConsentApplication.aspx?itemId=546&applNum=BUN60407121>

4. Adequacy of information

The information submitted by the applicant is sufficiently comprehensive to enable the consideration of the following matters on an informed basis:

- The nature and scope of the proposed activity that the applicant is seeking resource consents for.
- The extent and scale of the actual and potential effects on the environment.
- Those persons and / or customary rights holders who may be adversely affected.
- The requirements of the relevant legislation.

5. Qualifications and/or experience

I hold a Bachelor of Engineering (Engineering Science) and a Master of Planning Practice (Honours) from the University of Auckland which I obtained in 1996 and 2005 respectively.

I have 18 years of planning and resource management experience. My experience has included working as a planning consultant for ten years, providing in-house planning advice for a start-up processing engineering company for five years, and as a Senior Planner for the Council for three years.

6. Report and assessment methodology

The applications are appropriately detailed and comprehensive and include a number of expert assessments. Accordingly, no undue repetition of descriptions or assessments from the applications is made in this report.

I have made a separate and independent assessment of the proposal, with the review of technical aspects by independent experts engaged by the council, as needed.

Where there is agreement on any descriptions or assessments in the application material, this is identified in this report.

Where professional opinions differ, or extra assessment and / or consideration is needed for any reason, the relevant points of difference of approach, assessment, or conclusions are detailed. Also – the implications for any professional difference in findings in the overall recommendation is provided.

The assessment in this report also relies on reviews and advice from the following specialists:

Effect	Reviewing Specialist
Air Quality	Paul Crimmins, Senior Specialist, Contamination, Air & Noise Team, Specialist Input Unit, Auckland Council
Archaeology and Heritage	Myfanwy Eaves, Senior Specialist Archaeology, Cultural Heritage Implementation Team, Heritage Unit, Auckland Council
Marine Ecology	Dr Kala Sivaguru, Senior Specialist, Coastal & Water Allocation Team, Specialist Input Unit, Auckland Council
Contaminated Land	Fiona Rudsits, Senior Specialist – Contamination, Air & Noise Team, Specialist Input Unit, Auckland Council
Development Engineering	Maria Baring, Project Manager Regulatory Engineering, Regulatory Engineering South, Auckland Council
Earth and Stream Works	Samantha Langdon, Specialist (Earth and Stream Works), Earth, Stream & Trees Team, Specialist Input Unit, Auckland Council
Groundwater	Richard Simonds, Consultant Senior Geotechnical Engineer, Fraser Thomas
Landscape and Visual	Rob Pryor, Consultant Landscape Architect, LA4
Noise and Vibration	Jon Styles, Acoustic and Vibration Consultant, Styles Group
Parks	Andrew Miller, Consultant Parks Consent Planner, CoLab Planning
Social Impact	Robert Quigley, Consultant Social & Health Researcher, Quigley and Watts Ltd
Stormwater	Dr Arsini Hanna, Senior Specialist, – Stormwater and Wastewater Team, Specialist Input Unit, Auckland Council Eseta Maka-Fonokalafi, Senior Healthy Waters Specialist, Healthy Waters Strategy & Resilience Team, Healthy Waters

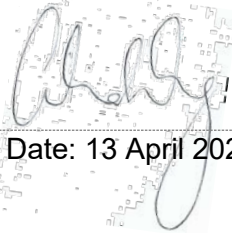
Terrestrial and Freshwater Ecology	Claire Webb, Consultant Ecologist, Beca
Traffic	Martin Huang, Consultant Transportation Engineer, Stantec New Zealand
Trees	Gavin Donaldson, Senior Arborist, Earth, Streams and Trees Team, Specialist Input Unit, Auckland Council
Urban Design	Trevor Mackie, Consultant Urban Designer

These assessments are included in Appendix 1 of this report.

This report is prepared by:

Celia Wong, Senior Planner, Resource Consents, South

Signed:




Date:

Date: 13 April 2023

Reviewed and approved for release by:

Warwick Pascoe, Principal Project Lead, Premium Resource Consents

Signed:



Date:

Date: 13 April 2023

7. Executive summary

Auckland Transport has applied to the council for resource consents to construct and operate a dedicated urban 1.8km long busway from Pakuranga Town Centre in the west to Pakuranga Creek and Riverhills Park in the east. Collectively these works are referred to as the Eastern Busway Stage 3 Residential (EB3R).

Its western extent links to the part of the Eastern Busway Stage 2 (EB2) at the intersection of Pakuranga Highway and Ti Rakau Drive, where a Notice of Requirement (NoR) and regional resource consents package is also being considered as part of this hearing.

During the processing of this application, a request was made by the applicant for the application's public notification. Five submissions were received, all of which were in time. Of these submissions, two were in support of the proposal, two did not specify a desired decision, and one was in opposition.

Having considered the specialist advice provided to Council, I consider that the application is not currently in the form where consent can be granted as there are a number of issues that cannot be resolved by way of conditions and require clarification, further information and/or mitigation to be considered at the hearing. That said, upon the resolution of such issues at the hearing, I consider that in principle consent could be granted.

Furthermore, Council has been advised of potential changes to the eastern intersection of Edgewater Drive and Ti Rakau Drive following post-notification discussions with submitters. Essentially, this 'change' introduces a form of signalisation at this intersection. The timing of the provision of plans and an amended Integrated Traffic Assessment are such that thorough consideration of the implications of the potential resultant effects of the change on the immediate and wider environment cannot be incorporated into this report. Further feedback on this aspect of the proposal will be provided by Council at the time of the hearing. In the first instance a decision is sought from the Hearing Commissioners as to whether this amendment warrants the (re)notification of the EB3R consent application.

8. The proposal, site and locality description

Proposal

Section 3 of the AEE provides a comprehensive description of the proposal incorporating details of both the busway's design and operation (Section 3.2) and its construction (Section 3.3).

In summary, the key elements associated with EB3R comprise:

- Widening of Ti Rakau Drive and the provision of a dedicated bus facility within the centre of Ti Rakau Drive that will link with EB2 (design and consenting phase) and EB3C (design and consenting phase),
- Provision of two bus stations (Edgewater Station and Gossamer Station) ,
- Construction of the western abutment for a future bridge across Pakuranga Creek, adjacent to the existing Ti Rakau Drive Bridge,
- Provision of facilities for buses, general traffic, pedestrians and cyclists along Ti Rakau Drive,
- New landscaping, and stormwater infrastructure.

Ancillary works include the creation of a new 22 space at-grade public carpark at 171 Edgewater Drive to provide replacement parking for the uses of Edgewater Shopping Centre.

Temporary works include the use of the existing dwellings located at 143 Ti Rakau Drive and 178 Gossamer Drive as site offices.

Site and surrounding environment description

A detailed description of the existing environment forms Section 4 of the AEE. Having undertaken a series of site visits on 7 September 2022, 31 March 2023 and 8 April 2023, I concur with that description of the site and provide the following additional comments:

- Of relevance to this proposal is the extent of land that is owned by Auckland Council. As set out in Appendix 5 of the AEE, as of 11 August 2022, acquisition had been completed (or agreements had been reached) for all 100 plus properties for which the full acquisition is required. Of the properties where partial occupation is required for the busway, agreements had been reached for all but eight private properties, and an agreement in principle had been reached with respect to the use of Parks land.

The applicant is invited to provide an update on the status of land acquisition at the hearing.

- Accordingly, since the AEE was written and the application was lodged in August 2023, AT has progressed with the demolition and removal of the dwellings where the demolition of buildings is a permitted activity pursuant to Rules H5.4.1(A29), H6.4.1(A30), and H13.4.1(A46).

Except for 191 Ti Rakau Drive (which is privately owned), all the properties fronting the southern side of Ti Rakau Drive are bound by temporary construction fencing where the majority of these properties are vacant or are the process of having their dwelling(s) removed.

On the northern side of Ti Rakau Drive, the dwellings on 220 and 222 Ti Rakau Drive have been removed, and the property proposed as a construction site office (178 Gossamer Drive) has had construction fencing erected along its perimeter.

- Further, consent (LUC60401706) has been granted to the Extension of William Roberts Road (described in Section 1.1 of the AEE) and works have commenced with the removal of trees within the south-western side of Ti Rakau Park and the removal of buildings at the end of Cortina Place.

9. Background

Comments from the Local Board

Separate comments on this resource consent application have been received from Mr David Collings as the Local Board Resource Consent Lead for the Howick Local Board.

For the most part, the comments mirror those expressed with respect to the resource consent applications relating to EB2 including those general comments on the desire to see this stage of the busway with minimal effects on the community at large, regarding any impact on traffic flow, noise and vibration and other disturbances and a reasonable level of mitigation of any environmental effects.

Specific to this application and the application for streamworks (LUS60412895), Mr Collings has noted that support would not be provided for the three proposed structures if permitted activity criteria were not met. These comments will be addressed as part of the following assessment and are appended as Appendix 3.

10. Reasons for the applications

Resource consents are required for the following reasons:

Auckland Unitary Plan (Operative in part)

District land use (operative plan provisions)

AUP(OP) Rule	Description	Activity Status
Land-Use Consent (Section 9(2)) - LUC60407123		
Chapter E25 – Noise		
E25.4.1 (A2)	<p>The permitted construction noise standard of 70dB is predicted to not be met at 63 residential and 2 commercial properties, with a maximum infringement potentially exceeding 20 dB. This is a worse-case scenario when a concrete saw is in use and has been modelled as though this is to occur at the extent of the construction boundary.</p> <p>Further, 43 residential dwellings may experience vibration levels above Category B vibration criteria if the roller compactor is in use on the construction boundary in the closest position to a sensitive receiver.</p> <p>As such, consent is required for activities that do not comply with a permitted activity standard</p>	Restricted discretionary
Chapter E26 – Infrastructure		
E26.4.1 (A16)	<p>Construction of road network utilities will occur in land that is not yet legalised as road. In particular this relates to works within land zoned residential (the construction of the new westbound general traffic lanes) and land zoned Open Space (the construction of the new westbound traffic lanes and works within Riverhills Park including the western bridge abutment). Consent is required for network utilities and electricity generation facilities not listed in Table E26.2.3.1 Activity Table</p>	Discretionary

AUP(OP) Rule	Description	Activity Status
E26.3.3.1 (A77)	<p>Tree removal will occur within coastal zones, to construct the new stormwater outfall at Riverhills Park and to modify existing stormwater outfalls within EB3R. Standard E26.3.5.2(1) is not complied with as works will involve the removal of trees measuring greater than 6m in height and/or 600mm in girth for trees located in coastal areas and riparian margins for the construction of network utilities.</p> <p>As such consent is required as Vegetation alteration or removal that does not comply with Standards E26.3.5.1 to E26.3.5.4</p>	Restricted Discretionary
E26.4.3.1 (A84)	No notable trees are impacted by the proposed works in EB3R. Consent is required as tree trimming is required for trees located in the road and Open Space zone which do not comply with Standard E26.4.5.1 (Trees in Streets and Open Space Zones)	Restricted Discretionary
E26.4.3.1 (A88)	Consent is required as proposed works will be undertaken within the protected root zone that is not provided for either by way of Rule E26.4.3.1 (A86) or E26.4.3.1 (A87)	Restricted Discretionary
E26.4.3.1 (A92)	Consent is required as the proposed works will require removal of trees greater than 4m in height and/or 400mm in girth for trees located in the road and Open Space zone as a result of the Project footprint	Restricted Discretionary
E26.5.3.1 (A97)	Land disturbance is predicted to occur over 6.8 hectares within EB3R. This includes the widening of Ti Rakau Drive, works within Riverhills Park to construct the western bridge abutment and Gossamer Station, and utility trenching. While land will not be opened all at once, consent is sought for earthworks to be greater than 2500m ² at any one time.	Restricted Discretionary
E26.5.3.1 (A97A)	Land disturbance is predicted to occur for a total of 20,000m ³ of cut and 32,000m ³ of fill across EB3R. This includes the widening of Ti Rakau Drive, works within Riverhills Park to construct the western bridge abutment and Gossamer Station, and utility trenching. While land will not be opened all at once, consent is sought for earthworks to be greater than 2500m ³ at any one time.	Restricted Discretionary
Chapter E27 – Transport		
E27.4.1(A2)	Three of 22 parking spaces proposed are provided with a manoeuvring space of 5.4m where a space of 5.9m is required by Standard E27.6.3.1 (T120). Consent is required as a restricted discretionary activity under Rule E27.4.1(A2)	Restricted discretionary

AUP(OP) Rule	Description	Activity Status
E27.4.1(A2)	The 6.5m wide vehicle crossing is proposed where the maximum permitted vehicle crossing for ten or more parking spaces is 6m under Standard E27.6.4.3.2 (T151). Consent is required as a restricted discretionary activity under Rule E27.4.1(A2)	Restricted discretionary
E27.4.1 (A5)	The widening of Ti Rakau Drive (an arterial road) will result in a number of vehicle crossings being modified or changing locations and will require consent for construction or use of a vehicle crossing where a Vehicle Access Restriction applies under Standards E27.6.4.1(2) or E27.6.4.1(3).	Restricted discretionary
Chapter E36 – Natural Hazards		
E36.4.1 (A56)	All other infrastructure (not considered under Rules E36.4.1 (A52 to A55) in coastal erosion hazard areas; coastal storm inundation 1 per cent annual exceedance probability (AEP) area; coastal storm inundation 1 percent annual exceedance require consent as a discretionary activity.	Restricted discretionary
Chapter E40 – Temporary Activities		
E40.4.1 (A24)	<p>In accordance with E40.4.1 (A24), exceedance of 24 months for the satellite offices and laydown areas within EB3R will require land use consent as a Restricted Discretionary Activity. The offices and laydown areas are intended to be operational for a period of 4 years.</p> <p>Specific temporary activities that are not provided as a permitted activity in rules (A12) to (A23) require consent as a non-complying activity.</p>	Non-complying
Chapter H6 – Terrace Housing and Apartment Buildings Zone		
H6.4.1 (A1)	<p>The proposed public carpark at 105 Ti Rakau Drive to provide 22 parking spaces to serve the Edgewater Shopping Centre will occur prior to the land being vested as road. Therefore, the activity will result in a technical infringement as an activity not provided for within the Residential – Terrace Housing and Apartment Buildings Zone.</p> <p>Consent is required as an activity not provided for.</p>	Non-complying

Regional land use (operative plan provisions)

AUP(OP) Rule	Description	Activity Status
Land-Use Consent (Section 9(2)) - LUC60407123		
Chapter E26 – Infrastructure		
E26.5.3.2 (A103)	The construction of EB3R will require earthworks over 6.8 hectares. These earthworks require consent as they are greater than 50,000m ² where land has a slope less than 10 degrees outside the Sediment Control Protection Area ² other than for maintenance, repair, renewal, minor infrastructure upgrading.	Restricted discretionary
E26.5.3.2 (A107)	Earthworks greater than 2,500m ² are proposed to occur within 100m of the CMA, , and trigger consent for earthworks within the Sediment Control Protection Area other than for maintenance, repair, renewal, minor infrastructure upgrading	Restricted discretionary
E26.6.3.1 (A117)	Earthworks within the Marine SEA associated with two outfalls will be a total of 148.5m ² and 78m ³ and will require consent as earthworks from 10m ² to 2500m ² and from 5m ³ to 2500m ³	Restricted discretionary

AUP(OP) Rule	Description	Activity Status
Coastal Permit – Section 12(1) (2) and/or (3) - CST60408460 (occupation) and CST60408461 (disturbance)		
Chapter F2 Coastal – General Coastal Marine Zone		
F2.19.4 (A50)	The proposed mangrove removal within the CMA for the construction of infrastructure and their associated occupation and use is considered as mangrove removal, not otherwise provided for under this rule.	Discretionary
F2.19.10 (A133)	The proposed construction, occupation of the CMCA with the stormwater infrastructure and to use the infrastructure to discharge stormwater into the CMA requires consent as infrastructure CMA structures not otherwise provided for.	Discretionary
F2.19.10 (A121) ³	Construction related temporary structures in the CMA, occupation of the CMCA with, and use of structures for construction for more than 40 working days will require as the construction of CMA structures and buildings unless provided for.	Discretionary

² Sediment Control Protection Area is defined as:

- 100 metres either side of a foredune or 100m landward of the coastal marine area (whatever is the more landward of mean high water springs); or
- 50 metres landward of the edge of a watercourse, or wetland of 1000m² or more.

³ Whilst the AEE did not seek consent under Rule F2.19.10 (A121), this rule has been assessed as part of this application to cover the consent for construction related structures/coffer dam for the proposed infrastructure construction in the CMA.

Streamworks Consent – Sections 13 and 14 - LUS60412895**Chapter E3 Lakes, rivers, streams and wetlands⁴**

E3.4.1(A1)	As the proposed erosion and scour associated with MCC_108707 is not associated with a new structure (E3.6.1.14(1)(b)) or the extension of an existing structure (E3.6.1.12(2)(b)), this activity would defer to (A1) as an activity that is not otherwise provided for and assessed as a discretionary activity. It is currently unknown the length of stream channel to be reinstated, and therefore the total length of rock rip rap subject to this assessment. The applicant has only accounted for the 2m that extends past the original outfall endpoint.	Discretionary
E3.4.1(A26)	The MCC_108707 outfall would be considered an existing structure under table E3.4.1. The removal of the existing MCC_108707 pipe from the bed of stream 3b would generally be subject to (A24). However, as the stream bed disturbance will exceed 10m, the upgrade of MCC_108707 would not meet standard E3.6.1.10(1)(a), and therefore, consent is required under Rule E3.4.1 (A26)	Discretionary
E3.4.1(A44)	Erosion and scour protection proposed to be placed below the new stormwater outfalls within the bed of stream 2 (12.08m associated with Outfall 2/MCC_108699) and stream 3a (10.87m associated with Outfall 300/MCC_108703) exceed 5m in length when measured from the outfall endpoints. As the lengths exceed standard E3.6.1.14(1)(b), consent is required as a discretionary activity under Rule E3.4.1(A44).	Discretionary
E3.4.1(A44)	To enable the installation of the erosion and scour protection for Outfall 300/ MCC_108703, the downstream extent of disturbance is greater than 10m when measured from the edge of the new rock rip rap structure. As the streamworks length does not meet standard E3.6.1.14(2), this activity is to be assessed as a discretionary activity under Rule E3.4.1(A44).	Discretionary

⁴ The AEE did not seek consent under these rules, with Section 5.2.3 setting out that the upgrades to the three existing outfalls (13/14, 1a, and 1b) comply with the standards in E3.6.1.12 and are considered to be permitted. Paragraphs 3.9 to 3.16 of the technical peer review undertaken by Council Specialist Samantha Langdon sets out the reasons for consent being required.

Discharge Permit - Section 15(2A) - DIS60407493		
Chapter E30 – Contaminated land		
E30.4.1 (A7)	Land disturbance will occur adjacent to a contaminated site (11 Cortina Place, a former service station) and a detailed site investigation has not been undertaken ⁵ . In this regard, consent is required with respect to discharges of contaminants into air, or into water, or onto or into land not meeting controlled activity Standard E30.6.2.1	Discretionary

National Environmental Standards⁶

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS)

NES-CS Regulation	Description	Activity Status
Regulation 11	Works are occurring in proximity to a former service station at 11 Cortina Place, Pakuranga, an identified HAIL site without the prior preparation of a detailed site investigation. Consent is required as an activity described in any of regulation 5(2) to (6) on a piece of land described in regulation 5(7) or (8) that is not a permitted activity, controlled activity, or restricted discretionary activity.	Discretionary

⁵ As set out in the AEE, as a precautionary approach consent was sought under Rule E30.4.1(A6). In the absence of being able to determine compliance with Standard E30.6.2.1 by way of a detailed site investigation, consent is considered to be required under Rule E30.4.1(A7) as opposed to Rule E30.4.1(A6).

⁶ The applicant originally sought consent under the NES-FW for vegetation clearance within 10m of a natural wetland (Regulation 45(1)), earthworks within 10m of a natural wetland (Regulation 45(2)), and for the temporary diversion and discharge of water within 100m of a natural wetland (Regulation 45(4)).

As set out in paragraphs 2.14 to 2.16 of the Technical Memo prepared by Samantha Langdon – Specialist (Earth and Stream Works), as a consequence of amendments to the NES-FW effective 5th January 2023 whereby “The definition of ‘natural wetland’ in the NPS:FM has been amended to ‘natural inland wetland’, and now excludes wetlands within the CMA, these reasons for consent are no longer required.

In this regard, the application for a water permit WAT60412894 and discharge permit DIS60412893 is no longer relevant to this proposal.

National Environmental Standard for National Environmental Standards for Freshwater (NES-FW)

NES-FW Regulation	Description	Activity Status
Regulation 45(1)	<p>Vegetation clearance will occur within and adjoining the CMA associated with the upgrade of stormwater outfalls and construction of the new stormwater outfall at Riverhills Park.</p> <p>Consent is required for vegetation clearance within, or within a 10 m setback from, a natural wetland. This is a discretionary activity if it is for the purpose of constructing specified infrastructure.</p>	Discretionary

The reasons for consent are considered together as a non-complying activity overall.

11. Status of the resource consents

Where a proposal:

- consists of more than one activity specified in the plan(s); and
- involves more than one type of resource consent or requires more than one resource consent; and
- the effects of the activities overlap;

the activities may be considered together.

Where different activities within a proposal have effects which do not overlap, the activities will be considered separately.

In the instance, the effects of the proposed resource consents will overlap and thus they are considered together as a non-complying activity overall.

12. Notification and submissions

Notification background

The applications were publicly notified on 13 December 2022 at the request of the applicant.

Notice of the applications was served on 13 December 2022 on those persons/customary or marine title groups identified as being adversely affected by the proposal.

As discussed, comments were received from Howick Local Board in general support of the proposal on the proviso that associated effects would be addressed.

Submissions

When the submission period ended, a total of five submissions were received, and no submissions were received after the close of the submission period.

A map showing the location of submitters is attached as Appendix 2.

Of the submissions received, two support the application, two are neutral/do not specify, and one opposes the application.

A summary of the issues raised in submissions, together with the relief sought by the submitters is set out as follows:

This table is only a summary of the key issues raised in submissions. For the specific details, refer to the full set of submissions, included in Appendix 3 to this report.

This summary of submissions identifies the following:

- the issues raised in submissions in terms of the key issues below
- details any relief sought by the submitter
- whether a submitter wishes to be heard at the hearing.

Summary of submissions

Issues raised:		
1.	Reduction of Greenhouse Gas Emissions from Transport/Sustainability Objective	2
2.	Construction Traffic Effects	2
3.	Disruptions to Edgewater College bus route	1
4.	Construction noise, vibration, dust, traffic management, wayfinding, stakeholder communication	2
5.	Lack of economic impact assessment, negative financial effects	1
6.	Location of Edgewater bus station, signalised intersection	1
Relief sought:		
A.	Grant consent	2
B.	Refuse consent/impose conditions	1
C.	Neutral/do not specify subject to condition re: amendments to CTMP/signalised intersection	2

The following table summarises the submissions received:

No	Name	Physical address	Issues raised	Relief sought	To be heard
16015	Grant Hewison	N/A	1	A	Y
16016	Equal Justice Project	N/A	1	A	Y
16018	Ministry of Education	N/A	2, 3	C	Y
16031	Pakuranga Plaza Limited	10 Aylesbury Street, Pakuranga	2, 4	B	Y
16045	Metlifecare Limited	14 Edgewater Drive., Pakuranga	4, 5, 6	C	Y

Written Approvals

The applicant has not obtained the written approval from any persons.

Further information to the applications following notification

After the submission period ended, the applicant provided on 3 March 2023 further information on a number of matters. Given the extent of information provided this has been uploaded to Council's website as follows: <https://www.aucklandcouncil.govt.nz/have-your-say/have-your-say-notified-resource-consent/notified-resource-consent-applications-open-submissions/Pages/ResourceConsentApplication.aspx?itemId=546&appNum=BUN60407121>

This further information forms part of the applications and is considered in this report. The information provided does not amend the application per se, and therefore re-notification of the applications was not required.

Potential amendments to the applications following notification

The applicant advised Council of potential changes to the eastern intersection of Edgewater Drive and Ti Rakau Drive on 17 March 2023. More specifically, as a consequence of discussions with submitters, an option has been offered whereby this intersection would introduce signalised traffic control where traffic could now enter/exit Edgewater Drive to/from the northern side of Ti Rakau Drive. At this time, Council advised that expert advice on the implications of this change on potentially affected parties and on the efficiency of the busway would be required to inform a decision on whether such a change would require renotification.

To this end, an amended Integrated Traffic Assessment was submitted to Council on 12 April 2023. Both the amended intersection configuration and this assessment have been uploaded as further information to the previously mentioned website address. The timing of this information is such that a considered recommendation for the renotification (or otherwise) of the application or its merits cannot be provided as part of this hearing report.

Such a recommendation will be provided prior to the hearing, with a decision sought from the Hearings Commissioners in the first instance on whether the amended intersection warrants renotification of this application.

Consideration of the applications

13. Statutory considerations

Resource Management Act 1991

In considering any application for resource consent and any submissions received, the council must have regard to the following requirements under s104(1) of the RMA – which are subject to Part 2 (the purpose and principles):

- any actual and potential effects on the environment of allowing the activity;
- any measure proposed to or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity;
- any relevant provisions of national policy statements, New Zealand coastal policy statement; a regional policy statement or proposed regional policy statement; a plan or proposed plan, a national environmental standard (NES), or any other regulations; and
- any other matter the council considers relevant and reasonably necessary to determine the application.

When considering any actual or potential effects, the council may disregard any adverse effects that arise from permitted activities in a NES or a plan (the permitted baseline). The council has discretion whether to apply this permitted baseline.

For a discretionary activity or non-complying activity, the council may grant or refuse consent (under s104B). If it grants the application, it may impose conditions under s108.

As a non-complying activity, it is subject to the ‘threshold test’ under s104D. The council may only grant consent to a non-complying activity if satisfied that the adverse effects on the environment are minor, or that the activity will not be contrary to the objectives and policies of the relevant plan or proposed plan. If the proposal satisfies either of the limbs of the test then the application can be considered for approval, subject to consideration under ss104 and 104B.

Sections 105 and 107 address certain matters (in addition to the matters in s104(1)), relating to discharge permits and coastal permits where the proposal would otherwise contravene s15 (or ss15A or 15B).

Sections 108 and 108AA provide for consent to be granted subject to conditions and sets out the kind of conditions that may be imposed.

14. Actual and potential effects on the environment

Sections 104(1)(a) and 104(1)(ab) of the RMA requires the council to have regard to:

- any actual and potential effects on the environment of allowing the activities (including both the positive and the adverse effects); and
- any measure proposed, or agreed to, by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity.

Positive effects

Section 7.3 of the AEE details the positive effects associated with the proposal, where in conjunction with the other stages of the Eastern Busway the proposal responds to: *“transport issues within southeast Tāmaki Makaurau Auckland, to meet projected population growth, reduce regional greenhouse gas emissions and to achieve modal shift goals.”*

More specifically, the proposal is intended to respond to existing congestion, the demands of increased population growth through brownfield and greenfield development, and the growth in commercial activity in the wider area through:

- *“The dedicated bus lanes and stations [which] will improve the public transport experience for passengers, through reliable travel times and high quality/frequent services and make it more attractive to current private vehicle users.”;*
- *“Increased uptake of public transport [which] will also ease congestion and reduce regional greenhouse gas emissions”,* where
- *... “the Project’s walking and cycling investments [will] make those transport modes safer and more attractive to users.”*

From a transportation perspective this assessment is supported by Council’s Consultant Traffic Engineer Martin Huang who has stated that: *“In particular, the establishment of public transport and active travel facilities along this corridor will noticeably improve the quality and reliability of these alternative travel modes and assist with the desired residential intensification development in this area”* (technical memo dated 24 March 2023, Appendix 1).

Overall, I adopt Mr Huang’s assessment and concur that, in the round, the works will have positive effects with respect to transportation improvements.

Adverse effects

In considering the adverse effects of the proposal, the council:

- may disregard those effects where the plan permits an activity with that effect; and
- must disregard those effects on a person who has provided written approval, and trade competition or the effects of trade competition.

Effects that may be disregarded

Permitted baseline assessment

The permitted baseline refers to permitted activities on the subject site. The permitted baseline may be taken into account and the council has the discretion to disregard those effects where an activity is not fanciful.

The permitted baseline has been discussed within section 7.2 of the AEE, in particular with reference to the works controlled by Chapter E26 Infrastructure of the AUP: *“The majority of works will take place within the existing road corridor, or within the future road corridor. Construction of roads within the road corridor is a permitted activity where all permitted standards are met, and extends to associated road closures, diversions and temporary traffic configurations that may be required by AT as the road operator. The removal, relocation and construction of underground networks utilities are also generally provided for as permitted activities.”*

Further to this, the following works have also been identified as being permitted under the AUP:

- *“Relocation of underground services*
- *Relocation of vector substations*
- *Removal of car parks currently located within legal road*
- *Removal of trees under 4.0m in height within legal road and open space*
- *Demolition of buildings in land zoned residential*
- *Removal of trees within land zoned residential.”*

The AEE also sets out that: *“the following are permitted activities that provide a useful baseline against which the adverse effects of the non-complying activity can be assessed:*

- *Construction noise and vibration complying with the relevant permitted standards*
- *Construction, operation, use, maintenance and repair of road network utilities within the legal road corridor*
- *Minor infrastructure upgrading of network utilities (including road network utilities).”*

Finally, with respect to the extent of land acquired within the proposal’s footprint the AEE notes in Section XX that: *“The land required for EB3R will be vested as road following the completion of all acquisitions. Given the extent of property already acquired by AT, it is considered reasonable that the permitted baseline as it relates to the construction and operation of infrastructure (and the broad range of activities that are permitted within the road corridor) be considered in the approach to the consideration of adverse effects on the environment.”*

To a certain degree, I concur with this approach albeit I consider this ‘baseline’ of sorts to be restricted to land that is owned by Auckland Council. As such, it is critical to understand from AT the status of the remnant properties for which acquisition and/or agreements had not been finalised at the time of lodging the resource consent applications.

Assessment

Receiving environment

The receiving environment beyond the subject site includes permitted activities under the relevant plans, lawfully established activities (via existing use rights or resource consent), and any unimplemented resource consents that are likely to be implemented. The effects of any unimplemented consents on the subject site that are likely to be implemented (and which are not being replaced by the current proposal) also form part of this reasonably foreseeable receiving environment. This is the environment within which the adverse effects of these applications must be assessed.

Adverse effects

While having regard to the above, the following assessment is done after I have:

- analysed the applications (including any proposed mitigation measures);
- visited the site and surrounds;
- reviewed the council's records;
- reviewed the submissions received; and
- taken advice from appropriate experts.

The following adverse effects have been identified.

14.1. Transport Effects

Construction Transport Effects

Application

An assessment of Construction Transport Effects has been undertaken within the Integrated Transport Assessment appended as Appendix 11 of the AEE (which has been updated as part of further information), with the effects detailed within section 7.4.1 of AEE and summarised as follows:

"In summary, the safety of all road users, including pedestrians and cyclists, has been a key consideration of all construction activities. In response to this issue, road safety will be at the forefront of the CTMP's development and implementation. This requirement is explicitly stated in the CTMP's stated objective and proposed conditions. Communication of changes to road layouts and access to properties will occur with the public and property owners prior to and during construction activities, as part of the CCP.

While disruption and delays for road users are anticipated to occur during the construction period, many of the associated effects are typical of infrastructure projects within an urban environment. From a resource management perspective, the permitted baseline is relevant in the consideration of adverse effects from road network activities. In particular, changes to the road network and construction, resurfacing, changes to intersection layouts, and maintenance of the road are all permitted activities, with associated effects from the management of construction traffic such as detours and temporary lane closures associated with these also being permitted.

Considering the points above, the permitted baseline for works that may occur within the road corridor, communication to be undertaken with the public prior to and during the works, and the

measures to be considered and undertaken as part of the CTMP, adverse effects on the existing road environment and its users will be no more than minor.”

Submissions

Three of submissions received (Ministry of Education, Pakuranga Plaza Limited and Metlifecare Limited) raise concerns relating to construction traffic effects and traffic management during construction.

Further comments from the Howick Local Board detail concerns about the impact on traffic flows along Ti Rakau Drive and the expectation that: *“comprehensive traffic management plans are developed to allay any effects to the network including the existing bus routes.”*

Specialist Assessment

Martin Huang, Consultant Transportation Engineer, has reviewed the application with respect to Traffic and Transportation, with his assessment appended as Appendix 1 to this report.

This assessment has been undertaken having noted that the applicant has undertaken discussions with particular submitters post-notification, but prior to the formal receipt of a specialist transportation assessment of a potential alternative signalised intersection at Edgewater Drive (east) and Ti Rakau Drive.

With respect to the above-mentioned submitters Mr Huang has advised as follows:

- With regard to the Ministry of Education’s concerns relating to the timing of construction truck movements and the request for further engagement for alternative Edgewater College bus routes during construction, no issues have been raised and the recommendation is made that the applicant continue to consult with the Ministry so a suitable interim solution is found and developed,
- In relation to the concerns raised by Pakuranga Plaza Limited (also referred to as GYPP) *“This submission has been fully addressed in the NoR technical memo⁷ and there are no additional matters to be assessed from an RC perspective.”*,
- While construction traffic is mentioned, the submission from Metlifecare Limited is primarily focussed on options for the intersection(s) of Edgewater Drive and Ti Rakau Drive. In this regard, Mr Huang recommends that: *“the Applicant continues to consult with Metlifecare to demonstrate the desired project outcome and provide practical solutions to address Metlifecare’s detailed concerns through the detailed design and construction phases.”*

In general, with respect to Construction Traffic Mr Huang has assessed that: *“the AEE has recognised the potential effects that may be experienced during the construction period, and it is considered that the implementation of the proposed Construction Traffic Management Plan will be able to provide appropriate measures and mitigations to manage traffic effects during the construction.”*

⁷ These are addressed in section 5.2.1 of the hearing report for EB2

Planning Assessment

I rely on Mr Huang's assessment, and in this regard recommend that the CTMP is updated as a condition of consent to specifically incorporate consultation with the above parties to manage particular construction traffic concerns. In order to ensure a consistent management approach, I also recommend that the conditions relating to the CTMP in EB2 are aligned.

The traffic effects associated with the site offices located at 143 Ti Rakau Drive and 178 Gossamer Drive have not been explicitly discussed. However, these site offices are detailed within the CTMP which in the round Mr Huang has assessed as being appropriate.

As such, overall, I consider that construction traffic effects can be managed such that any adverse effects are no more than minor.

As discussed earlier in this report, it remains to be seen whether construction traffic effects arising from the proposed signalisation of the eastern Edgewater Drive/Ti Rakau Drive intersection will be acceptable.

Operational Traffic Effects

Application

An assessment of Operational Transport Effects has been undertaken within the Integrated Transport Assessment appended as Appendix 11 of the AEE (which has been updated as part of further information), with the effects detailed within section 7.5.1 of AEE with the following conclusions made:

“Overall, while there will be some instances of delays increasing at certain intersections and traffic routes, the ITA demonstrates the significant benefits that EB3R and the wider Project will deliver with regard to the operation of the Tāmaki Makaurau Auckland’s transport networks. In particular, the functioning of the region’s bus services will experience a transformation, with the ability to provide increased services, reduced journey times and improvements in the ability to transfer between services. The passenger experience will also benefit from the provision of new bus shelters, real time information and general safety. EB3R also delivers improvements to walking and cycling transport modes, with dedicated and improved infrastructure. This will allow for safer journeys and better connectivity to local activities.

The infrastructure proposed in EB3R will therefore generally lead to an improvement from the existing environment for traffic movements in peak traffic, bus services and for pedestrians and cyclists. While delays are noted to occur in some instances across the road network following the completion of EB3R, adverse effects on the users of the Ti Rakau Road corridor will be no more than minor, and generally positive.”

Submissions

Two submissions reference operational traffic effects in relation to the reduction of Greenhouse Gas Emissions (Grant Hewison and Equal Justice Project), whilst Metlifecare Limited has raised options relating to the location of Edgewater bus station and a signalised intersection.

Specialist Assessment

Further to Mr Huang's consideration of Construction Traffic Effects, Mr Huang has also considered Operational Traffic Effects in his memo appended as Appendix 1.

With respect to the submissions made, Mr Huang provided the below comments:

- The submissions made by Grant Hewison and Equal Justice Project *“have not been discussed in this memo as the submitters support the RC applications and have not raised any general or specific traffic/transportation concerns associated with the proposal.”*
- In consideration of the requested relocation of Edgewater Bus Station: *“While there are some merits with catering for all movements at this intersection, the extra movements will lead to additional delays along this public transport corridor, which will reduce the project objectives and outcomes of improving bus travel time. In addition, the U-turn provision at adjacent locations is considered to be within acceptable distances. The moderate diversion is outweighed by the anticipated bus travel time benefits demonstrated by the ITA and subsequent S92 evidence.”*
- Relative to a signalised intersection and reference to an early concept layout: *“While there are always pros and cons to different design options, the current proposal advanced by the Applicant is considered to optimise the objective bus travel times along the corridor by restricting right turn movements for both Marriot Road and Edgewater Drive. The early concept layout discussed by the submitter is considered to incur unnecessary delays (and consequential safety risks) as a crossroad intersection. The U-turn provision in the vicinity of the site being approximately 200m from the intersection will allow vehicles to reach destinations without compromising the safety and efficiency benefits demonstrated by the ITA and subsequent S92 statements for the EB2R (and wider Eastern Busway) project overall.*

Overall, it is considered that the current proposed scheme remains the preferred design layout, but it is recommended that the Applicant continues to consult with Metlifecare to demonstrate the desired project outcome and provide practical solutions to address Metlifecare’s detailed concerns through the detailed design and construction phases.”

As discussed with the applicant providing an option for a signalised intersection at Edgewater Drive (east) and Ti Rakau Drive, its impact on bus travel times is yet to be established at the time of writing this report.

As such, while Mr Huang has assessed in the round that *“the establishment of public transport and active travel facilities along this corridor will noticeably improve the quality and reliability of these alternative travel modes and assist with the desired residential intensification development in this area,”* the degree to which (numerically) the improvements have changed as a result of the amended signalised intersection are to be reviewed and reported on at the time of the hearing.

Further to the effects of the busway, Mr Huang has also reviewed the layout of the proposed 22 at-grade public carpark proposed at 105 Ti Rakau Drive. In this regard, Mr Huang has identified that the proposed carpark will not comply with the provisions of E27 of the AUP with respect to: the over width nature of the vehicle crossing, the inability to provide three parking spaces with the minimum required manoeuvring space, and the absence of lighting details required for carparks accommodating ten or more parking spaces. Mr Huang has also identified that since it is proposed to establish more than 20 parking spaces, at least one accessible parking space is required according to New Zealand standard for Design for Access and Mobility – Building and Associated Facilities (NZS: 4121-2001).

These infringements were not assessed as part of the application submitted.

With regard to these 'infringements' Mr Huang has recommended by way of condition that the following amendments are made:

- *“Reduce the vehicle crossing width to 6m;*
- *Undertake amendment to the internal layout to achieve full compliance in accordance with Table E27.6.3.1.1 (T120), e.g., shifting the manoeuvring space between western rows to make room for the eastern row;*
- *Include appropriate lighting provisions in a manner that complies with the rules in E24 of AUP-OP;*
- *Provide at least one assessable parking space in accordance with NZS:4121-2001.”*

Planning Assessment

I adopt Mr Huang's assessment and recommended conditions. That said, with respect to the recommended conditions associated with the public carpark at 105 Ti Rakau Drive, I invite the applicant to provide either:

- amended plans to ensure compliance with the AUP and NZS:4121-2001, or
- additional assessment to demonstrate:
 - the appropriateness of an over-width vehicle crossing in the context of increased and improved pedestrian and cycle movements along Ti Rakau Drive;
 - the safe and efficient passage of vehicles from all parking spaces within the carpark; and
 - the provision of sufficient (potentially alternative) accessible parking spaces for the Edgware Shopping Centre which this carpark serves.

Overall, I consider that the operational traffic effects of the EB3R proposal as notified can be appropriately managed such that any adverse effects will be no more than minor.

14.2. Noise and Vibration Effects

Construction Effects

Application

A Construction Noise and Vibration Effects Assessment has been undertaken for both EB2 and EB3R (Appendix 22 to the AEE) where the discussion of construction noise effects and vibration effects are made in sections 7.4.2 and 7.4.3 of the AEE respectively.

Correspondingly, the AEE concludes (where the majority of properties where permitted noise levels are modelled to be exceeded are located on the northern side of Ti Rakau Drive) that:

“The construction noise and vibration assessment concludes that with the use of effective mitigation, noise levels are predicted to comply with the 70 dBL_{aeq} noise criterion at surrounding receivers for the majority of the construction works.

With regard to mitigation, the assessment has identified a number of measures that should be employed during EB3R's construction, including:

- *Managing times of activities to avoid night works and other sensitive times where practicable*
- *Liaising with neighbours so they can work around specific activities, including providing advance notice of night works or use of high noise generating machinery*
- *Selecting equipment and methodologies to restrict noise*

- *Using screening/enclosures/barriers*
- *Employing additional measures and consultation for any night works.”*

As such, the AEE concludes that in particular: *“the temporary period in which permitted noise levels will be infringed, the mitigation measures and further engagement planned that are proposed as conditions of consent, the temporary construction noise effects of EB3R will be less than minor.”*

Submissions

The matter of construction noise was raised in particular by the submissions made by Pakuranga Plaza Limited and Metlifecare Limited.

Specialist Assessment

The construction noise and vibration effects of the Project have been reviewed by Jon Styles of the Styles Group, Acoustics and Vibration Consultants in a memo dated 12 April 2023, which is provided in Appendix 1 to this report.

With regard to construction effects, Mr Styles has concluded that: *“Overall, I expect that the construction noise and vibration effects generated by the works will be typical of a large roading project with receivers in close proximity. Most receivers will experience a moderate level of construction noise and vibration for most of the project. The closest receivers will be likely to experience construction noise and vibration levels that exceed the project standards for short periods as the works progress past them.*

There are some receivers that will be exposed to construction noise and vibration levels above the project standards for longer periods – perhaps regularly for several weeks. These are predominantly in the vicinity of the RRF and associated structures. I consider that the construction noise and vibration effects could cause considerable disruption to these activities, even if they are managed well. I consider that it is critical for the designation conditions to set out a clear and robust process for the management of these effects and to ensure that they are minimised as far as practicable.

The conditions should include the requirement to effectively consult with the receivers where construction noise and vibration exceed the project standards, and to ensure that the construction noise and vibration management plan and Schedules are approved or certified by the Council prior to them authorising works that exceed the project construction noise and vibration standards.”

Relative to the concerns raised by submitters, Mr Styles has not discussed the submission made by Metlifecare Limited (whereby its focus was on the previously mentioned traffic matters) but has discussed noise and vibration effects as they pertain to Pakuranga Plaza in relation to the submissions made to the EB2 NoR. With respect to Pakuranga Plaza the following comments are made:

“The general nature of the Original Assessments and responses from the Requiring Authority make it difficult to determine the nature and degree of construction noise and vibration effects that these receivers will be exposed to.

My assessment is that many of the submitters will experience construction noise and vibration effects that are intermittent or short-term. The degree of disruption is likely to be low and manageable.

However, the submitters that operate businesses on the 'outside' of the plaza and close to the main works areas do have the potential to experience construction noise and vibration effects that could be more disruptive. These works will need to be carefully managed to ensure that the BPO is carefully identified and adopted.

I recommend that the Requiring Authority provide further detail on these submissions to provide a more specific and certain assessment of the potential adverse construction noise and vibration effects."

Planning Assessment

I adopt Mr Styles' assessment and recommended conditions, whereby in the round the applicant has the ability to control construction noise and vibration effects to an acceptable level, noting that the 'short periods' of time that construction noise and vibration levels that exceed the project standards as the works progress past them.

Further to Mr Styles' assessment, I consider that any noise through the use of 143 Ti Rakau Drive and 178 Gossamer Drive as construction site offices will be subservient in degree to the wider construction effects. As such, any construction management plans are considered to adequately control this aspect of the proposal.

Operational Effects

Application

A Noise and Vibration Operational Effects Assessment has been undertaken for both EB2 and EB3R (Appendix 7 to the AEE) where the discussion of operational noise effects is made in section 7.5.4 of the AEE.

Based on this technical assessment, the AEE concludes for EB3R that:

"42 residential properties are noted as experiencing an increase in noise levels beyond the 'do minimum' scenario of 5 decibels or greater as a result of EB3R. Of these, three properties will experience an increase of 9 – 11 decibels. Notwithstanding the increase in noise levels predicted, the assessment states that the predicted levels are not of a level unexpected for an urban environment, especially in proximity to a major urban arterial road. Furthermore, while the increase in traffic operational noise is noted by the assessment across certain properties, operational noise meets the permitted standard of Rule E25.6.33 of the AUP(OP), as the Best Practicable Option has been achieved.

Therefore, considering the permitted baseline, adverse effects associated with operational traffic noise will be mitigated so as to be less than minor.

Based on the modelling undertaken and mitigation proposed (including reduction in speed limits and noise wall), the requirements of Standard NZ 6806, and the existing environment as it is already defined by vehicle noise, noise effects of EB3R on the receiving environment will be less than minor."

Submissions

No submissions for EB3R specifically raise concerns relating to operational noise.

Specialist Assessment

The operational noise and vibration effects of the Project have been reviewed by Jon Styles of the Styles Group, Acoustics and Vibration Consultants in a memo dated 10 April 2023, which is provided in Appendix 1 to this report.

Relative to Mr Styles' review, the following comments are made:

- Common to EB2, Mr Styles considers that the technical acoustics aspects of the Operational Noise Assessments are generally robust. There was an issue with the inclusion of proposed speed limit reductions in the do minimum and mitigation options and the exclusion of diesel buses from the bus noise assessment. These matters have been addressed in the s92 responses.
- There is disagreement in the presentation of outputs (tables, maps, charts and summaries) in the Original Assessment, where:
*“For the avoidance of doubt, the figures and statements in the Original Assessments that describe the overall change in noise level arising from the projects must not be relied on.

I suggest that the Requiring Authority produce updated versions of Figures 7 and 8 of the Original Assessments to show the overall changes arising from the projects.”*
- Consideration as to whether Mitigation Option 4 is the preferred mitigation option for EB2 and EB3R follows BPO has not been conclusively addressed, where: *“the determination of whether the BPO has been adopted relies on the veracity of the Requiring Authority’s assertions that an OPGA or other low-noise pavement is unsuitable and that the height and extent of noise barriers beyond mitigation option 4 is limited by practical constraints.”*

To address this, the following information is sought:

“I consider that the Requiring Authority should demonstrate that there are no practicable options for a pavement that would be quieter than DG10.

If the Requiring Authority’s assertions regarding the pavement type and barriers are reasonable and correct, I consider that mitigation option 4 has been selected appropriately, and that it is likely to represent the BPO.”

- A range of conditions have been adapted (and abbreviated) from the conditions developed in the Board of Inquiry process and attached to the Northern Corridor Improvements Designation *“ensure that the effects they authorise are no greater than the effects that have been considered in this process and deemed reasonable and appropriate.”*

Planning Assessment

I rely on Mr Styles' assessment and his recommended conditions. Subject to the provision of the information sought and the implementation of his recommended conditions, I consider that the design and operation of EB3R can be controlled such that the operational adverse acoustic effects are reasonable and appropriate.

14.3. Urban Design Effects

Application

No specific Urban Design specialist assessment was provided as part of the application, although as noted in section 4.7 of the AEE, reference is made to the Natural Character, Landscape and Visual Effects Assessment appended as Appendix 18 which is common to both EB2 and EB3R.

Consistent with EB2, conditions (40 to 44) using the implementation of an UDLP are proposed to manage urban design effects.

Submissions

No submissions have been received with direct references to urban design matters whereby the discussion on disruptions to access during construction and operationally are assessed from a transport perspective.

Specialist Assessment

Urban design effects have been assessed by Trevor Mackie, Consultant Urban Design and Planner, in a memo dated 14 March 2023, which is provided in Appendix 1 to this report. The memo covers the NoR as well as the associated EB2 and EB3R resource consents. In this regard, except for the recommendation that a CPTED assessment be provided for the Reeves Road Flyover, the concerns raised by Mr Mackie (on the robustness of the UDLP in its lack of focus on a more intensively developed future environment, and the replacement planting resulting in a 'low beneficial' outcome) in the hearing report for EB2 are common to EB3R.

Accordingly, Mr Mackie concludes that: *“Having considered the EB3R resource consent applications for EB3R in their urban design considerations, and the associated suite of conditions, I consider that the EB3R resource consents should be **granted with amended Conditions 40 and 41 UDLP.**”*

The amendments recommended are the same for both EB2 and EB3R.

Planning Assessment

I adopt Mr Mackie's assessment and recommended amendments to conditions 40 and 41. In particular, I concur with Mr Mackie's comments on the future environment⁸, noting that Plan Change 78 notified in August 2022 as a consequence of the National Policy Statement on Urban Development (NPS-UD), and the requirement to incorporate the Medium Density Residential Standards (MDRS), look to enable greater residential intensification proximate to EB3R than that considered when EB1 was consented.

⁸ *“The proposed UDLP condition, for a required management plan and its certification, may be able to achieve good urban design, landscape and visual effects outcomes, as has largely been achieved in EB1. However I do not consider the existing environment effects assessment to provide a suitable standard for designing the Project. The effects to be managed and the performance required of the mitigations in the UDLP should have a focus on the future environment, which will likely have a substantially greater scale and intensity of built environmental context than the existing environment.”*

With respect to the proposed carpark on 105 Ti Rakau Drive, Mr Mackie's comments are limited to the following: *"The proposed carpark adjacent to the Edgewater Shops has proposed landscape planting mitigation, and its northwest adjacent site appears to be a business use rather than residential so a screen fence may not be required."* With respect to the likelihood of the adjacent Edgewater Shopping Centre continuing to operate outside of daylight hours and the subsequent requirement for the carpark to incorporate artificial lighting, I consider that replacement screen fencing to that currently existing along the carpark's north-western and south-western boundaries will still need to be installed to ensure compliance with artificial lighting (and acoustic) standards. A condition to this effect is recommended.

Overall, I consider that, with the implementation of the recommended conditions, any adverse urban design effects can be appropriately managed.

14.4. Landscape and Visual Effects

Application

Landscape and visual effects are assessed within section 7.4.14 of the AEE, with expert advice being provided within the above-mentioned Natural Character, Landscape and Visual Effects Assessment appended as Appendix 18.

Having regard to the EB3R works, the effects are summarised as follows:

"During construction, landform effects will largely be a result of grading to accommodate new road levels and surfaces. Some works will be required on the coastal interface in relation to the proposed outfalls. Overall, it is considered that landform effects during construction will be low, reducing to very low adverse during operation."

Effects on vegetation will be as a result of tree removal along the road corridor and within affected residential properties and parks. It is considered that adverse effects during construction will be low-moderate however such effects will be temporary, reducing to very low beneficial effects once new planting, with a particular focus on indigenous tree species, will be established.

Effects on open space during construction will be low adverse for Ti Rakau Park where works affect the southern portion. Works in Riverhills Park will be greater in magnitude and result in moderate adverse effects. Works within Freemantle Place Esplanade Reserve will result in very low adverse effects due to the proposed outfall occurring during construction. Once the project is completed, effects will generally reduce however it is recognised that the removal of open space as a result of the Project will result in residual adverse effects.

During construction, the landscape features of EB3R are considered to have low-moderate adverse effects as a result of the project impacting areas of open space. Residual effects however are generally considered to be beneficial due to the proposed enhancements to Ti Rakau Park and Riverhills Park as a result of the project. Effects on the urban development and land use are considered to be low adverse during construction, with low beneficial effects following construction. Effects on landscape character are considered to be low-moderate, reducing to low following project completion.

In relation to natural character effects, these are considered to be low adverse during construction, reducing to very low neutral once the project is complete. Visual effects will also be greater during construction, with the highest effects on residential viewing audiences located adjacent to EB3R, in particular the properties on the southern side of Ti Rakau Drive that are currently located one section back from the road which will become the new road frontage. Following construction it is anticipated that any residual effects on these viewing audiences would be low adverse.”

Submissions

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

Specialist Assessment

Landscape and visual effects have been assessed by Rob Pryor, Consultant Landscape Specialists, LA4 Limited, in a memo dated 15 March 2023, which is provided in Appendix 1 to this report.

Mr Pryor’s assessment of the Natural Character, Landscape and Visual Effects of EB3R are identified as follows:

“In terms of landscape effects, tree removal along the road corridor (primarily the western side), within affected properties and within Ti Rakau Park and Riverhills Road will have adverse landscape effects. The Landscape, Ecological and Arboricultural Mitigation Plans illustrate the proposed landscape mitigation planting, ecological mitigation planting, grass areas and specimen trees (including grades of 45L, 80L and 160L). I consider that this will assist to mitigate the tree removal in some areas but note that there are large areas of the Project where no tree planting is proposed. Areas of concern include the Ti Rakau Park frontage to Ti Rakau Drive; the northern side of Ti Rakau Drive from the Ti Rakau Park frontage along to Pakuranga Creek; as Ti Rakau Drive frontage to Riverhills Park; and busway station platforms at Edgewater and Gossamer Stations.

Effects on natural character will be restricted to earthworks and dredging of the coastal margins and CMA to construct the stormwater outfalls. Any adverse effects during construction are considered to be low and very low following construction.

In terms of landscape character it is considered that there will be a high degree of change to the character of the area particularly during construction activities. This will be resultant from earthworks, construction equipment and machinery, road widening, realignment and alteration of roads and berms. This would result in adverse landscape character effects for the duration of the works. The works are largely in the vicinity of the road corridor which reduces their impact. The most noticeable change in landscape character will be for the newly exposed dwellings on the southwestern side of Ti Rakau Drive. Following construction and implementation of the Landscape, Ecological and Arboricultural Mitigation Plans I consider there would be low adverse landscape character effects.

Residential viewing audiences would be the most sensitive to visual change, living locally and occupying a large area along the edges of EB3R, particularly Ti Rakau Drive. These residents are also located within the environs of the existing road corridor. Temporary visual effects will result from construction activities, elements and structures during the course of the Project. Permanent visual effects will result following the construction of the Project and include the

completed elements and structures, realigned road corridor, lighting poles, signage and proposed landscape mitigation planting and street trees. The highest adverse visual effects will be on the residential viewing audiences located adjacent to EB3R, in particular the properties on the southwestern side of Ti Rakau Drive that are currently located one property back from the road which will become the new road frontage. Following construction. And implementation of the Landscape, Ecological and Arboricultural Mitigation Plans it is anticipated that any adverse visual effects on these viewing audiences would be low.”

Overall, Mr Pryor concludes that: *“Having considered the EB3R resource consent applications for EB3R in their natural character, landscape and visual effects considerations, and the associated suite of conditions, I consider that the EB3R resource consents should be granted with amended Condition 40.”*

Planning Assessment

I adopt Mr Pryor’s assessment and recommended amendments to condition 40, having observed the distinct landscape feature of the existing Washington Palm trees bordering Ti Rakau Drive. I also note the assessment of landscape effects along the southern boundary of Ti Rakau Park will require consideration of the planting approved as part of the William Roberts Road extension consented (LUC60401706) in 2022.

Whilst Mr Pryor does not explicitly mention the proposed at-grade carpark, I do note that consistent with the existing carpark and notwithstanding its residential zoning the proposed carpark is located proximate to the Edgewater Shopping Centre that it is designed to serve. Consistent with the Business - Neighbourhood Centre zone requirements of the adjacent shopping centre, the carpark has incorporated elements of mitigation planting along its street frontage and its common boundary with residential properties. In this regard, while at odds with its zoning, from a planning perspective I consider the carpark has been appropriately designed as a practical extension of the Shopping Centre it is visually and practically affiliated with.

On balance, with the incorporation of planting more trees as also reinforced by Mr Mackie’s assessment I consider that the landscape and visual effects of the proposal can be mitigated.

14.5. Arboricultural Effects

Application

The proposal’s effect on trees has been assessed within section 7.4.9 of the AEE, with expert advice being provided within the Arboricultural Effects Assessment appended as Appendix 16, where removal of trees which require resource consent within the EB3R project area comprising of a mixture of trees located within road reserve (83 trees) and open space zones (74 trees).

To mitigate the removal of these trees, the replacement planting of some 634 trees is proposed, which equates to a ratio of approximately 4:1 for trees requiring resource consent to be removed within the EB3R boundaries as part of the Project.

Arborist Leon Saxon of the EBA concludes that: *“While the trees will not initially provide the scale of some of the trees proposed to be removed, in time they will become mature specimens themselves. It is also acknowledged that the species proposed for planting will primarily be native, ensuring that the biodiversity values of the Project area will be enhanced by the mature landscaping.*

Further to the planting of specimen trees, ecological enhancement planting is proposed along the southern portion of Riverhills Reserve where a stormwater outfall is proposed to be created as a natural watercourse.

While the replacement trees will take time to establish, the arboricultural values of the streetscape within EB3R will be improved when the trees mature.”

Submissions

No submissions have been received in relation to effects associated with trees.

Specialist Assessment

Council’s Senior Specialist Arborist Gavin Donaldson has made an assessment of arboricultural effects, in a memo dated 15 March 2023, which is provided in Appendix 1 to this report. This is a combined memo that considers the effects of both EB2 and EB3R.

Key to Mr Donaldson’s assessment is the ability by way of the ‘i-Tree Development forecasting tool’ to assess whether the proposed replacement planting matches *“the value of ecosystem services which would have been achieved by the existing trees had they been retained for a forecast period of 30 years.”*

In the absence of this forecasting tool being utilised, Mr Donaldson for both EB2 and EB3R has (consistent with Mr Mackie’s and Mr Pryor’s assessment) recommended that more trees be incorporated within the proposal and that the assessment of an ‘appropriate’ level of replacement planting *‘account for the loss of environmental benefits and eco-system services provided by the trees and vegetation being removed.’*

Planning Assessment

I adopt Mr Donaldson’s assessment, also noting the difficulties in understanding the scale and duration of the ‘temporary’ adverse effects of the proposed tree removals and the maturing of the replacement planting, particularly the maintenance requirements of UDLP appear to be limited to an establishment period of five years for specimen trees.

I am unsure of Council’s ability at compliance stage to understand whether the replacement planting accounts for the loss of environmental benefits and eco-system services provided by the trees and vegetation being removed, particularly within a potential ten-working day period as proposed by way of Condition 40. In this regard, I recommend that consensus as to the level of replacement planting required (either by way of the i-Tree Development forecasting tool or alternative mechanism) is obtained prior to a consent being granted.

14.6. Stormwater and Industrial Trade Activity Effects

Application

A Stormwater Effects Assessment prepared by Paul May of the EBA for Stage EB2 and EB3R was appended as Appendix 6 to the AEE where the proposed stormwater arrangements including the new outfalls proposed are described in Section 3.2.6 of the AEE.

Submissions

The submissions do not raise any stormwater or industrial trade activity matters.

Specialist Assessment

The proposal has been reviewed by Council's Senior Specialist Stormwater, Wastewater and Industrial Trade Activity, Dr Arsini Hanna.

As with EB2, Dr Hanna has confirmed in her memo dated 26 March 2023 (Appendix 1) that:

- the proposed arrangements are able to utilise the Network Discharge Consent (NDC), where no further consent is required under Chapter E8 of AUP subject to the provision of a Stormwater Management Plan (SMP),
- the proposal will not trigger a high contaminant generating consent being considered as a permitted activity under Rule E9.4.1(A5), and
- No consent under Chapter E10 of the AUP as the site is not located within a Stormwater Management Area Flow area.

Planning Assessment

Consistent with the consideration of EB2, in the round I adopt Dr Hanna's assessment (where the commentary on the NDC is consistent with that of Ms Baring), and whilst I consider that Ti Rakau Drive meets the definition of a 'high use road', I conclude the effects associated with the quality of the proposed stormwater discharge are acceptable on the basis that they will be managed by the NDC through the SMP process.

14.7. Land Disturbance and Stream Effects

Application

As discussed in the hearing report for EB2, a combined EB2 and EB3R Erosion and Sediment Control Effects Assessment was undertaken by C Stewart of the EBA to accompany the AEE for this stage. As summarised in section 7.4.4 of the AEE, with all land disturbance being undertaken in accordance with GD05 and controlled by way of conditions and management plans *"the adverse effects resulting from land disturbance associated with EB3R will be less than minor."*

No specific commentary is made on any potential adverse effects relating to works within streams on account of the assessment within section 5.2 of the AEE that the proposed works comply with the provisions of Chapter E3 of the AUP.

Submissions

No submissions have been received relating to Land Disturbance and Stream effects, however the Howick Local Board has requested that the Streamworks comply with permitted activity standards.

Specialist Assessment

Effects associated with Regional Earthworks (land disturbance and works within 10m of a natural inland wetland) have been assessed for the council by Ms Samantha Langdon – Specialist (Earth and Stream Works), Specialist Unit, in a memo dated 23 March 2023, which is provided in Appendix 1 to this report.

In section 2.13 of this memo, Ms Langdon sets out the scope of further information (including but not limited to request a more detailed description of the proposed Streamworks) that has been requested and is yet to be received, with the recommendation that the information to address these items is provided prior to the hearing. All items (a) to (e) relate to works relevant to EB3R.

As discussed within the hearing report for EB2, Ms Langdon has also identified the aspects of the proposal that no longer require consent under NES-FW.

Ms Langdon has also identified the aspects of the Streamworks that do not comply with permitted activity standards within Chapter E3 of the AUP as mentioned above.

That said, consistent with her assessment of the works associated with EB2, having considered the management processes proposed Ms Langdon has concluded that *“the resulting effects on the freshwater environment will be appropriately managed and mitigated:*

a. The proposed erosion and sediment control measures during earthworks and streamworks will mitigate the potential adverse effects from sedimentation on the freshwater receiving environment, including any potential loss in value of ecosystem health within the streams.

b. The structures proposed within the bed of the stream will be adequately addressed by way of demonstrating minimisation of structures and the proposed riparian offset planting.”

To this end, a suite of conditions has been recommended to manage such effects to a satisfactory degree.

Planning Assessment

I adopt Ms Langdon’s assessment and recommendations and conclude on this basis that, subject to the provision of further information as sought, the proposed earthworks can be managed in a manner that will ensure that any resultant adverse effects on the freshwater receiving environment will be appropriately managed.

That said, given the uncertainty relating to the extent of streamworks coupled with the interest in such works by the Local Board I reinforce Ms Langdon’s recommendation that this further information is provided prior to the hearing.

14.8. Development Engineering Effects (District Earthworks, Stormwater and Flooding)

There is a degree of overlap between the consideration of district and regional earthworks and stormwater matters as also discussed in sections 14.6 and 14.7 above.

Application

A Stormwater Effects Assessment prepared by Paul May of the EBA for Stage EB2 and EB3R was appended as Appendix 6 to the AEE where section 7.5.7 of the AEE Hydrological Effects

address natural hazards such as overland flowpaths and flood levels as well as stormwater effects. In this regard, the following conclusions are made:

- *“In accordance with the design philosophy and in recognition of the existing flooding issues, the longitudinal drainage for EB3R will provide new independent stormwater networks. The new independent networks, where feasible, will themselves connect to existing networks close to the respective outfalls with the existing pipe between the connection point and the outfall, including the outfall and upstream network being upgraded as necessary...”*
- *There are no flood impacts on private property, and large areas of reduced flooding throughout the wider catchment. The modelling shows that while some flooding will still occur during 1 in 10 and 1 in 100 ARI events, flood levels are generally decreased across EB3R and up to 400mm during the 10-year ARI event. While there are some areas that will experience increase in flood levels, these are contained in the road reserve or in open space such as Riverhills Park (where a raingarden and naturalised watercourse/ swale is included in the operational design). The potential flooding has been discussed with Auckland Council Community Facilities.*
- *This overall reduction in flood levels demonstrates that the planned stormwater attenuation works are a benefit to the local area, reducing the risks to safety and property. Furthermore, the functioning of the road network is improved, given that there is a reduced need to close road lanes during heavy rain.*
- *Overland flow paths have been assessed in the event of pipe blockages of the network. Flood depths on Ti Rakau Drive and other areas are improved against the existing environment. Sizing of stormwater pipes is proposed to address any impacts of flooding on private properties that were identified in modelling as being impacted by the 10 and 100 year flood events. Therefore, adverse effects resulting from a potential increase in flooding are avoided on all private property.”*

Effects associated with instability are addressed within the Erosion and Sediment Control Effects Assessment which was undertaken by C Stewart of the EBA to accompany the AEE (appended as Appendix 12). These effects are summarised in section 7.4.4 of the AEE, where having all land disturbance being undertaken in accordance with GD05 and controlled by way of conditions and management plans, *“the adverse effects resulting from land disturbance associated with EB3R will be less than minor.”*

Submissions

The submissions do not raise any stormwater matters or matters relating to natural hazards.

Specialist Assessment

These effects have been assessed for the council by Ms Maria Baring, Project Manager Regulatory Engineering, in a memo dated 25 March 2023, which is provided in Appendix 1 to this report.

Ms Baring’s assessment notes the following:

- *“The extent of the Site works has been provided in the application. A Geotechnical Factual Report has been provided showing the locations of the boreholes and a Geotechnical Interpretive Report has been prepared to accommodate the current busway design scheme.*

- *To ensure that the earthworks will not result in any instability of land or structures at or beyond the boundary of the properties where the land disturbance occurs, they must be undertaken in accordance with Geotechnical Interpretive Report EB2 and EB3R prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000004 Rev 0 dated 20 April 2022 and Geotechnical Factual Report EB2 and EB3R prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000003 dated 9 September 2022. The supervising engineer must also make an assessment prior to the commencement of earthworks, and undertake supervision and monitoring throughout.*
- *To manage traffic volume during the construction period, a construction traffic management plan is required prior to starting the earthworks. Relevant conditions are recommended in section 7.4 below.*
- *There will need to be a geotechnical completion report to confirm that the earthworks have been carried out in a safe manner and that the Site is fit for purpose. The completion report will need to look at the issue of settlement and liquefaction. These assessments will need to confirm that the possible adverse effects have been adequately mitigated.*
- *The stormwater outlets will be assessed by a regional Streamworks specialist engaged by the Council. Reference needs to be made to the memo drafted by the regional Streamworks specialist for a detailed assessment.*
- *The Stormwater Management Plan that is required to be submitted by the applicant will cover the upgrade of the stormwater pipe system and substantiate the conclusion in [report] that the extent of flooding will reduce over large areas of the wider catchment within which EB3R is located.”*

A range of conditions has been recommended to ensure the above recommendations will be implemented.

Planning Assessment

I adopt Ms Baring’s assessment (where the commentary on the NDC is consistent with that of Dr Hanna) and recommended conditions, and conclude the effects associated with the stormwater and natural hazards will be appropriately addressed as part of the proposal’s design and implementation.

14.9. Terrestrial Ecology Effects

Application

A Contaminated Land Effects Assessment prepared by Harry Jones of the EBA for EB2 and EB3R was appended as Appendix 19 to the AEE. The AEE summarises its findings as follows: *“The assessment notes the limited terrestrial ecological values within the EB3R area. As an existing urbanised area, there is little natural habitat present for native fauna. What habitat that exists is fragmented and subject to competition and predation by introduced species, such as domestic cats. While the EB3R area itself does not have any native bats as confirmed by a bat survey, nor significant numbers of at-risk native birds within a 5km radius, the ecological assessment has identified the high likelihood that native lizards will be present. They are most*

likely to be found within landscaped areas, such as Edgewater River Esplanade Reserve, and Fremantle Place Esplanade Reserve.

In order to address the potential effects on native lizards, a draft Lizard Management Plan (LMP) has been prepared and will be implemented during the construction period...

Further to the LMP, the terrestrial ecology assessment has recommended that vegetation removal is not undertaken during bird nesting season (September to February). Where these months cannot be avoided, the assessment considers that pre-construction nesting bird surveys should occur. This approach will protect any native birds.

The management plan also requires the re-establishment of lizard habitat, which will involve new plantings under a Habitat Restoration Plan (HRP) and will be linked to the development of the LMP. The final location and quantum of new plantings will be determined following further engagement with AC Community Facilities, where these plantings are likely to be undertaken within public reserves.

The ecological assessment has identified the planned land disturbance as having the greatest potential to affect freshwater ecology values. As previously detailed, Project construction will employ an ESCP and ssESCPs during construction to limit any sediment discharges into the local environment. In addition, the freshwater ecological assessment identifies that any effects associated with sediment discharges will be temporary, given the limited duration of exposed earthworks within the EB3R works area...

Considering the points above, the management plans to be in effect during construction of EB3R, and the measures proposed to mitigate loss of ecological habitat, potential adverse effects on the terrestrial ecology of the environment will be less than minor.”

Submission

While terrestrial ecology concerns were not raised in the submissions, as previously noted Howick Local Board has expressed its concerns relating to the extent of vegetation clearance and the desire that “*wherever possible this can be limited or otherwise mitigated or possibly reinstated.*”

Specialist Assessment

Terrestrial ecology effects have been assessed for the council by Ms Claire Webb, Senior Associate – Ecology, Beca, in a memo dated 17 March 2023, which is provided in Appendix 1 to this report.

As discussed within the hearing report for EB2, Ms Webb notes that while some effects such as the effects on lizards may be high, the terrestrial ecological effects arising from EB2 and EB3R have been sufficiently assessed in the application documents and include appropriate effects management measures. Subject to the imposition of consent conditions, Ms Webb considers that the potential ecological effects of the project will be adequately managed to low levels with no outstanding residual effects.

Ms Webb for both EB2 and EB3R recommends a condition relating to the preparation and implementation of an Ecological Management Plan.

Planning Assessment

Consistent with my planning assessment of these matters for EB2, I conclude that, with the inclusion of the recommended condition to prepare and implement an Ecological Management Plan as part of the construction works, the proposal's adverse effects on the terrestrial ecology can be managed to an acceptable degree.

14.10. Marine Ecology Effects

Application

The proposal discusses Marine Ecology and Coastal Avifauna effects within the Marine Ecology and Coastal Avifauna Effects Assessment prepared by Dr Sharon De Luca for both EB2 and EB3R appended as Appendix 20 of the AEE and section 7.4.6 of the AEE.

As summarised within the AEE: "As detailed in Section 7.4.4, land based earthworks will be controlled through the project-wide ESCP and associated ssESCPs. For works below MHWS (i.e. within the CMA), additional measures will be employed to control effects from sediment disturbance, such as coffer dams or bunds. These temporary structures will isolate the work areas from the surrounding coastal environment. Furthermore, the works will be undertaken during appropriate times during the tidal cycle and weather windows. These measures will limit the opportunity for any disturbed sediments to travel into the wider environment. Again, the effects of these coastal earthworks on ecological values are low to very low.

Considering the existing environment, the proposed construction methodology and ssESCPs proposed as conditions of consent, the construction effects on coastal ecology will be less than minor."

Submissions

There are no submissions relating to coastal processes or marine ecology effects. That said, consistent with EB2 the feedback from Howick Local Board has commented on the extent of vegetation clearance.

Specialist Assessment

Council's Senior Specialist-Coastal Dr Kala Sivaguru has peer-reviewed the proposed development in her assessment outlined in a memo dated 14 March 2023, appended within Appendix 1 of this report. Dr Sivaguru confirms her general agreement with the applicant's assessment for both EB2 and EB3R and has summarised that:

- *"Overall, the change in the coastal processes from the proposed infrastructure works will not be discernible and will be less than minor.*
- *Overall, any adverse effects on marine ecology including avifauna, sediment and water quality would likely be less than minor.*
- *Overall, any potential adverse effects from the proposed works are likely to be less than minor, subject to adherence with good practice and the recommended conditions of consent."*

Similar to Dr Sivaguru's approach with EB2, a number of conditions have been recommended in association with this assessment which appear in Appendix 4 of this report.

Planning Assessment

I adopt Dr Sivaguru's assessment and recommended conditions and conclude that with the implementation of these conditions the proposed works within the CMA can, with appropriate management, be undertaken with less than minor effects on coastal process and marine ecology.

14.11. Contaminated Land Effects

Application

A Contaminated Land Effects Assessment prepared by Harry Jones of the EBA for EB2 and EB3R was appended as Appendix 15 to the AEE. This aspect of the proposal was discussed within section 7.4.8 of the AEE, where: *"land disturbance will potentially be undertaken in one HAIL site identified as a former service station at 11 Cortina Place/ Ti Rakau Drive. Construction will also be undertaken within or in close proximity to two other HAIL sites (Riverhills Park and Ti Rakau Park) that have been identified as closed landfill sites. Testing undertaken of Riverhills Park and Ti Rakau Park has confirmed soil contaminants would not exceed the permitted standards within the AUP(OP). Other potential sources of contamination include asbestos and lead from building demolition/deconstruction."*

As mitigation, a Contaminated Land Management Plan (CLMP) has been proposed to address any potential contamination arising from the removal of residential dwellings containing asbestos or lead based paint, and to manage any contaminated soils and groundwater.

Submission

No submissions discuss contamination in this context.

Specialist Assessment

Fiona Rudsits, Senior Specialist – Contamination, Air & Noise, Auckland Council has reviewed the application in this regard. Her Technical Memo dated 16 March 2023 is appended as Appendix 1.

Consistent with the assessment set out within the hearing report for EB2, Ms Rudsits is satisfied with the conclusions and recommendations made by the Contaminated Land Effects Assessment and has concluded that the procedures proposed to mitigate adverse effects associated with human health are appropriate and adequate to mitigate risks to human health. Conditions and advice notes have been recommended accordingly.

Planning Assessment

Similarly, I adopt Ms Rudsits' assessment and recommendations and conclude (notwithstanding that the demolition and removal of dwellings has commenced) that the proposed development can appropriately manage and mitigate adverse effects associated with contaminant discharge and human health.

14.12. Open Space and Parks

Application

A summary of the works within Open Spaces is set out in section 3.3.12 of the AEE, where excavation and vegetation removal relating to the construction of the busway and stormwater infrastructure is proposed within 33R and 159R Edgewater Drive (referred to as Edgewater Drive Esplanade Reserve and Fremantle Place Esplanade Reserve respectively) and more substantive works⁹ within Riverhills Park.

The consequential effects on these spaces have been discussed with section 7.4.15 regarding construction effects and section 7.5.5 concerning operational effects of the AEE and are based on the Open Space Effects Assessment as Appendix 8 to this AEE.

The AEE makes the following conclusions on the proposal's effects on Edgewater Drive Esplanade Reserve, Fremantle Place Esplanade Reserve, and Riverhills Park:

Construction Effects

- *“The esplanade reserves do not feature any significant community infrastructure (e.g. sports fields). These reserves are located in proximity to the CMA and are noted within the Open Space assessment as used for passive recreation. Access to the reserves/ CMA will be maintained from other points within the local area. Given this, the temporary occupation within these reserves will not significantly affect the local community's access to open space and recreational opportunities.*
- *With regard to Riverhills Park, for the purposes of safety the public will be restricted from accessing the southern area of the park set aside for construction purposes. There will be a loss of capacity while the modification of the fields takes place. Communication with the relevant stakeholders is currently being undertaken and will be ongoing, with impacts from construction minimized where possible through the use of the CCP and the timing of works required.*
- *Following construction, AT will remove all construction equipment and materials, as well as replant any affected grassed or vegetated areas. This will ensure that longer term amenity values associated with these open spaces are maintained.*
- *Given the above, the construction effects of EB3R will have no more than minor adverse effects on open space and its use.”*

Operational Effects

- *“EB3R will permanently occupy portions of open space for its operation. This will result in a loss of approximately 250m² of open space/ esplanade reserve, and 3318m² of open space within Riverhills Park.*
- *The reduction in esplanade reserves will be undertaken in a manner which retains safe public access to the reserves.*

⁹ Works are listed as: Clearing of the work area, Modification of existing sports field platforms, Removal and reconstruction of existing walkway and footpaths, Earthworks, being removal of topsoil, Tree removal, Construction of stormwater treatment and associated swale/ naturalised watercourse, Construction of Gossamer Station and the western bridge abutment.

- *With regard to the acquisition of land from Riverhills Park, measures to avoid and mitigate impacts on the usability of the park have been proposed, including the following:*
 - *Rotate the No1. Field to an east-west configuration to ensure no reduction of the playing platform*
 - *Install additional premier playing surface (artificial turf, lights and drainage) in the area to accommodate the alignment change*
 - *Re-locate the No.2 field east to accommodate the No1 field*
 - *Rotate the No.3 field to an east-west configuration*
 - *Installation of a footpath to re-connect Ti Rakau Drive to the main car park and clubhouse*
 - *Additional broader outcomes with scope to be further developed and designed.*
- *The number of playing fields provided by Riverhills Park will therefore be maintained (Figure 3 18), while the quality of the fields will also be improved. A footpath will be provided within the park, promoting connections between the Gossamer Station, the clubhouse and the parking area within Riverhills Park. The close proximity of the proposed Gossamer Station to the park, in addition to signalised pedestrian crossings being provided at Gossamer Drive intersection will promote modal choice for the future users of Riverhills Park.*
- *Given the above, and the mitigation measures proposed, the operational adverse effects of EB3R on open space will be less than minor.”*

Submission

No submissions raise concerns relating to effects on open space.

Specialist Assessment

Andrew Miller, Consultant Parks Consent Planner has reviewed the application on Council’s behalf in this regard. His technical memo is appended as Appendix 1 of this report. As part of his assessment, Mr Miller has reviewed the provisions of the AUP together with the Howick Local Board Plan 2020 (HLBP) and Howick Walking and Cycling Network 2018 (HWCN) adopted by the Howick Local Board.

Overall, Mr Miller concludes that: *“the proposal can be mainly supported from a Parks Planning point of view. The proposed retaining wall RW211 has the potential to compromise the delivery of a recreational walking and cycling connection along Edgewater [Drive] Esplanade Reserve which would adversely impact the future recreational value of the reserve that could be enjoyed by nearby residents. I agree that Riverhills Park has the greatest potential to be impacted by the works, but the applicant has proposed a reasonable suite of mitigation measures to manage this. However there remains a degree of risk for delivery and success of the mitigation as additional resource consents may still be required for the works. Mitigation planting should be within the road corridor wherever possible as opposed to parks land. The applicants proposed UDLP, CEMP and CCP conditions are supported. Additional conditions are recommended below to avoid and mitigate adverse effects on the environment.”*

The recommended condition associated with EB3R relative to the submission of a detailed streetscape landscaping plan(s) for all swales, street trees and street gardens for approval by the Parks Planning Team Leader which in addition incorporates the *“Provision of large-growing specimen trees long the Ti Rakau Drive frontage of Riverhills Park.”*

Planning Assessment

I adopt Mr Miller's assessment and recommended conditions, also noting (as mentioned in the body of the technical memo) that *"Additional mitigation has also been agreed between the applicant and Community Facilities as part of a side agreement, and is incorporated as part of the application"*, where works and mitigation associated with Ti Rakau Park is underway as part of the William Roberts Road Extension consent and where the concept works associated with Riverhills Park will likely require consent.

Given this side agreement was signed in August 2022, the applicant is invited to provide further details of the mitigation since agreed upon within Riverhills Park, together with an update on any associated consenting requirements.

Clarification on whether retaining wall RW211 will frustrate future opportunities for recreational walking and cycling along Edgewater Drive Esplanade Reserve is also sought.

I note that Mr Miller's recommendation regarding the extent of replacement specimen tree planting along Riverhills Park's frontage with Ti Rakau Drive is in alignment with the arboricultural, urban design, and landscape and visual effects advice received from Messrs Donaldson, Mackie and Pryor respectively.

In principle, based on Mr Miller's advice, I conclude that (with the receipt of the above-mentioned further information and upon implementation of conditions) the long-term effects on the Open Space reserve can be managed to be no more than minor.

14.13. Social Impact Effects

Application

The consideration of Social Impact Effects has been detailed within the Social Impacts Assessment (SIA) prepared for both EB2 and EB3R appended as Appendix 30 of the AEE (where an addendum has been provided by way of further information) and has been discussed within section 7.4.7 as part of the AEE.

As discussed within the hearing report of EB2, the SIA has identified a range of potential social effects during construction, including:

- Loss of housing
- Severance from social infrastructure (e.g. medical facilities, open space, schools)
- Business disruption
- Reductions in amenity.

The AEE notes in relation to property acquisition: *"Consultation with the various owners and occupants has occurred in 2018 and 2021. AT is aware of these issues and proposes to address them through a "no surprises" approach with site owners and occupants. This will include clear communication relating to property acquisitions and clearance, with additional warning time given to tenants prior to their required departure (i.e. longer than 90 days)."*

With respect to Edgewater Shopping Centre, the AEE identifies that: *"Specific measures to avoid impact to business viability are set out in the draft CCP and include early engagement with businesses that are potentially affected."*, whereby construction effects are also managed/mitigated by way of the various construction management plans.

As such, the conclusion from the AEE is that: *“the social effects arising from construction will be mitigated so as to be no more than minor. The exception to this are the impacts upon properties directly affected by the EB3R construction footprint that have not yet been acquired, with the adverse social effects on those residents being considered as more than minor where this will result in their relocation.”*

Submission

Consistent with EB2, there are no submissions that raise social impact effects directly. That said, submissions have been made by Pakuranga Plaza Limited and Metlifecare on the effects on their respective businesses, which is an aspect of social effects for example. These are identified in the memo from Mr Quigley as set out below.

Specialist Assessment

Social effects have been assessed by Mr Robert Quigley, director of Quigley and Watts Ltd in a memo dated 17 March 2023, which is provided in Appendix 1 to this report. This report is distinct from that prepared for EB2, however his conclusion on the adequacy of the SIA submitted are the same.

Similarly, Mr Quigley has undertaken his own assessment of EB3R in drawing upon a SIA undertaken on behalf of AT with respect to the NoR for the Airport to Botany project (section 6.0 of his technical memo). These are detailed within section 5.2.10 of the hearing report for EB2, but in summary Mr Quigley concludes:

“A number of mitigations are proposed in the EB2 and EB3R SIA. These mitigations culminate in four management plans (Communication and Consultation; Construction Environmental; Construction Noise and Vibration; Construction Traffic) which are required in the conditions. These are a good start but do not go far enough to mitigate the potential high and extreme negative social effects identified. There is also a gulf between the more fulsome conditions proposed the Airport to Botany SIA compared with EB2 and EB3R. It would seem unusual that in one part of Auckland, certain social effects are acknowledged and mitigated, but just a few kilometres away, the potential social effects of a near identical project are not detailed or dealt with in a similar manner...”

Specific to EB3R, a greater understanding of potential severance is required. This could be achieved via a connectivity assessment, which would consider the effect of EB3R on severance caused by arterial routes which bisect active routes between and around different areas; and suggest appropriate mitigations.

I have not written these into conditions as that is a role for the Applicant. It will be important for any proposed conditions to follow the purpose/intent and language of the plans in the Appendices, so that the processes implemented do not become transactional. Instead, the goal is for the plans to be open, and support community development and relationships. As such, independent review by Auckland Council of the Auckland Transport plans and monitoring reports is required.”

Planning Assessment

Based on Mr Quigley’s assessment, I conclude that there is the ability to appropriately address social impact effects of the proposal to an acceptable degree but the measures currently proposed by the SIA do not sufficiently identify and consequently address them.

The key difference between EB2 and EB3R relates to the extent of land acquired and the consequential extent of removal of dwellings to date. That said, while arguably a degree of severance has already occurred as a permitted activity, I consider that the construction effects of EB3R will exacerbate the existing disconnect along Ti Rakau Drive for both residents and businesses.

In this regard, I consider the approach recommended to address such concerns for EB2 also be adopted for this proposal whereby additional conditions including the provision of a Development Response Plan are imposed to further mitigate construction effects including those associated with business disruption. Similarly, I consider that it would be helpful if the applicant could provide a combined response to this matter at the hearing.

14.14. Cultural Effects

Application

The AEE addresses cultural effects from construction in Section 7.4.10 and in Section 7.5.3 in respect of operational effects. There is no specific cultural values assessment but the application documents included a number of Cultural Values Assessments from 2016 from Ngāi Tai ki Tāmaki, Ngāti Paoa Iwi Trust and Te Ākitai Waiohū (Appendix 33). I understand that these contain sensitive information and remain confidential.

As discussed within the AEE: *“AT has been working with mana whenua during the development of the Project’s design and construction of EB1 (i.e. Panmure to Pakuranga). Through this engagement, AT has developed a deeper understanding of the project area’s cultural values and the measures which should be employed to address potential cultural effects.”*

In this regard, construction management plans have been designed to minimise construction effects on cultural values. As will be noted, the Archaeological Effects Assessment undertaken as part of the proposal has identified that there are no recorded sites within EB3R’s footprint.

Further to this, AT has proposed conditions requiring ongoing engagement with mana whenua through the continuation of the kaitiaki forum. AT has noted that *“The kaitiaki forum will provide the mechanism to work with mana whenua in the detailed design of the Project and the various place making elements.”*

Having employed this approach on other transport projects, AT considers that: *“this is the appropriate method to address any residual cultural effects associated with the operation of EB3R.”*

Submissions

There are no submissions have been received relating to cultural effects.

Specialist Assessment

No specialist assessment is provided in respect of cultural effects.

Planning Assessment

As part of the notification process, notice of the application was sent directly to sixteen iwi or hapu parties that could be potentially affected by the proposal. As there are no submissions from mana whenua following the application's notification, consistent with the approach taken in the consideration of the EB2 NoR, it is not appropriate for me to make conclusion on cultural effects other than to note that the applicant appears to have sufficiently engaged with mana whenua and is working through the project with them as far as those groups wish to participate.

14.15. Air Quality Effects

Application

As discussed in the hearing report for EB2, a combined EB2 and EB3R Air Quality Effects Assessment was undertaken by Tracy Freeman of the EBA to accompany the AEE for this stage. As summarised in section 7.4.12 of the AEE, having utilised dust management measures by way of Erosion and Sediment Control Plans and Contaminated Land Management Plans *"EB3R's effects on air quality will be minimal and less than minor."*

Submissions

Two submissions from Pakuranga Plaza Limited and Metlifecare Limited raised concerns relating to construction effects such as dust. The submissions from Grant Hewison and Equal Justice Project supported the proposal on account of reductions in greenhouse gas emissions.

Specialist Assessment

Air quality effects have been assessed by Mr Paul Crimmins, Senior Specialist - Contamination, Air & Noise, Auckland Council in a memo dated 31 March 2023 that assesses the potential air quality effects of both EB2 and EB3R, which is provided in Appendix 1 to this report.

Consistent with his assessment of EB2, Mr Crimmins considers that the project poses negligible risks to air quality either during construction or on an operational basis. Additionally, Mr Crimmins has assessed that the air discharges from the EB2 & EB3R Projects do not necessitate an air discharge consent and are a Permitted Activity under AUP(OP) Rule E14.4.1(A1). Mr Crimmins considered that air quality matters can be adequately mitigated by conditions for the Resource Consents and implemented as part of adherence to the ESCP and additional 'dust' conditions have been recommended in this regard.

Planning Assessment

I adopt Mr Crimmins's assessment and recommendations, and I conclude that the air quality effects associated with EB3R can be managed to an acceptable degree.

14.16. Groundwater Effects

Application

As discussed in the hearing report for EB2, Groundwater Permitted Activity Assessment (Appendix 19) was lodged in conjunction with the AEE for Stages EB2 and EB3R. As described in section 7.4.13 of the AEE: *"The assessment does not identify any potential adverse effects on the groundwater system, primarily due to the limited amount of excavation required and the*

shallow excavation depths across the majority of the EB3R footprint. The deepest works are largely restricted to trenching required for stormwater upgrades and the western bridge abutment piles.”

Submissions

There are no submissions that relate to groundwater effects.

Specialist Assessment

A review of the AEE and the Groundwater Permitted Activity Assessment was undertaken on behalf of Council by Senior Geotechnical Engineer Richard Simonds of Fraser Thomas (appended as Appendix 1). As discussed in the hearing report for EB2, Mr Simonds is of the opinion that: *“the proposal (EB2 and EBR3 works as described above) is a Permitted Activity when assessed against AUP Standards E7.6.1.6 (1 to 3) & E7.6.1.10 (1 to 6) and a Consent for dewatering and groundwater diversion is not required.”*

Planning Assessment

Accordingly, I adopt Mr Simonds’ assessment and conclude that the effects associated with groundwater are acceptable.

14.17. Historic Heritage and Archaeological Effects

Application

Historic heritage and archaeological effects are addressed in Section 7.4.1 of the AEE, based on the Archaeological Effects Assessment appended as Appendix 24. This assessment is common to both EB2 and EB3R.

From this assessment’s findings the AEE notes that: *“there are no historic heritage or known archaeological sites present within the EB3R footprint. As a brownfield location, previous development is likely to have destroyed or damaged any in-situ materials, such as pre-contact middens or colonial period fencing. Notwithstanding this, accidental discovery protocols will be in place during construction works, as well as a general authority to modify or destroy archaeological sites under Section 44 of the HNZPTA.*

Based on the above, the potential adverse effects on historic heritage resulting from EB3R’s construction will be less than minor.”

Submissions

No submissions have been received in relation to historic heritage and archaeology.

Specialist Assessment

Effects on historic heritage have been assessed by Myfanwy Eaves, Senior Specialist: Archaeology, Cultural Heritage Implementation, Heritage Unit, Auckland Council in a memo dated 15 March 2023, which is provided in Appendix 1 to this report.

Ms Eaves concludes that: *“from an archaeological and historic heritage perspective, the Project will result in little to no risk to unknown sites or objects provided an Archaeological Authority from HNZPT is obtained prior to earthworks commencing. The suggested methodology proposed by*

the Applicant is appropriate to manage any risk of damaging or destroying the historic heritage resource.”

The amendments recommended to conditions associated with EB2 also apply to EB3R.

Planning Assessment

I rely on Ms Eaves’ assessment and recommended amendments, concluding that the proposed development can be appropriately managed to practically avoid risk of damaging or destroying items of historic heritage and archaeology with the EB3R footprint.

Summary

Actual and potential effects conclusion

In summary, I cannot definitively determine the degree of the adverse effects of the proposal in its current form. That said, with the provision of further information and clarification and the application of a number of recommended conditions, in principle I consider that the proposal’s construction and operation can be managed such that:

- its effects on the environment are no more than minor; and
- effects such as noise and vibration and social impacts on particular parties are acceptable.

15. Relevant statutory documents - s104(1)(b)

As set out in section 9.3 of the AEE, an assessment with reference to s104(1)(b) has been made against the following statutory and non-statutory documents:

- The Hauraki Gulf Islands Marine Park Act (HGIMA);
- Marine and Coastal Area (Takutai Moana) Act 2011
- National Policy Statements for Freshwater Management and Urban Development
- National Environment Standard for Freshwater
- National Environment Standard Assessing and Managing Contaminants in Soil to Protect Human Health
- AUP(OP) – RPS, Regional and District Objectives/Policies
- The Pakuranga Town Centre Master Plan
- The Auckland Plan 2050
- The Regional Land Transport Plan
- Auckland Transport’s Statement of Intent 2021/22 – 2023/24
- Integrated Transport Programme 2012-2041
- Auckland Transport Alignment Project 2021-2031
- Regional Public Transport Plan 2018 - 2028
- Howick Walking and Cycling Network Adopted Report November 2018
- Howick Local Board Plan 2020.

With reference to the above-mentioned documents, the following assessments are made.

National environmental standards– s104(1)(b)(i)

The consideration of the relevant National environmental standards has been made in section 9.4 of the AEE as follows:

NES-CS

- *“The contaminated land assessment has identified the presence of three HAIL sites within the EB3R area. This includes an area within Ti Rakau Drive adjacent to 11 Cortina Place, and the proposed works trigger consent under the NES-CS given the likely presence of soil contaminants. The contaminated land assessment details that the potential risks associated with human health from soil disturbance at this location are limited and can be managed through the proposed CLMP.”*

NES-FW

- *“Resource consent has been sought for vegetation clearance and earthworks within, or within 10 m of, natural wetlands as well as discharges under the specified infrastructure provisions of the NES-FW.*

The ecological assessments undertaken for EB3R (Appendices M and N) have identified that the mangrove areas proposed for clearance can be considered wetlands under the NES-FW. These coastal wetland areas have been compromised by previous urbanisation, discharges and illegal dumping. Regardless of the compromised nature of many of the wetland values, land disturbance and vegetation clearance around and within them has been minimised to that required for the construction and operation of stormwater infrastructure. The effects generated by these outfall structures and associated pipework will be addressed through EB3R’s ESCP, mitigation planting and a construction methodology which will limit the volumes of sediment which will be disturbed during CMA works.”

Based on the preceding assessment, I concur that the proposal is consistent with the outcomes sought by the NES-CS and the NES-FW.

National Policy Statement – s104(1)(b)(iii)

The following national policy statements have been considered within Table 9-1 as part of an assessment of the proposal against the AUP(OP) Objectives and Policies:

- National Policy Statement on Urban Development (NPS-UD)
- National Policy Statement for Freshwater Management (NPS-FM)
- National Policy Statement on Electricity Transmission (NPS-ET)

NPS-UD

I concur with the assessments made in Table 9.1 with respect to the proposal's consistency with the objectives and policies associated with the recognition of, and provision for, the principles of Te Tiriti o Waitangi, including through the participation of mana whenua in resource management processes and in the consideration of current and future effects of climate change.

That said, in consideration of Objectives 1, 4 and 6. Policy 1 detailed as part of the consideration of Residential and Business Zones, I note that all matters are not yet resolved with respect to the influence of social impact matters and amenity values on the proposal's ability to provide a well-functioning urban environment.

In this regard, for the reasons discussed to date, and consistent with EB2, the proposal has the potential to be consistent with the NPS-UD, but the above-mentioned effects need to be resolved before a final determination can be made in this regard.

NPS-FM

I concur with the assessments made in Table 9.1 with respect to the proposal's consistency with the objectives and policies associated with the NPS-FM, whereby expert advice as detailed earlier in this report has concluded that the effects on coastal processes, marine ecology and streamworks can be appropriately managed.

NPS-ET

I concur with the assessment made in Table 9.1 with respect to the proposal's consistency with the objectives and policies associated with the NPS-ET and note that the separate resource consent application sought by Transpower to remove one lattice tower at Mattson Road and erect two replacement monopole towers to avoid potential clashes with the National Grid has been granted (LUC60405289).

New Zealand Coastal Policy Statement 2010 (NZCPS) – s104(1)(b)(iv)

The purpose of the NZCPS is to establish policies that seek to achieve the purpose of the RMA in relation to the coastal environment of New Zealand.

With respect to this proposal Table 9-1 replicates the assessment quoted in section 6.1.3 of the hearing report for EB2. Insofar as the proposal has been designed to limit works, including vegetation clearance and sediment disturbance within the CMA, and the proposed stormwater design is considered to improve the overall quality of the stormwater discharged into the CMA, the proposal recognises the importance of the CMA to mana whenua and the proposed coastal works will not obstruct the public's enjoyment of and access to the coastal environment.

This assessment has been supported by the relevant Council specialists in relation to Coastal Processes, Marine Ecology and Streamworks. On this basis, I conclude that the proposal is consistent with the NZCPS.

Hauraki Gulf Marine Park Act 2000 (HGMPA) – s104(1)(b)(iv)

The council must have regard to sections 7 and 8 of the HGMPA when it is considering an application for resource consent for the Hauraki Gulf, its islands, and catchments. These sections are treated as a New Zealand coastal policy statement.

Section 7 recognises its national significance, while s8 outlines the objectives of the management of the Hauraki Gulf, its islands and catchments.

The objectives seek to protect, maintain and where appropriate enhance the life supporting capacity of the environment of the Hauraki Gulf and its islands.

The above assessment in Table 9-1 has also been utilised for the consideration of the HGMPA, and correspondingly I conclude that the proposal is also consistent with the HGMPA.

Auckland Unitary Plan (Operative in part): Chapter B Regional Policy Statement – s104(1)(b)(v)

Chapter B of the AUP(OP) sets out the strategic framework for the identified issues of significance, and resultant priorities and outcomes sought. These align with the direction contained in the Auckland Plan.

Auckland Council Regional Policy Statement – s104(1)(b)(v)

The Auckland Council Regional Policy Statement ("RPS") sets out the strategic framework for managing the use, development and protection of the natural and physical resources of the Auckland region in an integrated and co-ordinated manner.

AT has assessed the Project against the relevant provisions of the RPS in Section 9.3 (Table 9-1) of the AEE. The assessment of EB3R against the RPS is largely the same as that set out for EB2 and assessed within section 6.2 of the hearing report for EB2 with the exception of the consideration of earthworks within the Marine SEA. In this respect, the AEE notes: *"While the stormwater design will require works and permanent occupation in the CMA and areas within Marine SEA, they have been designed to minimise the related areas of CMA disturbance and occupation."*

Based on the reasons set out for EB2 and the preceding expert advice, I reinforce the assessment made for EB2 whereby I consider that for the most part the proposal gives effect to the RPS as set out in the RA's assessment. However, there are a number of matters where there are inconsistencies with the RPS particularly in the areas of the health and safety of people and communities, which is the subject of Objective B2.3.1 (A quality built environment). Accordingly, a number of changes to conditions are proposed to suitably addresses these matters.

Auckland Unitary Plan (Operative in part) – section 104(1)(b)(vi)

AT have assessed the Project against the relevant provisions of the AUP district plan in Section 9.3 (Table 9-1) of the AEE. Many of these matters have been discussed above and within section 6.2 of the hearing report for EB2 in relation to the RPS.

Areas not covered above but included in the assessment include the following:

- E27 Transport – while consideration of Transport effects has been assessed as part of the wider road network, as discussed already, the safety and efficiency of the public at-grade carpark and its inconsistency with the parking and access standards (including lighting) are yet to be addressed by way of either amended plans to achieve compliance or an accompanying assessment of effects arising from this current design of the carpark,
- E24 Lighting – similarly, it is unclear whether adequate and appropriate exterior lighting is proposed for the above-mentioned carpark, albeit in general the lighting proposed for EB3R will be developed through the ULDP,
- The effects of land disturbance will be managed through management plans (E11 and E12 Land Disturbance),
- Relative to air quality, the construction phase of EB3R will involve the potential discharge of soil contaminants, as well as dust. Both discharge types have been assessed by Council's respective specialists to be appropriately managed and controlled through the Project's various management plans, including those of the ESCP and CLMP.
- Long term effects on the quantity and access to public open space are largely avoided (H4 Open Space Zones) with the exception of Riverhills Park where *“measures to avoid, remedy and mitigate adverse effects on the park and its users have been raised through the consultation process. These include the potential for reorientation of the existing playing fields so that the number of fields does not reduce.”*

Further as discussed in the assessment of development within Residential and Business zone, concerns still remain with respect to social impact and amenity aspects of the proposal. However these concerns are considered to be able to be addressed by way of conditions following the provision of further information.

16. Any other matter – section 104(1)(c)

Section 104(1)(c) requires that any other matter the consent authority considers relevant and reasonably necessary to determine an application be considered.

A raft of other non-statutory documents as mentioned in section 15 of this report have been reviewed within section 9.5 the AEE of this application.

With the exception of the Marine and Coastal Area (Takutai Moana) Act 2011, these documents detail the progression in, and history of, the transport strategy, and the importance of public transport in the provision of genuine travel choices within the Auckland Region, and at a more local level within the Howick Local Board area.

As such, these documents provide useful background in the long-standing development of the EB3R proposal as opposed to justifying the effects of the proposal in themselves for the purposes of decision making.

17. Particular restrictions for non-complying activities – s104D

Under s104D a non-complying activity can only be granted provided it passes at least one of the tests of either s104D(1)(a) or s104D(1)(b).

If an application fails both tests of s104D then it cannot be granted.

The elements of the proposal that trigger its overall non-complying activity status relate to:

- The proposed public carpark at 105 Ti Rakau Drive being considered as an activity not provided for within the Residential – Terrace Housing and Apartment Buildings Zone pursuant to Rule H6.4.1 (A1), and
- The removal of 90m² of mangroves required for the construction of one proposed outfall structure (Riverhills) in the SEA M2 overlay, and the removal of 58.5m² of mangroves for the upgrading of outfall (108719) located in a SEA M1 overlay.

These elements of the proposal have been assessed as being able to be implemented with no more than minor effects on the environment, where:

- the proposed public carpark has been designed such that visually and operationally it serves as a natural extension of the existing Business - Neighbourhood zoned Edgewater Shopping Centre and whereby the access, external lighting and internal layout can be amended in accordance with AUP standards; and
- the mangrove removal relative to the extent of mangroves within the vicinity has been assessed by the applicant's and Council's ecologists to be of a degree that does not warrant mitigation.

It is acknowledged however, that there are aspects of the overall proposal where concerns regarding effects on particular parties have been raised by Messers Styles and Quigley in particular. In their assessments of noise and vibration and social impacts, these effects can be acceptably managed through the implementation of a suite of conditions.

Turning to the consideration of section 104D(1)(b), as a roading infrastructure project that has been assessed by Council's Consultant Traffic Engineer that involves: *"the establishment of public transport and active travel facilities along this corridor will noticeably improve the quality and reliability of these alternative travel modes and assist with the desired residential intensification development in this area"* the proposal (whilst as discussed requiring further information and mitigation) will not be contrary to the objectives and policies of relevant NPS, NES, and the AUP.

Section 104D conclusion

As noted previously the proposal have the ability (with the provision of further information and the implementation of recommended conditions) to satisfy the threshold test of s104D such that the proposal will not be contrary to the objectives and policies of relevant NPS, NES, and the AUP.

The applications therefore have the ability to meet at least one of the tests of s104D and the applications can be assessed against the provisions of s104B and a substantive decision made.

18. Other relevant RMA sections

Monitoring – s35

In granting consent to an application, a council may impose conditions to offset any adverse effects associated with the resource consent. In addition, a council is required to monitor the exercise of resource consents under section 35 of the Act and may fix a charge under section 36 payable by the consent holder in order to carry out monitoring functions. The amount that can be charged is based on actual and reasonable costs associated with monitoring and covers such tasks as site inspections, carrying out tests and administration.

The main components of this consent that will require monitoring are ensuring that the works are carried out in accordance with the approved plans, carrying out site inspections, and undertaking further assessment by specialist officers of finalised plans and management plans. Given the extent of the monitoring required for the various resource consents, and the scale of the proposal as a larger infrastructure proposal, it is considered appropriate that a monitoring deposit is negotiated with the Team Leader, Compliance Monitoring South. A condition requiring the negotiation and payment of this fee is recommended.

Matters relevant to discharge and coastal permits – s105

The proposal requires a consent to discharge contaminants under s15. Under section 105(1), the council must have regard to the following additional matters for any application for a discharge permit or a coastal permit that would contravene s15 or s15B of the RMA:

“(a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(b) the applicant’s reasons for the proposed choice; and

(c) any possible alternative methods of discharge, including discharge into any other receiving environment.”

Noting the peer-review undertaken by Council’s Senior Specialist – Contaminated Land, Contamination, Air & Noise, I concur with the assessment set out in section 11.8 of the AEE, which concludes that the proposal can satisfy the matters set out in s105 as:

- *“the construction related discharge of potential soil contaminants will have minimal effects and can be addressed by way of the proposed ESCP and CLMP.”*
- *“it is not possible to avoid these discharges given their association with land disturbance within and beside established transport corridors.”; and*
- *“... the proposed construction method has also been chosen on the basis that few deep excavations within proximity to 3 Reeves Road or 141 Pakuranga Road will be required, other than for piles (in the case of 3 Reeves Road) and utility trenches. No other forms of discharge are considered appropriate given the nature of the contamination (soil based) and the inability to discharge it into an authorised stormwater network.”*

The provisions of s105 have been met subject to the imposition of appropriate conditions of consent to ensure there is no significant adverse effect on the receiving environment. The applicant's reasons for the proposed choice are considered appropriate in the circumstances and there are no alternative methods of discharge applicable in this case.

Restrictions on discharge permits – s107

The council must have regard to the restriction on the granting of certain discharge permits that might otherwise contravene sections 15 or 15A. Section 107 states that a consent authority shall not grant a discharge permit to do something that would otherwise contravene section 15 allowing the discharge of a contaminant or water into water, if, after reasonable mixing, the contaminant or water discharged is likely to give rise to all or any of the following effects in the receiving waters:

- The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials.
- Any conspicuous change in the colour or visual clarity.
- Any emission of objectionable odour.
- The rendering of fresh water unsuitable for consumption by farm animals.
- Any significant adverse effects on aquatic life.

The proposal satisfies the provisions of s107 as also set out in section 14.11 of the AEE. Specifically, based on the previous assessment in this report, the measures contained within the described construction management plans (ESCP and CLMP) will ensure that EB3R can be constructed without generating the above discharges into the receiving environment.

Accordingly, there is no reason under section 107 of the RMA not to grant the requested discharge permits.

Conditions of resource consents – ss108

The recommended conditions of consent are contained in Appendix 3. At the time of writing this report the recommended consent conditions have not been provided to the applicant. It is noted that Council's standard conditions have been included on the various consents to ensure adverse effects are being appropriately avoided, remedied or mitigated, and to ensure consistency with similar operations in the Auckland Region.

Duration of resource consents – s123

The following durations were sought in section 12.2 for the EB's resource consents:

Consent Type	Duration
Land Use Consent (section 9(2))	5
Coastal Permit (Occupation)	35 Years
Coastal Permit (Disturbance)	5 Years
Discharge (Earthworks/Contaminants)	5 Years
Discharge (NES-FW)	35 Years

Noting that a discharge permit is no longer required under the NES-FW, I make the following comments.

Land Use Consents – LUC60407123 (various)

Relative to the proposed earthworks, Council's Specialist Ms Langdon supports a standard duration of five years for the earthworks which will allow for any delays in the commencement and completion of works.

Coastal Permits - CST60408460 (coastal structures)

Council's Coastal Specialist Dr Sivaguru has advised the following: *"The applicant has sought a 35-year term of consent for the occupation and use of stormwater infrastructure. From the effects point of view, any adverse effects as a result of the occupation and use of the infrastructure will be less than minor. An expiry date of 35 years is recommended."*

Lapsing of resource consents – s125

The AEE has set out that: *"It is considered prudent that given the size of the Project a 10-year lapse date is applied given the uncertain impacts of COVID-19. A 10-year lapse date will ensure that adequate time is given for the commencement of construction and matches the standard timeframe for an AC Council-led review of the AUP(OP)."*

Under s125, if a resource consent is not given effect to within five years of the date of the commencement (or any other time as specified) it lapses automatically, unless the council has granted an extension. In this case, given the extent of permitted works undertaken to date with the removal of dwellings along the southern side of Ti Rakau Drive, five years is considered an appropriate period for the consent holder to make substantial progress in the implementation of the consent.

Review condition – s128

Section 128 of the RMA provides for the council to review the conditions of a resource consent at any time specified for that purpose in the consent. A consent may specify a time for review of the conditions of a consent for the following purposes.

- to deal with any adverse effects on the environment which may arise from the exercise of consent and which are appropriate to deal with at a later stage; or
- to require holders of discharge permits or coastal permits which could otherwise contravene ss15 or 15B of the Act to adopt the best practicable option to remove or reduce any adverse effect on the environment; or
- for any other purpose

A review condition has been recommended on the following consent:

- Coastal permit CST60408460 (coastal structures).

The reasons for this are to enable the ongoing review of the conditions associated with stormwater outfalls in the event that any unforeseen adverse effects become apparent, or if best practice requirements change over the duration of the consent. The duration of earthworks (for example) has been assessed as being of a limited duration that does not warrant a specific review condition.

19. Consideration of Part 2 (Purpose and Principles)

Purpose

Section 5 identifies the purpose of the RMA as the sustainable management of natural and physical resources. This means managing the use of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

Principles

Section 6 sets out a number of matters of national importance which need to be recognised and provided for. These include the protection of outstanding natural features and landscapes, the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna, and the protection of historic heritage.

Section 7 identifies a number of “other matters” to be given particular regard by the council in considering an application for resource consent. These include the efficient use of natural and physical resources, and the maintenance and enhancement of amenity values.

Section 8 requires the council to take into account the principles of the Treaty of Waitangi.

Assessment

Any consideration of an application under s104(1) of the RMA is subject to Part 2. The Court of Appeal in *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316 has held that, in considering a resource consent application, the statutory language in section 104 plainly contemplates direct consideration of Part 2 matters when it is appropriate to do so. Further, the Court considered that where a plan has been competently prepared under the RMA it may be that in many cases there will be no need for the Council to refer to Part 2. However, if there is doubt that a plan has been “competently prepared” under the RMA, then it will be appropriate and necessary to have regard to Part 2. That is the implication of the words “subject to Part 2” in s104(1) of the RMA.

In the context of this non-complying activity applications for land use, discharge from a contaminated site and coastal permits, where the objectives and policies and other relevant provisions of the relevant statutory documents were prepared having regard to Part 2 of the RMA, they capture all relevant planning considerations and contain a coherent set of policies designed to achieve clear environmental outcomes. They also provide a clear framework for assessing all relevant potential effects, and I find that there is no need to go beyond these provisions and look to Part 2 in making this decision as an assessment against Part 2 would not add anything to the evaluative exercise.

20. Conclusion and Recommendation

As detailed, further information on potential changes to the eastern intersection of Edgewater Drive and Ti Rakau Drive was provided to Council by the applicant on 12 April 2023. As this information has not yet been thoroughly reviewed, the following recommendation is based on the version of EB3R that was notified.

Recommendation on the applications for resource consent

At this point I am not in the position to support the granting of the resource consents as notified as the following matters remain outstanding to be addressed at the hearing:

Transportation (105 Ti Rakau Drive – Public Carpark)

- a. Either amended plans to address non-compliance with the provisions of E27 and E24 of the AUP and NZS: 4121-2001, and/or
- b. Expert advice regarding the acceptability of any non-compliance.

Noise and Vibration

- c. Additional information on why a low noise road surface is not practicable.
- d. The practicability of more extensive and/ or higher road-side barriers.
- e. Confirmation of the number of PPFs where acoustic treatment would be required.
- f. An updated version of Figures 7 and 8 of the noise operational noise assessment.

Social Effects

- g. Provision of additional management plans as recommended by Mr Quigley, and in particular a Development Response Plan to assist with addressing the concerns of the Pakuranga Plaza and Edgewater Shopping Centre businesses.

Land disturbance and streamworks

- h. Provision of the items set out in section 2.13 (a) to (e) of the Technical Memo prepared by Samantha Langdon – Specialist (Earth and Stream Works), Specialist Unit, Auckland Council to understand the specifics of streamworks and vegetation clearance proposed.

Open Space Effects

- i. Clarification of the effects of RW211 on the future opportunities for recreational walking and cycling along Edgewater Drive Esplanade Reserve.

The applicant is also invited to provide updates on the progress of:

- j. Land acquisition and/or Agreements to temporarily occupy those properties required for the construction and operation of EB3R, and
- k. Details of mitigation agreed with Auckland Council – Community Facilities for works proposed within Riverhills Park.

If these matters can be satisfactorily addressed, and subject to the recommended conditions in Appendix 4, I consider that the resource consents could be confirmed for the following reasons.

- In accordance with an assessment under ss104(1)(a) and (ab) of the RMA, the actual and potential effects from the proposal are found to be acceptable, as the construction and operational adverse effects can be appropriately managed.
- In accordance with an assessment under s104(1)(b) of the RMA, the proposal is found to be consistent with the relevant statutory documents.
- In accordance with an assessment under s104(1)(c) of the RMA, while relevant, there are no other matters were considered reasonably necessary to determine the applications.
- In regard to other relevant RMA sections, whereby with specific reference to the coastal and discharge permits sought that:
 - the provisions of s105 have been met subject to the imposition of appropriate conditions of consent to ensure there is no significant adverse effect on the receiving environment, and
 - that the management plans proposed are such that there is no reason under section 107 of the RMA not to grant the requested discharge permit.
- In regard to s104D of the RMA, the proposal has the ability to satisfy the threshold test of s104D(1)(b) whereby the proposal will not be contrary to the objectives and policies of relevant NPS, NES, and the AUP.
- The proposal can be considered in the round to be consistent with the purposes and principles of the RMA as set out in Part 2.

APPENDIX 1

AUCKLAND COUNCIL SPECIALIST REVIEWS

Memo

31 March 2023

(Post-Notification Revision)

To: Celia Wong, Senior Planner – Southern Consenting;
David Wong, Senior Policy Planner – Plans & Places

cc: Warwick Pascoe, Principal Project Lead – Premium Consenting

From: Paul Crimmins, Senior Specialist – Contamination, Air & Noise

Subject: BUN60407133 & BUN60407121: Air Quality Review for Eastern Busway Projects EB2 & EB3R (Pakuranga Town Centre to Pakuranga Creek)

I have reviewed the AEE and supporting information submitted for Notice of Requirement and Resource Consent applications BUN60407133 and BUN60407121, and submissions received during the Public Notification period, with respect to the actual and potential air quality effects of the proposal and the provisions of the *Resource Management (National Environmental Standards for Air Quality) Regulations 2004* (NES:AQ) and AUP(OP) Chapter E14: Air Quality.

The documents I have reviewed are:

- Assessment of Environmental Effects: EB2 (AEE EB2: T Hegarty, 28/06/2022)
- Assessment of Environmental Effects: EB3R (AEE EB3R: N Keyte, 27/06/2022)
- Air Quality Effects Assessment (AQR: T Freeman, 04/07/2022)
- Erosion and Sediment Control Plan (ESCP: C Stewart, 19/07/2022)
- Construction Environmental Management Plan (CEMP: D Alexander, 18/07/2022)
- Submissions, particularly including those that mention air discharges:
 - Equal Justice Project
 - G Hewison
 - Pakuranga Plaza Ltd
 - General Distributors Ltd

I conclude that the EB2 and EB3R Eastern Busway Projects pose negligible risks to air quality. From an air quality perspective, I cannot see any reason not to approve the Notice of Requirement and grant the resource consent applications subject to conditions similar to those proposed by the AEEs (relating to minimising dust by adherence to the ESCP as detailed at the end of this memo). The reasons for these conclusions are:

- I consider there is a negligible risk of adverse air quality effects arising from the construction or operational phases of the EB2 and EB3R Projects:
 - Extensive assessment of the potential for air discharges and resulting effects to amenity and human health has been provided by the AQR.
 - I consider the AQR has been prepared by a Suitably Qualified and Experienced air quality Practitioner in accordance with the recommendations of relevant best practice guidance.
 - I agree with the conclusions of the AQR, that the EB2 & EB3R Projects pose negligible risks to air quality during the construction and operational phases.

- I note that Pakuranga Plaza was specifically considered as part of the AQR's assessment of dust effects. The AQR's assessment concludes that there is a negligible risk of adverse dust effects for the commercial occupants and retail customers of Pakuranga Plaza. I agree with this conclusion.
 - I agree the potential discharges of dust from the construction activities are likely to comply with general permitted activity standard E14.6.1.1.
 - Relatively limited earthworks are required for the EB2 and EB3R Projects, with low potential for significant dust discharges.
 - Other construction activities, such as the construction of a new flyover for Reeves Road, asphaltting and concreting, have similarly low likely dust discharges.
 - 'Standard' dust control measures, such as those outlined by section 7 of the AQR and sections 4.22, 5.4 & 5.5 of the ESCP, shall sufficiently mitigate dust discharges and resulting effects. I consider these dust control measures:
 - Sufficiently minimise the risk of offensive or objectionable dust amenity effects from the Projects.
 - Adequately incorporate relevant good practice guidance for controlling dust effects from projects of this nature.
 - Suitably address all notable potential dust sources during the construction phase, including 'non-earthworks' sources such as concrete cutting and demolition.
 - Include some advanced measures beyond what I consider necessary, but which will further minimise potential dust effects during construction. These advanced measures include instrumental dust monitoring at two residential locations near to the EB2 works areas with suitable response triggers for investigation and contingency dust management.
 - Are suitably adaptable to address any contingency scenario where unanticipated discharges of dust occur, such as the implementation of additional water carts in response to any noted visible dust or trigger level exceedance recorded by the instrumental monitors or the receipt of complaints regarding dust.
 - I consider the operational air discharges from the busway and re-configured roadways (for example from exhaust emissions and brake/tyre wear) are negligible and unlikely to cause detectable changes to local air quality.
- I consider the air discharges from the EB2 & EB3R Projects do not necessitate an air discharge consent and are a Permitted Activity under AUP(OP) Rule E14.4.1(A1), as:
 - The air discharges (noting the scale of potential dust discharges and measures to minimise these discharges and resulting effects as included in the ESCP) are likely to comply with relevant general permitted activity standards E14.6.1.1.
 - Rules E14.4.1(A82 & A83), relating to discharges of dust from demolition, earthworks and construction activities that do not meet the general permitted activity standards, are therefore not applicable.
 - Rule E14.4.1(A114) provides for discharges from vehicle exhausts using the new busway as a Permitted Activity without specific standards.
- I consider the EB2 & EB3R Projects are not likely to cause notable changes to the concentrations of harmful air pollutants within ambient air. Air pollutants discharged from the Projects are not likely to cause an exceedance of any of the relevant Ambient Air Quality Standards of the NES:AQ or Auckland Ambient Air Quality Targets of the AUP(OP).

Regarding the discharges of greenhouse gases (GHG) into air associated with the Proposal:

- Discharges of GHG and resulting impacts on climate change are ‘not within scope’ for the Resource Consent applications, given that the Consent Applications were lodged prior to the repeal of RMA section 104E on 30/11/2022. Section 104E restricted the assessment of GHG discharges and resulting effects on climate change. The transition clauses of the Resource Management Amendment Act 2020 (RMAA2020) mean that these Resource Consent applications are to be considered as if s104E is in force.
- The RMAA2020 introduced new requirements for District Plans at RMA section 74(2)(d) and repealed the restrictions on these Plans from considering GHG discharges and effects on climate change (RMA section 70A). A matter that Council ‘shall have regard to’ when changing a District Plan now includes the Emission Reduction Plan (published May-2022).
 - I recommend that the Positive Effects of the Project regarding GHG emission reductions, as identified by the submissions of G Hewison and the Equal Justice Project, are accounted for in the NoR decision.
 - I recommend that the NoR should have particular regard to the Emission Reduction Plan’s direction for mode-shift from private vehicle transport to public and active modes (ERP Chapter 10: Transport):
 - *Reduce reliance on cars and support people to walk, cycle and use public transport including by:*
 - *improving the reach, frequency and quality of public transport and making it more affordable for low-income New Zealanders*
 - *increasing support for walking and cycling, including initiatives to increase the use of e-bikes*
 - *ensuring safer streets and well-planned urban areas.*
- RMA section 74(2)(e) also requires that Plan Changes have regard to the National Adaptation Plan (published Aug-2022) relating to adaptation and resilience to the effects of climate change. These adaptation measures are outside the scope of my review of discharges into air.

I consider that no specific conditions for air quality are necessary for the Designation for EB2 proposed by the Notice of Requirement. Air quality matters can be adequately mitigated by conditions for the Resource Consents, and implemented as part of adherence to the ESCP.

For the resource consents for EB2 and EB3R, I consider that the Proposed Conditions requiring adherence to the ESCP are generally sufficient to minimise air quality effects. However, to adequately ensure that potential dust effects are mitigated, I recommend one additional specific condition is imposed for each of the EB2 & EB3R consents to limit discharges of dust and direct that these discharges are to be mitigated in accordance with relevant good practice and the ESCP. These recommended ‘dust’ conditions address the concerns regarding construction dust raised in the submissions of Pakuranga Plaza Ltd and General Distributors Ltd.

I recommend these additional ‘dust’ conditions are included within the Land Disturbance portion of the EB2 & EB3R consents, near to other conditions relating to ESCP measures (such as minimising the deposition of dirt on roads).

I recommend the following conditions for consent bundle BUN60407133, relating to EB2 (adopting the numbering used by the AEE EB2, Appendix 3):

1. [Activity in accordance with plans, including the ESCP].
14. [Adherence to the ESCP].
18. Discharges of dust must not cause offensive or objectionable effects at any location beyond the boundary of the Site, in the opinion of an enforcement officer when assessed in accordance with the *Good Practice Guide for Assessing and Managing Dust* (Ministry for the Environment, 2016). The consent holder must ensure that dust management during the works generally complies with the recommendations of this *Good Practice Guide* and minimises dust generation as far as practicable. This includes having sufficient water to dampen exposed soil and unsealed areas, and/or other dust suppressing measures detailed by the ESCP, available as necessary.

I recommend the following conditions for consent bundle BUN60407121, relating to EB3R (adopting the numbering used by the AEE EB3R, Appendix 4):

1. [Activity in accordance with plans, including the ESCP].
56. [Adherence to the ESCP].
59. Discharges of dust must not cause offensive or objectionable effects at any location beyond the boundary of the Site, in the opinion of an enforcement officer when assessed in accordance with the *Good Practice Guide for Assessing and Managing Dust* (Ministry for the Environment, 2016). The consent holder must ensure that dust management during the works generally complies with the recommendations of this *Good Practice Guide* and minimises dust generation as far as practicable. This includes having sufficient water to dampen exposed soil and unsealed areas, and/or other dust suppressing measures detailed by the ESCP, available as necessary.

Paul Crimmins
MSc(Hons), BA

Senior Specialist – Contamination, Air & Noise

Arboricultural memorandum for a notice of requirement for Eastern Busway Stage EB2 (NoR EB2) and resource consent applications for Eastern Busway Stage EB2 (BUN60407133) and Eastern Busway Stage EB3R (BUN60407121)

To: Celia Wong - Auckland Council Planner Resource Consents
Warwick Pascoe - Principal Project Lead Premium Resource Consents
David Wong - Auckland Council Senior Policy Planner
David Wren - Consultant Planner

From: Gavin Donaldson – Auckland Council Senior Specialist Arborist

Date: 15th March 2023

1. Application details

Applicant's name: Auckland Transport (Applicant)

Application number: NoR EB2, EB2 BUN60407133

EB3R BUN60407121

Site address: Reeves Road, Pakuranga Heights (EB2) including the South Eastern Arterial (SEART). Ti Rakau Drive, Reeves Road, Pakuranga Road, William Roberts Road and 207 Ti Rakau Drive, Pakuranga Heights (EB3R) including Ti Rakau Drive from Reeves Road to Riverhills Park at Pakuranga Creek

2. INTRODUCTION

QUALIFICATIONS AND RELEVANT EXPERIENCE

- 2.1. My name is Gavin Rex Donaldson, and I am a Senior Arborist in the Earth, Streams and Trees Specialist Unit at Auckland Council.
- 2.2. My qualifications include a Certificate in Horticulture (1975), Certificate in advance tree biology (1989), Diploma in Arboriculture (2001) and a Graduate Diploma majoring in Environmental Science and Natural Resource Management (2013). I also hold an International Society of Arboriculture Certification Board (ISA) Tree Risk Assessment Qualification (TRAQ) 2019-2024.
- 2.3. My current role at Auckland Council is to provide reports and recommendations to Council Planners for land use applications that involve protected trees, peer review and determine resource consent applications that solely concern protected trees, provide specialist advice on major infrastructure projects, outline plans of works, and notices of requirement, and to prepare reports and technical memoranda as an arboricultural expert at notified Council hearings, Council committees, and in the Environment Court.
- 2.4. I am a member of the New Zealand Tree Crop Association, Tane's Tree Trust, the International Society of Arboriculture, the New Zealand Arboricultural Association, and sit on the New Zealand Arboricultural Association's Registered Consultants Committee.

- 2.5. I have been practicing arboriculture since 1981 and was principal of my own arboricultural consultant and contracting firm from 1986-2003. I was awarded Approved Contractor status by the New Zealand Arboricultural Association (1992), and the Ron Flook Award for excellence and services to Arboriculture (New Zealand Arboricultural Association 2012).

EXPERT WITNESS CODE OF CONDUCT

- 2.6. I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this technical memo. Other than where I state that I am relying on the advice of another person, this evidence is within my area(s) of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express. I have qualified my evidence where I consider that any part of it may be incomplete or inaccurate, and identified any information or knowledge gaps, that I am aware of, and their potential implications. I have stated in my evidence where my opinion is not firm or concluded because of insufficient research or data or for any other reason and have provided an assessment of my level of confidence, and the likelihood of any outcomes specified, in my conclusion.

3. SUMMARY OF PROPOSAL

- 3.1 The Applicant has applied for resource consents and a notice of requirement for vegetation removal and alteration in Council Reserves and Road Reserves, and within terrestrial wetlands and the coastal areas of the Tamaki River to enable the development, construction, operation and maintenance of a new Eastern Busway extension of the existing Panmure to Pakuranga busway along Ti Rakau Drive, with the construction of a new Pakuranga Bus Station, the construction and operation of the Reeves Road Flyover, modifications to the SEART off-ramp at Ti Rakau Drive, and accompanying walking and cycling facilities and stormwater infrastructure.

- 3.2 This technical memorandum addresses the Arboricultural effects of both the NoR and resource consent applications and in preparation for this I have reviewed the following documents relevant to the NoR EB2, EB2 BUN60407133 and EB3R BUN60407121:

- EB2 & EB3R Landscape Ecological and Arboricultural Mitigation Plans (AEE, Appendix 5)
- Draft Arboricultural Effects report compiled by Leon Saxon from Arborlab Limited dated 21.04.2022 (AEE, Appendix 16)
- DRAFT tree location plans for EB2 and EB3R compiled by Arborlab dated July/ August 2018
- William Roberts Road Extension – Further Information for Tree Owner Approval dated 5th Sept 2022
- Tree Protection Management Plan - Eastern Busway EB2 and EB3 Residential compiled by Leon Saxon of Arborlab dated 22.06.2022 (AEE, Appendix 17)
- Arboricultural Effects Assessment - Eastern Busway EB2 and EB3 Residential compiled by Leon Saxon of Arborlab dated 06.07.2022

- Tree Owner Approval (TOA) from Community Facilities for the Eastern Busway packages being EB2 and EB3R for the establishment of the Reeves Road Flyover Structure and widening of Ti Rakau Drive, dated 25.11.2022.
- EB3 Residential Stormwater Outfalls Arboricultural Memorandum compiled by Leon Saxon of Arborlab dated February 2023

3.3 In addition, I have reviewed the urban design report provided with the application and the technical memo provided by the Council's Urban Design Specialist, which includes a comprehensive account and analysis of the effects upon protected trees and vegetation that will arise from the proposal – which I concur with and do not need to repeat, and the conclusions and recommendations with which I agree and fully support.

3.4 As there are similar considerations and effects associated with Arboriculture and Urban Design, streetscape and visual amenity, climate change, provision of ecosystem services by trees, and the Urban Forest Ngāhere Strategy, I am relying on the evidence of the Council's Urban design specialist where applicable, as some of the aspects of urban design are not strictly within my area(s) of expertise.

4 ADEQUACY OF INFORMATION PROVIDED

4.1 The information provided includes an AEE, an Arboricultural Effects Assessment report, and a draft tree protection management plan (TPMP) which is intended to apply to both NoR and Resource Consent applications. The Arborlab Arboricultural Assessment includes a Tree Inventory of proposed works for EB2 and EB3R, presented as the 'worst case', with a finalised TPMP to be provided at a later date prior to construction.

4.2 The AEE and Draft Arboricultural Effects report compiled by Arborlab states at section 7 Mitigation, that a finalised Tree Protection Management Plan (TPMP) will be provided at a later date prior to construction, which will outline:

- Management Plan Framework
- Roles and Responsibilities
- Project Staging
- Tree Protection Measures
- Bio-security Measures
- Sustainability Options.

4.2 The AEE and Draft Arboricultural Effects report further states at 7.2 (Replacement Planting Strategy), that a comprehensive Urban Design and Landscaping Plan (UDLP) will be prepared prior to construction.

4.3 While the provision of finalised work methodologies and plans at the time of construction, often through an outline plan of works, is common practice with a Designation, this does not allow the Council to make a fully informed assessment of effects at the NoR stage and only provides a limited ability to 'request' changes at a later date.

4.4 In this instance it is also noted at 3.2 of the Council's Urban Design Specialist technical memo that "the final design of urban design and landscape components is proposed to be managed by a UDLP, rather than an Outline Plan of Works, and requires certification by Council rather than a separate consent. This reliance on a UDLP management plan and certification process may not allow adequate evaluation of effects mitigation, which needs to be undertaken in the AEE."

5 FURTHER INFORMATION REQUESTED

- 5.1 While the Applicant has offered to provide 'mitigation' for the proposed tree removals, by definition, mitigation acknowledges that there is a lasting negative effect. As a matter of consistency with the Arborlab report's inclusion of 'sustainability options and recent NoR applications (Drury Arterial Networks, Supporting Growth N/W), 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 the trees being removed.
- 5.2 If the actual effects of tree removal are to be addressed in a sustainable fashion, the replanting will need to match the value of ecosystem services which would have been achieved by the existing trees had they been retained for a forecast period of 30 years. A 30year forecast is well within the life span of the trees proposed for removal, and this is consistent with the sustainability goals of the Auckland Council's 'Low Carbon Strategic Action Plan' and the 2050 goal set by the government for carbon neutrality under the Climate Change Response (Zero Carbon) Amendment Act.
- 5.3 This is also noted in the Council's Urban Design Specialist technical memo where it is stated that "in relation to the issue of adapting to a changing climate and responding to microclimate factors, the streets and in particular Ti Rakau Drive need to have suitable space for street tree planting that will contribute to a reduction in heat island effects of the increased paved surfaces. I note that establishing trees within the urban environment would be consistent with the Council's Urban Ngāhere Forest Strategy (2019) and its vision to increase the tree canopy cover across Auckland's urban area. In my opinion, UDLP requirements should be expanded to address the need for planting of a sufficient number and suitably scaled trees within the street and parks frontages to achieve this outcome. "
- 5.4 Pursuant to s92 of the RMA the Applicant was requested that the UDLP utilise the i-Tree Development forecasting tool to calculate lost future benefits from the proposed tree removals, and to provide for appropriate levels of replacement planting in order to maintain eco-system services provided by the trees and achieve sustainability and carbon neutrality.
- 5.5 In support of this request the applicant was provided with the following information:
- 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 the Applicant to this link provided for their assistance <https://www.itreetools.org/>
- 5.6 The Applicant's reply to this request was that "the i-Tree Development tool is not an AUP(OP) requirement, and the proposed mitigation is based on best practice and guidance." I do not accept this response because the AUP specifically lists the provision of ecosystem services as a matter of importance for trees in roads and open spaces as shown in the following excerpts from chapters E15, E16 and E17 of the plan:

AUP - Ecosystem Services

Chapter E15 - Vegetation management and biodiversity

E15.2. Objectives

- (1) Ecosystem services and indigenous biological diversity values, particularly in sensitive environments, and areas of contiguous indigenous vegetation cover, are maintained or enhanced while providing for appropriate subdivision, use and development.

E15.3. Policies

- (2) Manage the effects of activities to avoid significant adverse effects on biodiversity values as far as practicable, minimise significant adverse effects where avoidance is not practicable, and avoid, remedy or mitigate any other adverse effects on indigenous biological diversity and ecosystem services, including soil conservation, water quality and quantity management, and the mitigation of natural hazards.

Chapter E16. Trees in open space zones

E16.1. Background

Environmentally, trees provide important ecological values in terms of storing carbon and providing habitat and food for wildlife, improving air quality and providing ecosystem services.

E16.8.2. Assessment criteria

The Council will consider the relevant assessment criteria for restricted discretionary activities from the list below:

The specific values of the trees including any ecological values with respect to water and soil conservation, ecosystem services, stability, ecology, habitat for birds and amelioration of natural hazards.

E17. Trees in roads

E17.1. Background

Trees in roads make streets more attractive and contribute to pedestrian amenity and public health. Environmentally, trees provide important ecological values in terms of storing carbon, providing habitat and food for wildlife, improving air quality and providing ecological and amenity values.

E17.8.2. Assessment criteria

The Council will consider the relevant assessment criteria for restricted discretionary activities from the list below:

The specific values of the trees including any ecological values with respect to water and soil conservation, ecosystem services, stability, ecology, habitat for birds and amelioration of natural hazards.

6 RECOMMENDATIONS

- 6.1 I support the recommendations and conditions provided by the Council's Urban Design specialist in requesting more street trees, parks frontage trees and station platform trees, with a preference for greater certainty from the Landscape, Ecological and Arboricultural Mitigation Plans being amended to show the additional trees and their

locations, and for the UDLP condition to be amended to require implementation of those Mitigation Plans.

- 6.2 It is my recommendation that the UDLP be required 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 sustainability and carbon neutrality throughout the project.



Gavin R. Donaldson - Senior Arborist

Earth, Streams and Trees Specialist Unit – Auckland Council.



REVIEW OF CONSTRUCTION NOISE AND VIBRATION EFFECTS

EB2 AND EB3R
PAKURANGA

PREPARED FOR
Auckland Council

DATE
12 April 2023

Technical review prepared by Styles Group for Auckland Council.

REVISION HISTORY

Rev:	Date:	Comment:	Version:	Prepared by:
1	12/04/23		Final	Jon Styles, MASNZ Director and Principal Styles Group

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1.0 Introduction

Auckland Council has engaged Styles Group to review the construction noise and vibration effects from Auckland Transport's Notice of Requirement to construct and operate Stage 2 of the Eastern Busway (EB2 NoR) and associated resource consents for the construction and operation of Stage 2 of the Eastern Busway (EB2) and Eastern Busway Stage 3 Residential (EB3R).

This review has been prepared following extensive pre-lodgement and post-lodgement engagement with the Eastern Busway (EB) team. The engagement has included a site visit, a number of meetings and extensive feedback on draft reports and the review of the finalised reports lodged with the applications and the various responses to the Councils further information request.

The pre-lodgement engagement was productive and assisted in resolving a number of questions and issues that had arisen in the early stages of the assessments.

The objective of this review is to provide general commentary on the reports and responses provided by the EB team, to synthesise and summarise the EB assessments and to provide any additional commentary and analysis to ensure that the effects and mitigation measures are clear and understandable.

This review is focussed on the assessments of noise and vibration for the construction of the various EB projects. The reports that were included in the lodgement packages are referred to collectively in this review as the Original Assessments.

2.0 Experience and qualifications

My full name is Jon Robert Styles. I am an acoustic consultant, director and the principal of Styles Group Acoustics and Vibration Consultants. I have approximately 22 years of experience in the industry, the first four years as the Auckland City Council's Environmental Health Specialist – Noise, and the latter 18 years as the Director and Principal of Styles Group.

I hold a Bachelor of Applied Science majoring in Environmental Health and I have completed the Ministry for the Environment's Making Good Decisions programme. I recently concluded my second term as the President of the Acoustical Society of New Zealand. I am currently a Council member and professional member of the ASNZ.

I am on the executive of the Association of Australasian Acoustical Consultants (**AAAC**). My role on the executive is to develop guidelines for the assessment of noise and vibration in New Zealand and Australia.

Throughout my career, I have been involved in the development and administration of numerous District Plan rules, plan changes and general policy development. I have assisted a large number of councils to process a significant number of resource consents and Notices

of Requirement subject to noise and vibration standards. I have extensive experience advising on the management of noise and vibration effects, including the construction, maintenance and operational noise effects of major and strategic transport infrastructure (including port, road, air and rail) and the protection of strategic industry and transport infrastructure through the effective management of reverse sensitivity effects.

Specific assignments relevant to this evidence include:

- The Auckland Council's witness through the development of the High Land Transport Noise Overlay in the AUP.
- Advice on several recent District Plan reviews, including Whangarei Urban and Services Plan Change and whole of plan reviews for Taupō, Napier and Kaipara.
- Providing advice on numerous public and private plan changes involving land exposed to road and rail noise, including recommendations for appropriate acoustic mitigation response.
- Noise and vibration measurements for a significant number of resource consent applications involving the establishment of activities sensitive adjacent to various forms of transport infrastructure.
- A large number of projects around New Zealand involving road traffic noise and the application of New Zealand Standard NZS6806:2010 *Acoustics – Road Traffic Noise – New and Altered Roads (NZS6806)*. A number of these projects have been Roads of National Significance (RoNS) and include the Southern Corridor Improvements, Te Atatu Road widening, Lincoln Road Corridor Improvements, Ellerslie and Takanini Noise Walls, Mill / Redoubt Road, SH1 Whangarei Improvements, SH12 Matakoho Bridges, CSM2 & MSFRL (Christchurch Southern Motorway Stage 2 & Main South Road Four Laning), Mackays to Pekapeka, Waikato Expressway (numerous sections), Southern Links Hamilton, Central Motorway Junction, AMETI, Victoria Park Tunnel, Waterview Connection, St Lukes Interchange, SH16 Causeway, Puhoi to Warkworth, the East West Link, Penlink, Warkworth to Wellsford and many others.
- I was heavily involved in the Northern Corridor Improvements project as the expert advising the Board of Inquiry. That process created a number of outputs that have been successfully utilised by more-recent projects involving similar noise and vibration effects. Several of these have been adopted by the Requiring Authority in this case.
- I have given evidence before several Boards of Inquiry on road traffic noise effects including being the Boards' expert on several occasions.

I have read the Environment Court Code of Conduct for Expert Witnesses. My advice complies with the Code in all respects and the opinions herein are within my area of expertise.

3.0 Background

3.1 RFI and Response

The Council requested further information relating to construction and operational noise effects from EB2, EB3 NoR and EB3R based on our input. The requests are set out in the [Request for Further Information \(RFI\)](#).

The applicant's [response](#) for EB2 NoR is accompanied by:

- Updated noise [tables](#)
- Updated noise [maps](#)
- Updated EB2 NoR [conditions](#)

The applicant's [response](#) for EB3R is accompanied by:

- Updated noise [maps](#) (Attachment 4)
- Updated [conditions](#) (Attachment 7)

Our advice to the Council was that the information and changes sought in the RFI process were likely to affect numerous parts of the Original Assessments, including throughout the body of the reports and in the conclusions and summaries. We suggested that the requests were addressed in an updated report, rather than in a separate document. The Council supported this. Revising the original reports to incorporate the responses to the requests would have yielded a clear and readily understandable set of reports.

However, the responses have been provided as supplements to the Original Assessments. The responses address the specific questions from the Council. The responses do not include a variety of consequential updates to the Original Assessments that are necessary for a clear understanding. In my view, this has led to a situation where the assessment of construction noise and vibration effects is more difficult to follow and understand than it should be.

4.0 Scope of EB2

EB2 NoR proposes to designate 6.21 ha of land for the construction, operation, and maintenance of the Eastern Busway. The Site subject to EB2 NoR and EB2 resource consents includes land between the intersection of Ti Rakau Drive/ South-Eastern Highway (SEART) and Pakuranga Road/ William Reeves Road.

The key aspects of EB2 relevant to construction and operational noise effects include:

- *“Road widening of Ti Rakau Drive to provide for a new road layout, including dedicated bus lanes, walking, and cycling infrastructure and a new bus station at Pakuranga Town Centre*

- *The construction and operation of the Reeves Road flyover*
- *Modification of the South-Eastern Highway offramp onto Ti Rakau Drive*
- *Modifications to the intersections of Ti Rakau Drive with Reeves Road, Tiraumea Drive, Reeves Road, Palm Avenue and Aylesbury Street*
- *An extension of Cortina Place*
- *The creation of a cul-de-sac, with turning head, at the northern end of William Roberts Road”*

The scope of the projects, receiving environment and the nature and extent of construction works are described in the application material and various responses. They are not repeated here.

5.0 Scope of EB3R

EB3R includes works along a 1.8km section of Ti Rakau Drive, commencing at the intersection of Reeves Road, SEART and Ti Rakau Drive (tying into works for EB2) and concluding at the western shore of Pakuranga Creek.

The key elements of EB3R are described in the AEE as follows:

- *A separated busway through the centre of Ti Rakau Drive*
- *The construction of two new westbound lanes for general traffic*
- *Two intermediate bus stations, being Edgewater Station and Gossamer Station*
- *The western abutment for a future bridge across Pakuranga Creek, adjacent to the existing Ti Rakau Drive Bridge*
- *Intersection upgrades along Ti Rakau Drive, including William Roberts Road and Gossamer Drive.*

The scope of the projects, receiving environment and the nature and extent of construction works are described in the application material and various responses. They are not repeated here.

6.0 Review of the assessments of construction noise and vibration effects

6.1 Overview

Managing the noise and vibration effects from constructing large infrastructure projects can be challenging. The often-heavy nature of the works and close proximity to receivers often results

in the generation of noise and vibration effects high enough to cause significant disruption to normal business or residential activity.

In my experience, it is not possible to require a project of this nature to comply with noise and vibration limits that would avoid disruption. To do so would often require such extensive mitigation that the project becomes cost-prohibitive, and it could prolong the construction duration by significant amounts.

Accordingly, the construction noise and vibration effects of large infrastructure projects are often managed by allowing them to exceed the typical 'permitted standards' for construction noise and vibration on the basis that there are strict requirements (in conditions) to ensure that the Best Practicable Option (**BPO**) is adopted to manage the effects. The BPO can comprise a large variety of physical mitigation measures such as limits on machine size and type, noise barriers and similar, through to management measures such as timing of the works, offering mitigation to the receivers directly and offering effective consultation and engagement with the receivers to help avoid the worst of the effects. This is essentially the Requiring Authority's proposal in this case. I support such a proposal, provided that the conditions set out a clear and certain pathway to ensure that the BPO is carefully identified and adopted in all cases.

6.2 The Requiring Authority's assessments

The Original Assessments provide predicted noise levels for a 'worst-case' scenario where there is noisy construction plant in use close to a receiver, and a 'typical' scenario where there is work occurring in the vicinity of a receiver but where the plant is perhaps further away and there are noise barriers in place. I generally agree with the concept of providing worst-case and typical noise level predictions. This helps to convey that the effects will not always be as bad as the highest predicted noise levels.

I have reviewed the noise and vibration prediction methodologies and I am generally satisfied with their appropriateness and the veracity of the outcomes that they inform. I do have a minor concern that the worst-case and typical scenarios are quite narrow in scope, and that there will be a great variety of activities likely to be undertaken throughout the works that are not represented. This includes some very specific works around the RRF involving piling, bridge construction and other specific construction methods. However, I do not consider that the narrow scope of the noise level predictions requires further work by the Requiring Authority.

I consider that there is likely to be some considerable variation in the actual noise levels that will be received in-reality. The noise level predictions provided by the Requiring Authority are useful to give an indication of the approximate magnitude of the effects, but they should be considered indicative only.

The Responses provide a very general indication of the duration of time that a receiver or group of receivers could be exposed to noise or vibration levels that exceed the project standards. It is difficult to determine if the Requiring Authority's assessment of these durations is accurate without involving a construction expert. However, based on my experience, I agree with the Requiring Authority that there will be some receivers that will experience significant disruption potentially for several weeks. These effects can be significant, even when managed

by adopting the BPO in terms of physical mitigation and management measures. This is commonplace for large infrastructure projects. I have made several specific recommendations for managing the effects on several key receivers and submitters where such effects are expected.

The key component of the assessment of construction noise and vibration effects are the tables in section 7 of the Original Assessments. These set out the nature of the effects that would typically be experienced at various noise and vibration levels. These have been adapted from the Northern Corridor Improvements project.

These tables are reproduced again in Response 45 along with estimations of the number of receivers that will be exposed to the corresponding noise levels. In my view, a clear understanding of these tables and the associated noise and vibration effects is a key component of the overall assessment of construction noise and vibration effects.

These illustrate that the effects will include considerable disruption at some receivers, even with mitigation applied.

6.3 Night works

The Original Assessment sets out that there will be a number of locations where works will be necessary at night. I understand that works at night are required to complete tasks when traffic flows are low and traffic disruption can be minimised, on the basis that completing such works during the day would cause significant disruption. The downside of avoiding bad traffic disruption during the day is the creation of potential sleep disruption for nearby receivers at night. It is my experience that allowing for some work at night is reasonable and consistent with the approach taken for most large infrastructure projects.

The key is to ensure that the noise and vibration levels from night works are minimised as far as practicable, and that where the residual noise and vibration levels exceed the project noise and vibration standards, a Schedule is developed to manage those effects. This is the typical approach that has been successfully adopted for several recent infrastructure projects.

The Requiring Authority has proposed night works that exceed the project noise and vibration standards “*when works cannot practicably take place during the day.*” I consider that the conditions should limit the scope of night works to this. I have suggested an advice note to deliver this outcome. The key issue is ensuring that construction work is not carried out at night to make up for lost time or other delays, where that work can be completed during the day.

6.4 Construction Noise and Vibration Management Plan

The Requiring Authority has submitted a draft CNVMP. I generally support the CNVMP as it has been drafted. However, my recommended conditions change some of the requirements of the CNVMP and Schedules to the extent that the draft CNVMP will need to be updated to accommodate these. I expect that the updates will be relatively minor.

I note that as the design and planning of the project progresses, the Requiring Authority are likely to have a greater level of detail on the construction processes, plant and locations. This will enable a greater level of certainty and accuracy in the CNVMP and Schedules. Accordingly, I have only reviewed the general nature of the draft CNVMP.

Overall, I consider that the draft CNVMP is generally suitable provided it is updated to be consistent with the requirements of the conditions I have recommended and updated to take advantage of the greater level of detail that will be available as the design and planning of the project advances.

6.5 Conclusion on effects

Overall, I expect that the construction noise and vibration effects generated by the works will be typical of a large roading project with receivers in close proximity. Most receivers will experience a moderate level of construction noise and vibration for most of the project. The closest receivers will be likely to experience construction noise and vibration levels that exceed the project standards for short periods as the works progress past them.

There are some receivers that will be exposed to construction noise and vibration levels above the project standards for longer periods – perhaps regularly for several weeks. These are predominantly in the vicinity of the RRF and associated structures. I consider that the construction noise and vibration effects could cause considerable disruption to these activities, even if they are managed well. I consider that it is critical for the designation conditions to set out a clear and robust process for the management of these effects and to ensure that they are minimised as far as practicable.

The conditions should include the requirement to effectively consult with the receivers where construction noise and vibration exceed the project standards, and to ensure that the construction noise and vibration management plan and Schedules are approved or certified by the Council prior to them authorising works that exceed the project construction noise and vibration standards.

7.0 Submissions on construction noise and vibration effects

I have reviewed the submissions that relate to construction noise and vibration effects. There are five submissions that relate to the effects on businesses in the Pakuranga Plaza complex. I address these together. The three remaining submissions on construction noise and vibration effects are addressed separately.

The submissions relating to construction noise and vibration effects are summarised below. All relate to EB2.

Table 1 Submissions on EB2

Submitter	Concern
The MPKD Group Ltd (Porterhouse Grill)	The Submitter operates a steak house that is located at the front entrance of Pakuranga Plaza. The restaurant operates 7 days per week between the hours of 11am and 11pm. The Submitter is concerned that the location of the construction hub and associated construction noise effects will cause disruption and impact upon the comfort of diners.
Brownson Jewellers	The Submitter operates a jewellery business located at the front entrance of Pakuranga Plaza. The shop operates from Monday to Saturday between the hours of 9:00am and 5:30pm. The Submitter is concerned that the location of the construction hub and associated construction noise effects will cause disruption and impact upon the comfort of customers.
Jty Tech	The Submitter operates a business located close to the carpark adjacent to the library. The shop operates from Monday to Saturday between the hours of 10:00am and 6:00pm. The Submitter is concerned that the location of the construction hub and associated construction noise effects will cause disruption and impact upon the comfort of customers.
Gibb and Milner (gym studio)	The Submitter operates a gym located at the front entrance of Pakuranga Plaza. The gym operates 7 days per week between the hours of 5:00am and 7:30pm. The Submitter is concerned that the location of the construction hub and associated construction noise effects will cause disruption and impact upon the comfort of customers.
Pakuranga Plaza Limited	The Submitter is the owner of Pakuranga Plaza. The Submitter is concerned that the Plaza and its tenants will be adversely affected by construction noise and vibration effects. The Submitter seeks that conditions of consent are imposed to adequately manage the effects of construction noise and vibration on plaza tenants
General Distributors Ltd	The Submitter operates Countdown supermarket in the Pakuranga Plaza. The Submitter is concerned that the land disturbance activities associated with the construction phase will result in adverse effects on the supermarket. The Submitter seeks that conditions of consent are imposed to adequately manage the effects on the operation of the supermarket.

7.1 Pakuranga Plaza submissions

The submissions from Pakuranga Plaza and a number of the businesses that are part of it all raise similar issues.

The general nature of the Original Assessments and responses from the Requiring Authority make it difficult to determine the nature and degree of construction noise and vibration effects that these receivers will be exposed to.

My assessment is that many of the submitters will experience construction noise and vibration effects that are intermittent or short-term. The degree of disruption is likely to be low and manageable.

However, the submitters that operate businesses on the 'outside' of the plaza and close to the main works areas do have the potential to experience construction noise and vibration effects that could be more disruptive. These works will need to be carefully managed to ensure that the BPO is carefully identified and adopted.

I recommend that the Requiring Authority provide further detail on these submissions to provide a more specific and certain assessment of the potential adverse construction noise and vibration effects.

7.2 Kainga Ora submission

I note that the submission from Kainga Ora supports the imposition of conditions that require a Construction Noise Management Plan and Schedules to manage the construction noise and vibration effects of the project. My recommended conditions below address this requirement.

7.3 The Warehouse Group submission

The submission from The Warehouse Group raises a number of issues in respect of construction noise and vibration effects.

Point 5(j) and (k) raise concerns around the process for approval or certification of management plans. My recommended conditions require that the CNVMP and Schedules are certified by the Council before they can authorise any works that exceed the project noise and vibration standards. The conditions also set out a process for consulting with the affected receivers in certain circumstances. I consider that my recommended conditions address these aspects and the relief sought in 6(ii) and (iii) of The Warehouse Group submission in relation to construction noise and vibration effects. For the avoidance of doubt, I agree that The Warehouse Group is a key receiver that could experience considerable disruption if the construction noise and vibration effects are not adequately managed. I consider that it is appropriate that the Requiring Authority consult with The Warehouse Group during the preparation of the CNVMP and Schedules and throughout the phases of work that generate high noise or vibration levels.

Point 6(ix) of The Warehouse Group submission requests that:

"Specify in the conditions that bored piles shall be utilised for the RRF foundations (as has been assumed in the assessment of noise and vibration effects)."

The Requiring Authority's assessment of effects is based on this method of piling. In my experience, impact or vibratory piling can generate considerably higher noise and vibration effects than bored piling. I therefore agree that it would be appropriate to require that the piling method is bored piling or another method that generates noise and vibration levels that are no higher.

Point 6(x) of The Warehouse Group submission requests that:

"Require noise attenuation to be provided to the upper level of The Warehouse building to ensure that, during the construction period, noise within the building does not exceed the limits for construction activities set out in the Auckland Unitary Plan."

I agree that this is a sensible approach to managing effects. However, the submission point requests acoustic treatment be provided without establishing whether the noise levels inside the building will in fact be over the relevant AUP controls.

Similar to my recommendations for resolving the operational noise concerns raised by The Warehouse Group, I recommend that The Warehouse Group provide estimates of the transmission loss of the exposed facades or access to those spaces for the Requiring Authority's experts to do so. The Requiring Authority can then provide predicted noise levels inside the building for the noisiest phases of work. That will determine whether acoustic treatment or further mitigation at the source would be required.

Point 6(xii) of The Warehouse Group submission requests that:

“Require that vibration generated by construction activities shall not exceed the level required to ensure the comfort of customers within The Warehouse store and the level to ensure that merchandise displays are not disrupted.”

I agree that this is a key consideration. However, based on the information available I consider that such disruption from vibration effects is unlikely. Notwithstanding, I consider that the conditions should set a very clear process for the determination of the BPO to be adopted to minimise the potential vibration effects. It is my experience that totally avoiding such noise and vibration effects can in some cases significantly constrain the project. It can sometimes lead to much longer construction programs (prolonging other adverse effects, such as access and traffic) or require the adoption of other perhaps slower or more expensive construction methods that can generate different adverse effects of concern.

In such circumstances, it is often possible to manage (instead of totally avoid) the noise and vibration effects in other ways by timing the high-vibration works to take place when the receivers are least-sensitive, providing resources to assist businesses to secure stock (from falling due to vibration) and other similar measures. In simple terms, there is often some give-and-take required to complete construction projects efficiently. I consider that the key is to ensure that any disruption that does occur is reasonable and can be tolerated, and that the BPO has been adopted to minimise it.

Such mitigation measures can often be determined by following carefully crafted conditions that are subject to the approval or certification of the Council. I consider that the conditions I have recommended should address this concern.

8.0 Recommended conditions

I have prepared a set of conditions that I recommend are attached to the designation and resource consent.

As I have set out earlier, I consider that a high level of certainty and clarity in the conditions is critical. I consider that the conditions that set out the processes for preparing and adhering to the Schedules is a key component of the conditions. These are the conditions that will manage

and control the works that will generate the highest level of effect and have the greatest potential to disrupt neighbouring activities.

The conditions set out below are substantially similar to the conditions applied to the William Roberts Road early works package. The main difference is that they enable infringements of the vibration standards designed to avoid damage to buildings, but only where the Requiring Authority has been able to demonstrate a number of requirements have been met. The William Roberts Road conditions did not provide for any infringement of the building-damage controls given that the applicant had proposed to comply with them.

These conditions are very similar to the condition-sets attached to a number of major infrastructure projects around Auckland, including the Northern Corridor Improvements project.

CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN (CNVMP)

1. The Requiring Authority must prepare a finalised Construction Noise and Vibration Management Plan (CNVMP) for the proposed works. At least five (5) working days prior to Commencement of Construction, the Requiring Authority must submit the CNVMP to the Council for certification that the CNVMP gives effect to the objectives and requirements below. Construction activity must not commence until confirmation is provided from the Council that the CNVMP satisfactorily meets the requirements and all measures identified in that plan as needing to be put in place prior to commencement of works have been addressed.

The objectives of the CNVMP are to:

- a. Identify and implement the Best Practicable Option (BPO) for the management of all construction noise and vibration effects;
- b. Define the procedures to be followed where the noise and vibration standards (Conditions 2 and 3) are not met (following the implementation of the BPO);
- c. Set out the methods for scheduling works to minimise disruption; and
- d. Ensure engagement with affected receivers and timely management of complaints.

The CNVMP must include:

- e. Description of the works, anticipated equipment/processes and their scheduled durations;
- f. Hours of works, including a specific section on works at night (2230h - 0700h), incorporating clear definitions of the works undertaken at night (if any);
- g. Contact details for staff responsible for implementation of the CNVMP;
- h. The construction noise and vibration performance standards for the project (as set out in conditions 2 and 3);
- i. Management and mitigation options to be adopted for all works during the Project, including prohibition of tonal reverse alarms;
- j. Minimum separation distances from receivers for plant and machinery where compliance with the construction noise and vibration standards is achieved;
- k. Procedures to manage the noise and vibration effects where these minimum separation distances cannot be met;

- l. Identification of affected sensitive receivers where noise and vibration project standards apply;
- m. Methods and frequency for monitoring and reporting on construction noise and vibration;
- n. Procedures for the regular training of the operators of construction equipment to minimise noise and vibration and procedures for the management of behaviours for all construction workers;
- o. A specific section setting out the requirements for Schedules to be prepared where the noise or vibration levels from any works that cannot comply with the noise and vibration project standards in Condition 2 and Category B of Condition 3. The Schedules must set out the mitigation, monitoring and management measures (including communication with stakeholders and use of temporary noise barriers) that will be adopted for works which cannot comply with the project standards specified in condition 2 and 3. Schedules must be prepared in accordance with Condition 4.
- p. Procedures for communication, consultation and complaints response including specific provisions for determining the times that receivers are sensitive to noise and vibration and the extent to which high noise and vibration works can be scheduled around those times where practicable.
- q. Procedures and timing of reviews of the CNVMP.

Construction Noise and Vibration Standards

Noise

- 2. Construction noise must be measured and assessed in accordance with the provisions of New Zealand Standard NZS 6803: 1999 "Acoustics - Construction Noise" and comply with the following Project Noise Standards unless otherwise provided for in any Schedule (refer Condition 4):

Time of week	Time Period	Project Noise Standards	
		L _{Aeq} dB	L _{AFmax} dB
Occupied buildings containing activities sensitive to noise			
Weekdays	0630 - 0730	55	75
	0730 – 1800	70	85
	1800 – 2000	65	80
	2000 - 0630	45	75
Saturdays	0730 – 1800	70	85
	All other times	45	75
Sundays and public holidays	0630 - 0730	55	85
	All other times	45	75
Occupied buildings containing all other activities			

All days	0730 - 1800	70	-
	1800 - 0730	75	-

Activities sensitive to noise are defined in Chapter J of the Auckland Unitary Plan

Advice Note:

The CNVMP required by Condition 1 and Schedules authorised by Condition 4 may authorise noise levels exceeding those set out in this condition. The noise limits in this condition that apply between 1800 and 0730 on any day may only be exceeded by works that cannot be completed between 0730 and 1800 for practical reasons related to avoiding unreasonable traffic congestion during the day, or similar. These noise limits may not be exceeded for reasons related to shortening the construction timeframe or for making up lost time.

Vibration

3. **Part 1** - Construction vibration must comply with the project vibration standards set out the following Table A. Construction vibration must be measured and assessed in accordance with DIN4150-3:1999.

Table A – Construction Vibration Standards:

Receiver	Time	Category A	Category B
Occupied activities sensitive to noise <i>(As defined in Chapter J of the Auckland Unitary Plan)</i>	Night-time 2000 – 0700	0.3 mm/s PPV	1 mm/s PPV
	Daytime 0700 – 2000	2 mm/s PPV	5 mm/s PPV
Other occupied buildings	At all times	2 mm/s PPV	5 mm/s PPV
All other buildings	At all times	5 mm/s PPV	Tables 1 and 3 of DIN4150- 3:1999

Part 2 - If measured or predicted vibration from construction activities exceeds the vibration standards in Category A, the Requiring Authority must consult with the affected receivers to:

- a. Discuss the nature of the work and the anticipated days and hours when the exceedances are likely to occur; and
- b. Determine whether the exceedances could be timed or managed to reduce the effects on the receiver.

The Consent Holder must maintain a record of these discussions and make them available to the Council on its request.

Part 3 – If measured or predicted vibration from construction activities exceeds the vibration standards on Category B, those activities may only proceed subject to a certified Schedule.

Construction Schedules

4. A Schedule must be prepared and submitted to the Council when:
 - a. Construction noise is either predicted or measured to exceed the standards in Condition 2, except where the exceedance of the standards in Condition 2 is no greater than five (5) decibels and does not exceed:
 - i. 0700-2200: one (1) period of up to two (2) consecutive weeks in any rolling 8-week period; or
 - ii. 2200-0700: one (1) period of up to two (2) consecutive nights in any rolling 10-day period.
- Or;
- b. when construction vibration is either predicted or measured to exceed the Category B standards in Table A.

The objective of the Schedule is to set out the BPO for the minimisation of noise and / or vibration effects of the construction activity. The Schedule must, as a minimum set out:

- a. Construction activity location, timing and start and finish dates;
- b. The predicted noise and / or vibration level for the construction activity;
- c. The receivers affected by the works subject to the Schedule;
- d. Noise and limits to be complied with for the duration of the activity;
- e. The mitigation options that have been selected and the options that have been discounted as being impracticable;
- f. For vibration – the pre-condition surveys of buildings and pipe work which document their current condition and any existing damage;
- g. For vibration – an assessment of each building to determine susceptibility to damage from vibration and define acceptable vibration limits that the works must comply with to avoid damage;
- h. The proposed noise and / or vibration monitoring regime;
- i. The methods adopted to minimise amenity effects on buildings which remain occupied during the works
- j. The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation outcomes have and have not been taken into account.

The Schedule must be submitted to the Council for certification at least five (5) working days, (or as soon as practicable in unforeseen circumstances arise that make a five-day timeframe impracticable) in advance of Construction Works which are covered by the scope of the Schedule.

5. If any damage to buildings is shown to have occurred as a result of vibration from the construction of the Project, any such damage shall be remedied by the Requiring Authority as soon as reasonably practicable subject to any associated asset and/or owner agreement.

9.0 Conclusion

Managing the noise and vibration effects from constructing large infrastructure projects can be challenging. The often-heavy nature of the works and close proximity to receivers often results in the generation of noise and vibration effects high enough to cause significant disruption to normal business or residential activity.

The Original Assessments provide predicted noise levels for a 'worst-case' scenario where there is noisy construction plant in use close to a receiver, and a 'typical' scenario where there is work occurring in the vicinity of a receiver but where the plant is perhaps further away and there are noise barriers in place. I generally agree with the concept of providing worst-case and typical noise level predictions. This helps to convey that the effects will not always be as bad as the highest predicted noise levels.

I consider that there is likely to be some considerable variation in the actual noise levels that will be received in-reality. The noise level predictions provided by the Requiring Authority are useful to give an indication of the approximate magnitude of the effects, but they should be considered indicative only.

The Responses provide a very general indication of the duration of time that a receiver or group of receivers could be exposed to noise or vibration levels that exceed the project standards. It is difficult to determine if the Requiring Authority's assessment of these durations is accurate without involving a construction expert. However, based on my experience, I agree with the Requiring Authority that there will be some receivers that will experience significant disruption potentially for several weeks. These effects can be significant, even when managed by adopting the BPO in terms of physical mitigation and management measures. This is commonplace for large infrastructure projects. I have made several specific recommendations for managing the effects on several key receivers and submitters where such effects are expected.

I have proposed a set of conditions that establish a regime where all work that can comply with the project noise and vibration standards can proceed, essentially as permitted activities. The condition set provides a process to be followed where the noise or vibration levels will exceed the project standards. The process involves the development of a Schedule. The objective of the Schedule is to require a closer look at the way the effects can be managed and to set out specific management measures to minimise the noise and vibration effects as far as practicable. This includes working with the receivers. A Schedule is typically a few pages long and is appended to the CNVMP as they are developed. I consider that the extra attention and effort required by the Schedule process is appropriate given that they are managing the very worst of the construction noise and vibration effects arising from the project.

The Requiring Authority has proposed the use of Schedules also. The main difference between the Requiring Authority's proposal and my advice is that the Requiring Authority seeks to manage the effects of some exceedances of the project standards in the main CNVMP, and some by the use of Schedules. I consider that this creates an uncertain arrangement whereby the CNVMP could seek to manage exceedances by very broad or general mitigation methods which could be so general that a Schedule would never be needed. In my view, this could result in a lack of focus and effort to manage the very worst of the noise and vibration effects that the project will generate.

The Original Assessment sets out that there will be a number of locations where works will be necessary at night. I understand that works at night are required to complete tasks when traffic flows are low and traffic disruption can be minimised, on the basis that completing such works during the day would cause significant disruption. The downside of avoiding bad traffic disruption during the day is the creation of potential sleep disruption for nearby receivers at night. It is my experience that allowing for some work at night is reasonable and consistent with the approach taken for most large infrastructure projects.

The key is to ensure that the noise and vibration levels from night works are minimised as far as practicable, and that where the residual noise and vibration levels exceed the project noise and vibration standards, a Schedule is developed to manage those effects. This is the typical approach that has been successfully adopted for several recent infrastructure projects.

The Requiring Authority has proposed night works that exceed the project noise and vibration standards "*when works cannot practicably take place during the day.*" I consider that the conditions should limit the scope of night works to this. I have suggested an advice note to deliver this outcome. The key issue is ensuring that construction work is not carried out at night to make up for lost time or other delays, where that work can be completed during the day.

Overall, I expect that the construction noise and vibration effects generated by the works will be typical of a large roading project with receivers in close proximity. Most receivers will experience a moderate level of construction noise and vibration for most of the project. The closest receivers will be likely to experience construction noise and vibration levels that exceed the project standards for short periods as the works progress past them. There are some receivers that will be exposed to construction noise and vibration levels above the project standards for longer periods – perhaps regularly for several weeks. These are predominantly in the vicinity of the RRF and associated structures. I consider that the construction noise and vibration effects could cause considerable disruption to these activities, even if they are managed well. I consider that it is critical for the designation conditions to set out a clear and robust process for the management of these effects and to ensure that they are minimised as far as practicable.

Technical memo for a resource consent application relating to soil contamination

To: Warwick Pascoe, Principal Project Lead – Premium Resource Consents

And to: Celia Wong Senior Planner, Resource Consents – South;

From: Fiona Rudsits, Senior Specialist – Contamination, Air & Noise

Date: 16 March 2023

1 Application details

Applicant's name: Auckland Transport (Eastern Busway Alliance)

Application numbers: BUN60407121 (LUC60407123 & DIS60407493)

Activity types:

- Soil disturbance, subdivision and land-use change on pieces of land where soil may be contaminated, with a risk to human health; and
- Discharge of contaminants into air, water or land from the disturbance of contaminated land or land containing elevated levels of contaminants

Site address: EB3R - 207 Ti Rakau Drive, Pakuranga

2 Qualifications and experience

My full name is Fiona Clare Rudsits and I am employed as a Senior Specialist within the Contamination, Air & Noise Team of Auckland Council's Specialist Unit.

I have been employed in this role since June 2018. Prior to this I was employed as an Environmental Scientist and Project Manager with GHD Limited in Australia and New Zealand. I have over 15 years' experience in contaminated land assessments.

I hold a Bachelor of Science degree in Environmental Science from the Royal Melbourne Institute of Technology (RMIT), which I obtained in 2001. I have also completed a Graduate Certificate in Sustainable Management through the Open Polytechnic of New Zealand (2018).

I am a member of the Australasian Land & Groundwater Association (ALGA) and currently an elected committee member for ALGA's Auckland Branch for 2022.

3 Introduction

The following documents relevant to the application have been reviewed with reference to the requirements of the *National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011* ([NES:CS](#)) and Chapter E30 of the *Auckland Unitary Plan (Operative in Part)* ([AUP\(OP\)](#)).

- *Eastern Busway 3 Residential, Assessment of Environmental Effects*, prepared by Eastern Busway Alliance (EBA) / Auckland Transport (AT), Rev 3, dated 11 August 2022 ('the EB3R AEE');
- EB2&EB3R-Specialist Reports-AC Feedback & Comments
 - (Appendix 14) *Contaminated Land Effects Assessment, Eastern Busway EB2 and EB3 Residential*, prepared by AECOM New Zealand Limited on behalf of EBA/AT, Rev 2 dated 27 May 2022 ('the contaminated land report');
 - (Appendix 15) *Contaminated Land Management Plan Eastern Busway EB2 and EB3 Residential (Rev C)* prepared by AECOM New Zealand Limited on behalf of EBA/AT, dated 238 July 2022 ('the CLMP'); and
 - (Appendix 4) Proposed Conditions-Final

The Eastern Busway Alliance (EBWA) includes collaboration with Auckland Transport (AT) and private companies. The alliance includes AECOM, a recognised consultant in contaminated land. Therefore I consider that the contaminated land technical report and supporting CLMP have been prepared by a suitably qualified and experienced practitioner (SQEP) in general accordance with the Contaminated Land Management Guidelines [No.1: Reporting on Contaminated Sites in New Zealand](#) (Ministry for the Environment (MfE), revised 2021), as required by the NES:CS.

4 Summary of proposal and soil contamination assessments

4.1 Proposal as relevant to soil contamination

- The EBA/AT are proposing to create a multi-stage transport project between Panmure and Botany to improve the transport networks across south-east Tāmaki Makaurau Auckland. The project forms part of the previous Auckland Manukau Eastern Transport Initiative (AMETI) programme, which includes a dedicated busway and bus stations between Panmure, Pakuranga and Botany town centres.
- This application is for the resource consents that are part of the Eastern Busway Stage 3 Residential (EB3R), encompassing Ti Rakau Drive from the South-Eastern

Highway (SEAT) in Pakuranga tying into EB2/ Notice of Requirement (NoR) which extends for 1.8km.

- The works involve the widening of Ti Rakau Drive for the construction of two central running bus lanes, and two intermediate bus stations at Edgewater Drive and Gossamer Drive. Lastly, walking, cycling and stormwater infrastructure will be upgraded across the alignment.
- EB3R will require the removal through demolition and/or deconstruction of approximately 83 dwellings. It is understood the removal of these dwellings have already commenced.
- Earthworks will be required across the extent of the EB3R alignment (shown in Figure 3-1). While, land disturbance has been minimised, wherever possible, EBR3 will require a total of 20,000m³ (cut) and 32,000m³ (fill) over approximately 41,000 m² of land.



Figure 3-1 Location of Works for EB3R shown in Yellow

4.2 Summary of the Contaminated Land Technical Report

- The contaminated land report has provided a detailed study and assessment of both the EB2 and EB3R alignments. The study has reviewed public records and utilised information gathered during a 2012 preliminary assessment which had identified multiple potential HAIL sites within the alignments.
- Based on the findings of this study three sites adjacent to or within the proposed EB3R alignment were identified as potential HAIL (potentially contaminated sites), as detailed in Table 4.

Table 4 - Summary of findings within EB3R

Site Name/Location	Landuse Activity	HAIL Category	Comments
Riverhills Park	Closed landfill site	G3 – Landfill sites	Site investigated. No contamination encountered.
Ti Rakau Park	Closed landfill site	G3 – Landfill sites	No soil disturbance planned at or adjacent to this location.
11 Cortina Place / 64B Ti Rakau Drive*	Former service station, Pakuranga Medical Centre	F7 – Service stations including retail or commercial refuelling activities	The site has been addressed in the William Roberts Road Extension Contaminated and Technical Report, however residual hydrocarbon impacts potentially remain in the carriageway adjacent to the site (Ti Rakau Drive).

*Note: Indicates sites detailed in the William Roberts Road Extension Technical Report

- Further detailed assessments were completed across the potential HAIL sites listed above which concluded one site within EB3R alignment where contamination may be encountered during construction activities, this included:
 - The carriageway adjacent to 11 Cortina Place (EB3R), as residual hydrocarbons were considered reasonably likely to be found within the carriageway adjacent to the former service station, due to migration via groundwater from an identified HAIL site.
- Although construction will also be undertaken within or in close proximity to two other HAIL sites (Riverhills Park and Ti Rakau Park) that have been identified as closed landfill sites. Testing undertaken of Riverhills Park and Ti Rakau Park has confirmed soil contaminants would not exceed the permitted standards within the AUP(OP). Other potential sources of contamination include asbestos and lead from building demolition/deconstruction.
- It is understood works within the vicinity of 11 Cortina Place will require approximately 1,400 m³ of material to be disturbed over a total area of 3,400 m². At this stage as no sampling has been undertaken in this area of works and as soil disturbance will likely exceed the permitted activity standards for both the NES:CS and AUP(OP) Chapter E30, discretionary activity consents are being sought for excavation activities occurring at this site.
- All remaining sites within EBR3R identified as part of this assessment comply with the AUP(OP) permitted activity rules outlined in the AUP(OP) Chapter E30 and the NES:CS.
- The contaminated land technical report concludes that any potential effects to human health and the environment can be mitigated/managed through a contaminated land management plan (CLMP).

4.3 Summary of Contaminated Land Management Plan (as provided in Appendix 14 of the AEE)

- The CLMP provides generic controls for the management of soil contamination within both EB2 and EB3R, including site management procedures relating to health and safety and to minimise discharges of contaminants to the environment by using erosion and sediment controls along with dust management techniques and health and safety measures, such as personal protective equipment requirements for the protection of human health. Contingency measures for the discovery of unanticipated contamination are also provided and procedures should groundwater be encountered during the excavation works.
- I consider the CLMP is suitable to manage any contamination encountered during the works. The CLMP has rightly focused on the areas of greater risk (ie areas of the Project likely to have had HAIL activities undertaken on it) however, also addresses the potential for unexpected hazardous materials to be encountered during all the land disturbance works.
- Overall, I agree the CLMP is suitable to support the proposed land disturbance works under both the NES:CS and Chapter E30 of the AUP(OP).

4.4 Summary of resource consent application and reason for consent

- Table 5.1 of the AEE states that the proposal is a Restricted Discretionary Activity under Rule E30.4.1(A6) because Land disturbance will occur adjacent to contaminated sites (carriageway adjacent to the former service station at 11 Cortina Place may exceed 200m³) and a detailed site investigation has not been undertaken. As such, a precautionary approach has been applied and resource consent is sought under this rule. **However, I consider a Discretionary Activity consent (not a 'Restricted Discretionary Activity' consent) under Rule E.30.4.1(A7) is required for the proposed project works. Please note, Rule E30.4.1(A6) is a controlled activity - there is no Restricted Discretionary Activity' status that applies under the Chapter E30 Rules.**
- Section 5.3.1 of the AEE states that the proposal is a Discretionary Activity under Regulation 11 of the NES:CS because works are occurring in proximity to the existing service station at 11 Cortina Place, Pakuranga. This section of the EB3R works has been identified as occurring on a HAIL site without the prior preparation of a detailed site investigation (DSI).
- As a DSI has not been completed for the proposed works I agree that the proposed soil disturbance activity is a **Discretionary Activity and Regulation 11 of the NES:CS.**
- Section 7.4.8 of the AEE assesses the effects relating to contaminated soils. Based on the management and mitigation strategies within the CLMP and noting that should these soils be confirmed as being contaminated, it is anticipated that soil and/or groundwater will be managed appropriately and disposed of at a licensed facility. The AEE concludes that the potential adverse effects of potentially

contaminated soil can therefore be appropriately managed and will have a less than minor effect on human health and the environment.

- A Site Completion report (SCR) within three months of the completion of earthworks
A summary of the works undertaken, including a statement confirming whether excavations on the route has been completed in accordance with the CLMP.

5 Technical review of application and effects

5.1 Submissions relevant to contaminated Land

No submissions in relation to the proposal as relevant to Contaminated Land matters have been received at the time of writing.

5.2 Review relating to discharges of contaminants to the environment

Disturbing soils with contamination exceeding the AUP(OP) PA acceptance criteria (E30.6.1.4) has potential to cause adverse effects from discharges of contaminated sediment and stormwater, and inappropriate disposal of soil.

The applicant has provided a CLMP that outlines management procedures to mitigate the environmental effects of the potential contaminant discharges during soil disturbance activities. I consider that these measures are appropriate to mitigate the risks of contaminant discharges to the environment.

I consider both the contaminated land technical report and the CLMP as being generally adequate and sufficient to effectively minimise/mitigate potential contaminant discharges to the environment and protect human health. The CLMP contains a set of procedures for handling and disposal of the excavated potentially contaminated material, as well as a Contingency Plan for the management of unexpected discoveries of contamination hotspots, if encountered.

The application report concludes that there will be no other than less-than-minor adverse effects on the environment and human health as a result of the proposed land-disturbance activities within the subject site.

I agree with the applicant's assessment, and I consider that the offered conditions in conjunction with the below recommended conditions of consent shall adequately avoid, remedy and mitigate potential adverse effects to the environment.

5.3 Review relating to human health

I consider there is a low risk to human health from the proposed earthworks within soils that may have been impacted by HAIL activities given the health and safety measures outlined by the CLMP.

The CLMP sets out the proposed management procedures to mitigate adverse effects on human health. Those procedures include relevant safety briefing to the personnel involved, implementation of efficient earthworks and dust controls, regular inspections of the works site, appropriate disposal of the excess excavated material, contingency procedures for encountering unexpected contamination hotspots, and reporting of the compliance during the works.

Owing to the potential for asbestos containing materials within the buildings which are to be demolished and/or deconstructed and the potential for these to cause further soil contamination if not appropriately handled, I also recommend an advice note relating to the requirements under the Health and Safety at Work (Asbestos) Regulations 2016 for the building demolitions.

I consider that those procedures are appropriate and adequate to mitigate the risks to human health.

5.4 Review conclusion

The AEE concludes that there would not be any significant adverse effects to human health and the environment as a result of disturbing potentially contaminated soils.

I agree with the applicant's assessment, and I consider that the below offered and recommended conditions of consent shall adequately avoid, remedy and mitigate potential adverse effects to human health and the environment.

6 Statutory considerations

6.1 Relevant statutory provisions, objectives and policies

Objective E30.2(1) and Policies E30.3(1 & 2) of the AUP(OP) are considered relevant to this application.

Sections 105 and 107 of the RMA apply to discharge permits and are relevant to this proposal.

6.2 Conditions of consent: Section 108

I have reviewed the offered contaminated soils conditions (namely conditions 61-71 provided in Appendix 4) and have amended or provided suggested changes where appropriate. Most of the recommended conditions of consent are to apply to both the contaminated soils discharge consent (DIS60407493) and land-use consent under the NES:CS (LUC604007123) as detailed in section 6.2 below. Additional Contaminant Discharge (CD) conditions in section 6.3 apply to the discharge consent DIS60407493 only.

The recommended conditions are aimed to ensure that the proposed management and mitigation measures detailed in the submitted CLMP will be carried out.

6.3 Duration of consent: Section 123

The applicant has requested a lapse date under section 125 of the RMA of five years. This duration will allow the applicant time to undertake the works, while limiting the effects to a short time period. This is consistent with the duration of discharge consents granted for other similar applications.

There is no expiry date for the land-use consent under the NES:CS.

7 Recommendation and conditions

7.1 Recommendation

With regard to adverse effects on human health and the environment, the assessment in this memo does not identify any reasons to withhold consents. The aspects of the proposal considered by this memo could be granted consents, subject to recommended conditions, for the following reasons:

- Subject to the imposition of consent conditions, it is considered that the effects on human health and the receiving environment will be appropriately managed and mitigated.
- The sensitivity of the receiving environment to the adverse effects of the contaminant discharge will not be compromised given the level of the discharge, and appropriate on-site management techniques.

7.2 Contaminated land conditions as per conditions offered in Appendix 4 of the AEE (Conditions 7, 61-71)

I recommend Condition 7 should be replaced by wording in the [blue text](#) and shall apply to the DIS60407493 only

~~7. The discharge permit associated with the construction of the Eastern Busway Project (EB2) shall expire 5 years after consent has been given effect to.~~

[Consent DIS60407493 expires five years from the date of commencement unless it has been surrendered or been cancelled at an earlier date pursuant to the RMA.](#)

The following general conditions (61-71) offered are recommended to apply to both consents LUC60407123 under the NES:CS and DIS60407493 under Chapter E30 of the AUP(OP)

In generally I agree these conditions (61-71 are acceptable and may be applied to the both the NES:CS and contaminated discharge consents

61. Discharges from disturbance of contaminated soil must be carried out in accordance with the Contaminated Land Management Plan (CLMP) listed in Condition 1 unless

otherwise modified by the conditions below or in accordance with Conditions 13 to 16 above.

62. An appropriately qualified and experienced contaminated land specialist must be engaged to oversee the earthworks in areas of potential contamination. All sampling and testing of contamination on the site must be overseen by the appropriately qualified and experienced contaminated land practitioner. All sampling is to be undertaken in accordance with the Contaminated Land Management Guidelines, No-5 - Site Investigation and Analysis of Soils, Ministry for the Environment, revised 2021.

Advice Note: All testing and analysis should be undertaken in a laboratory with appropriate experience and ability to carry out the analysis. For more details on how to confirm the suitability of the laboratory please refer to Part 4: Laboratory Analysis, of Contaminated Land Management Guidelines No.5

63. The Council is to be informed in writing about the commencement of the Eastern Busway Project (Package EB3R) works at least 2 working days prior to commencement.

Advice Note: Discharge from the site includes the disposal of water (e.g. perched groundwater or collected surface water) from the remediation area.

64. Any soils and/or fill material identified as contaminated and requiring off-site disposal are to be loaded directly into trucks and covered during transportation off site in accordance with the CLMP. All soil removed from the land disturbance area must be deposited at a suitably certified facility.

65. All imported fill must comply with the definition of 'cleanfill', in accordance with 'A Guide to the Management of Cleanfills', Ministry for the Environment (2002).

Advice Note: Background levels for the Auckland region can be found in the Council's technical publication TP153 "Background concentrations of inorganic elements in soils from the Auckland Region" (2001).

66. Within three months of the completion of the soil disturbance activities within the project area, a Site Completion Report (SCR) must be provided to the Council.

67. The SCR must contain sufficient detail to address the following matters:

- (a) A summary of the works undertaken, including a statement confirming whether the excavation of the site has been completed in accordance with the CLMP
- (b) A summary of inspections and oversight completed by the SQEP.
- (c) The location and dimensions of the excavations carried out, including a site plan.

- (d) A summary of testing undertaken (if applicable) including tabulated analytical results.
- (e) Records of any unexpected contamination encountered during the works and contingency measures undertaken (if applicable).
- (f) Details of any validation soil sampling completed in areas of unexpected soil contamination and vicinity of fill material previously identified as exceeding the adopted soil acceptance criteria (if applicable).
- (g) Copies of the disposal dockets for the contaminated fill and 'cleanfill' material removed from the site.
- (h) Copies of the SQEP site inspection documentation.
- (i) Details regarding any complaints and/or breaches of the procedures set out in the certified CLMP, and how any incidents or complaints were addressed.
- (j) Results of testing, if required, of any spoil disposed offsite.
- (k) Results of testing of any imported fill material.
- (l) Identification of any areas which need on-going monitoring and management.

68. Where contaminants are identified that have not been anticipated by the application, the unexpected discovery procedures in the CLMP as identified in Condition 1 must be employed, including notifying the Council. Any unexpected contamination and contingency measures must be documented in the SCR.

Advice Note: *Unexpected contamination may include contaminated soil, perched water or groundwater. The consent holder is advised that where unexpected contamination is significantly different in extent and concentration from that anticipated by the original site investigations, handling the contamination may be outside the scope of this consent. Advice should be sought from the Council as to whether carrying out any further work in the area of the unexpected contamination is within scope of this consent.*

CONTAMINATED LAND – ENVIRONMENTAL HEALTH (LUC60407123)

- 69. All works are to be in accordance with the CLMP listed in Condition 1, unless otherwise amended by the process in Conditions 9 to 13 above. The CLMP must be prepared, implemented and reported in accordance with Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 ('NES: Soil') by an appropriately qualified and experienced professional.
- 70. An appropriately qualified and experienced contaminated land specialist must be engaged to oversee the earthworks in areas of potential contamination.

71. Works must cease in the vicinity of any contamination not previously identified and the Council must be advised immediately. Works can recommence once the unexpected discovery protocols noted in the section for 'Unexpected Discovery of Land Contamination' in the certified CLMP have been satisfied.

In addition to the above I recommend the following advice note be included under LUC60407123

Advice Note:

If you are demolishing any building/structures that may have asbestos containing materials (ACM) in it:

- *You have obligations under the relevant regulations for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.*
- *Work may have to be carried out under the control of person holding a WorkSafe NZ Certificate of Competence (CoC) for restricted works.*
- *If any ACM is found, removal or demolition will have to meet the Health and Safety at Work (Asbestos) Regulations 2016.*
- *Information on asbestos containing materials and your obligations can be found at www.worksafe.govt.nz.
If ACM is found on site following the demolition or removal of the existing buildings/structure, you may be required to further remediate the site and carry out validation sampling. Dependent on the amount of soil disturbance, a further consent application may be required.*

7.3 Further conditions to apply to contaminant discharge consent DIS60407493 under Chapter E30 of the AUP(OP)

As a term of 5 years is being sought for the duration of the contaminated land discharge consent however the application documents have not offered any conditions to manage the potential contaminant discharges during the works, this has left to be included within the proposed CLMP. Therefore, I recommend the following management protocols be included in the set of conditions to apply to consent DIS60407493 under Chapter E30 of the AUP(OP) only

- CD.1 Potentially contaminated soils and material identified for off-site disposal shall primarily be loaded directly into trucks and shall be covered during transportation off site. If required, temporary stockpiles of soils free from separate phase hydrocarbons or odorous petroleum hydrocarbons shall be located on an impermeable surface within an area protected by erosion and sediment controls and be covered with tarpaulins anchored at the edges outside working hours and during periods of heavy rain. Stockpiling of material containing separate phase hydrocarbons or odorous petroleum hydrocarbons shall not take place.

- CD.2 The disturbance of soils containing elevated levels of contaminants must be managed in accordance with the CLMP to minimise the discharge of contaminants (including debris, soil, silt, sediment or sediment-laden water) from the subject site to either land, stormwater drainage systems, watercourses or receiving waters:
- a. Erosion and sediment controls must be installed along the boundaries of the disturbance areas in accordance with the CLMP and Auckland Council guidance document 2016/005: *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region*;
 - b. The excavation areas must be maintained in a damp state while works are occurring to suppress the generation of dust during the works;
 - c. Filter cloths or cover mats must be installed over the stormwater cesspits in the vicinity of the excavation areas;
 - d. Vehicles must be inspected prior to leaving the works area and wheels brushed/cleaned as required to avoid the potential for sediment to leave the site on vehicle tyres and enter the stormwater system; and
 - e. Any truck-loads of excess excavated material leaving the site must be covered during transportation.

Advice Note: Contaminant discharges

Discharges from the site include the disposal of water (including groundwater or collected surface water) from the land-disturbance area.

- CD.3 Any perched groundwater or surface run-off water encountered within the excavation area requiring removal shall be considered potentially contaminated, and shall either:
- a. Be disposed of by a licenced liquid waste contractor; or
 - b. Pumped to sewer, providing the relevant permits are obtained; or
 - c. Discharged to the stormwater system or surface waters provided a SQEP verifies that the contaminant levels are likely to comply with the Australian and New Zealand Environment Conservation Council (ANZECC) *Guidelines for Fresh and Marine Water Quality (2000) for the protection of 80 percent of freshwater species*, with the exception of benzene where the 95 percent protection level shall apply.

Technical memorandum for a resource consent lodged by Auckland Transport for the Eastern Busway Stage [EB3 Residential]: Development Engineering

To: Celia Wong
And to: Warwick Pascoe, Principal Project Lead, Premium Resource Consents
From: Maria Baring, Development Engineer, Regulatory Engineering South

1. Application details

Applicant's name: Auckland Transport (**Applicant**)
Application number: BUN60407121/LUC60407123
Site address: 207 Ti Rakau Drive Pakuranga

2. Introduction

Qualifications and relevant experience

- 2.1 My name is Maria Baring, and I currently hold the position of Project Manager at Auckland Council.
- 2.2 I hold a bachelor's degree in Civil Engineering from the University of San Carlos in the Philippines. I am a member of Engineering New Zealand [1010183].
- 2.3 I am a project manager for premium applications at Regulatory Engineering South and have held this position for approximately three years. I was a senior development engineer prior and held the position for five years and a development engineer for nine years.
- 2.4 I have approximately 17 years of professional experience in Resource Consents processing. In this position I have processed the following applications of a similar nature:
 - a. The major upgrade, including enabling works of State Highway 20A and associated local roads
 - b. Earthworks and stormwater controls associated with the enabling works for the Manukau Rail at Hayman Park, Manukau City

Expert Witness Code of Conduct

- 2.5 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this evidence. Other than where I state that I am relying on the advice of another person, this evidence is

within my area(s) of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

- 2.6 I have qualified my evidence where I consider that any part of it may be incomplete or inaccurate, and identified any information or knowledge gaps, or uncertainties in any scientific information or mathematical models and analyses that I am aware of, and their potential implications. I have stated in my evidence where my opinion is not firm or concluded because of insufficient research or data or for any other reason and have provided an assessment of my level of confidence, and the likelihood of any outcomes specified, in my conclusion.

3. Overview and scope of technical memorandum

- 3.1 The Applicant has applied for resource consents for the development, construction, operation, and maintenance of Eastern Busway 3R (Residential) which begins at 90 Ti Rakau Drive and ends at the western bank of Ti Rakau Drive Bridge.
- 3.2 The applications were publicly notified (at the request of the applicant) on 13 December 2022, and submissions closed on 1 February 2023.
- 3.3 I have reviewed the Applicant's resource consent application (**Application**) and the relevant supporting information with reference to the requirements of Chapters E26 and E36 in the Auckland Unitary Plan (Operative in Part) (**AUP-OP**), to assist the preparation of the Council's reporting planner's report under s 87F of the RMA. I have only assessed the earthworks and flooding components of the Application.
- 3.4 More specifically, my technical memorandum covers Healthy Waters comments*¹ on the Stormwater Effects and the applicant's Network Discharge Consent Requirements. Healthy Waters concluded that the Network Discharge Consent Requirements [WQ] and details of the flood assessment and pipe capacities must be covered under Stormwater Management Plans. The SMP must include the following:
- 10-year and 100-year rainfall data used in the design
 - Flood assessment results for 10-year and 100-year post-development scenarios covering the upsizing of pipes to resolve overland flow path issues
 - Assess each category against NDC Schedule 4 Development Requirements for Transport Projects

*¹ Healthy Waters comments dated 27 June 2022

- 3.5 In preparing this technical memorandum, I have reviewed the following documents relevant to the Application:
- a. Eastern Busway 3 Residential Assessment of Effects on the Environment Document Reference EB234-1-PL-RP-Z3-000018 rev2 dated 01 August 2022.
 - b. Geotechnical Interpretive Report EB2 and EB3R prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000004 Rev 0 dated 20 April 2022
 - c. Geotechnical Factual Report EB2 and EB3R prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000003 dated 9 September 2022

4. Executive Summary

4.1 I reviewed the documents relating to the construction of a road network and flooding on land that is not yet legalized as a road. This relates to works within land zoned residential [the construction of the new westbound general traffic lands] and land-zoned Open Space [the construction of the new westbound traffic lanes and works within Riverhills Park including the western bridge abutment], and generally support the application.

5. Summary of proposal

Overview

5.1 Auckland Transport (AT), with its delivery partner, Eastern Busway Alliance (EBA), seeks resource consents, and has prepared a Notice of Requirement, for the Eastern Busway Stage 2 (EB2). Resource consents for district and regional consents are sought for EB3R. Both stages form part of the wider Eastern Busway Project [the Project]. The EBR3 package will provide the extension of the Rapid Transit Network from the South-Eastern Highway in the west to Pakuranga Creek in the east, including additional walking and cycling infrastructure.

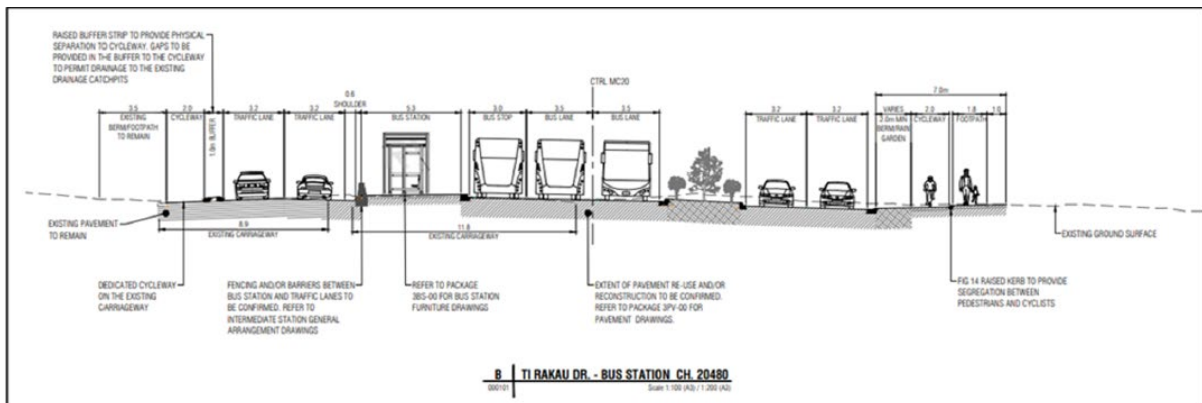


Figure 3-2 Cross Section of the Proposed Widened Ti Rakau Drive

Reasons for consents: Development Engineering

5.2 The following resource consents for earthworks are required under the AUP-OP to enable the Project:¹

E26.5.3.2(A97): Earthworks greater than 2500m² other than for maintenance, repair, renewal, minor infrastructure upgrading

E26.5.3.1 (A97A): Earthworks greater than 2500m³ other than for maintenance, repair, renewal, minor infrastructure upgrading

E26.5.3.2 (A107): Earthworks greater than 2500m² within the Sediment Control Protection Area¹¹ other than for maintenance, repair, renewal, minor infrastructure upgrading

Table 3-9 Summary of Earthworks for EB3R

Area	Cut Material m ³	Fill Material m ³	Earthworks Area m ²	Estimated Earthworks Duration
Ti Rakau Drive widening, EB2 to EB3C (southwest side)	10,800	16,000	34,500	38 days
Ti Rakau Drive widening, Gossamer Drive to EB3C (north side) and including milling operations	9,095	15,100	6,500	9 days
Residential boundary clearance area beyond earthworks design footprint	N/A	N/A	27,000	N/A
Trenching: water main and stormwater pipelines, combined service trenching (large and deep pipe work)	Cut to fill trenching operations estimated 7,600	900	N/A	Trenching operations sequenced through project
Total	20,000	32,000	41,000 (design EW) 27,000 (additional clearance)	47 days

E36.4.1(A56): All other infrastructure in coastal erosion hazard areas: coastal storm inundation 1 percent annual exceedance probability (AEP) area: coastal storm inundation 1 percent annual exceedance

¹ Page 83 of the Eastern Busway 3 Residential AEE

Summary of proposal (relevant to development engineering)

5.3 In terms of the proposal as it relates to earthworks, the Assessment of Effects provides the following:²

- a. All earthworks will be subject to regular inspections of controls. THE ESCP will be required to be certified prior to works commencing and management plans will be implemented during construction.

² Pages 23, 39 and 112

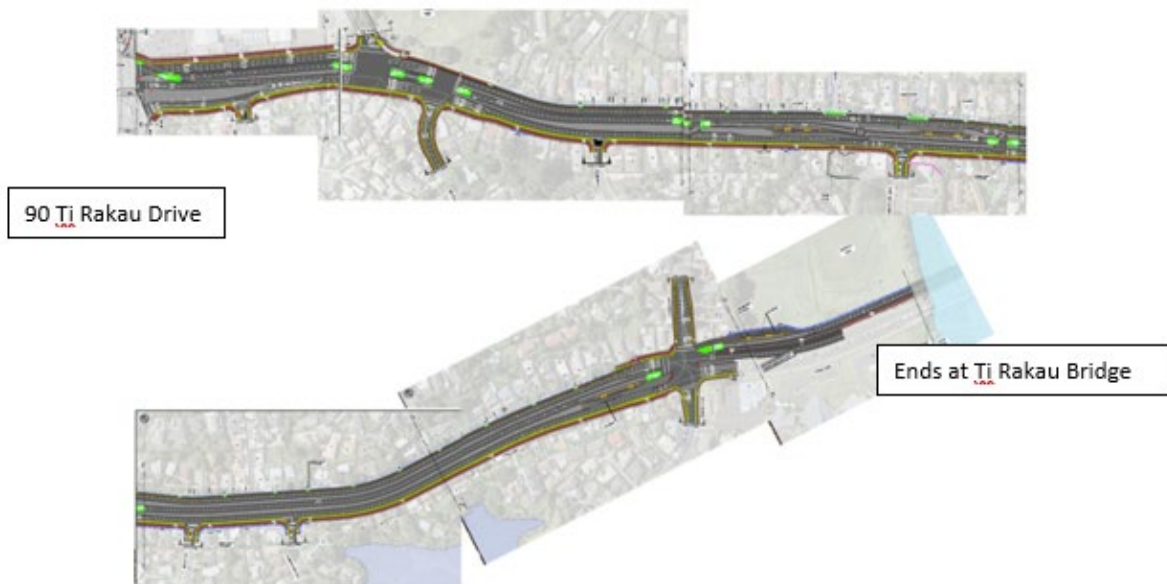
- b. The flood waters are due to the current stormwater infrastructure. The sizing of stormwater pipe is proposed to address any impacts on private houses identified in

the modelling as being impacted by the 10 and 100-year flood events. The proposal will include the upgrading of stormwater pipes and outlets to serve the catchment. Therefore, adverse effects resulting from a potential increase in flooding are avoided on all private properties.

6. Technical assessment of effects

6.1 The applicant has proposed a 20,000m³ cut and 32,000m³ fill of earthworks, within an area over 10.3 ha of land-based works and 0.5 coastal works. These earthworks are identified in the AUP(OP) as a restricted discretionary activity under rule E26.5.3.2(A97, 97A, and 107).

- Various blockwork retaining walls across EB3R (up to 2.6m high)
- Mechanically stabilized earth wall (MSE) (up to 4m height at Riverhills Park as part of the approach to the new Ti Rakau Drive bridge).



6.2 The applicant proposed stormwater outlets located in coastal erosion hazard areas; coastal stormwater inundation 1 percent annual exceedance probability (AEP) area; and coastal stormwater inundation 1 percent annual exceedance. The placement of such structures is identified in the Auckland Unitary Plan-Operative in Part as a restricted discretionary activity under rule E36.4.1(A56).

6.3 The extent of the Site works has been provided in the application. A Geotechnical Factual Report has been provided showing the locations of the boreholes and a Geotechnical Interpretive Report has been prepared to accommodate the current busway design scheme.

6.4 To ensure that the earthworks will not result in any instability of land or structures at or beyond the boundary of the properties where the land disturbance occurs, they must be undertaken in accordance with Geotechnical Interpretive Report EB2 and EB3R prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000004 Rev 0 dated 20 April 2022 and Geotechnical Factual Report EB2 and EB3R prepared by Eastern Busway

referenced no. EB-2-D-0-GT-RP-000003 dated 9 September 2022. The supervising engineer must also make an assessment prior to the commencement of earthworks, and undertake supervision and monitoring throughout.

- 6.5 To manage traffic volume during the construction period, a construction traffic management plan is required prior to starting the earthworks. Relevant conditions are recommended in section 7.4 below.
- 6.6 There will need to be a geotechnical completion report to confirm that the earthworks have been carried out in a safe manner and that the Site is fit for purpose. The completion report will need to look at the issue of settlement and liquefaction. These assessments will need to confirm that the possible adverse effects have been adequately mitigated.
- 6.7 The stormwater outlets will be assessed by a regional Streamworks specialist engaged by the Council. Reference needs to be made to the memo drafted by the regional Streamworks specialist for a detailed assessment.
- 6.8 The Stormwater Management Plan that is required to be submitted by the applicant will cover the upgrade of the stormwater pipe system and substantiate the conclusion in [report] that the extent of flooding will reduce over large areas of the wider catchment within which EB3R is located.
- 6.9 It is recommended to include the following requirements in the construction management plan:
 - a. Any temporary traffic management activities along Ti Rakau Drive to provide site access to consider the effects of other projects that may be occurring in the area.
 - b. Methods to maintain vehicle access to the property and/or private roads where practicable, or to provide alternative access arrangements when access will not be maintained. Erosion and sediment control plan has been prepared to support the application (which has also been reviewed by another expert for the Council). A regional earthwork specialist has been engaged by the Council. Reference needs to be made to the memo drafted by the regional earthwork specialist for a detailed assessment.

7. Recommendations and conditions

Adequacy of information

- 7.1 The above assessment is based on the information submitted as part of the Application. As stated above I consider that the information submitted is sufficiently comprehensive to enable the extent and scale of any adverse effects on the environment in terms of land stability to be able to be assessed.
- 7.2 The information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the AUP-OP. Geotechnical plans of the location of the boreholes and long-sections identifying geotechnical layer codes will identify the stability of the land during earthworks.
- 7.3 The applicant is required to lodge a Stormwater Management Plan against NDC Schedule 4 Development Requirements for Transport Projects and include any impacts

of flooding on private properties and is recommended as advice notes for this application.

Conditions

7.4 As stated above, the following conditions address the engineering issues of the construction of Rapid Transit Network:

Advanced notification that earthworks will be beginning on site

1. The Council must be notified at least five (5) working days prior to earthwork activities commencing on the subject site.

Pre-Commencement Meeting

2. Prior to the commencement of the construction and / or earthworks activity, the consent holder must hold a pre-start meeting that:
 - is located on the subject site
 - is scheduled not less than 5 days before the anticipated commencement of construction and/or earthworks
 - includes Monitoring Inspector
 - includes representation from the contractors who will undertake the works

The following matters must be discussed at the meeting:

- the erosion and sediment control measures.
- the earthworks methodology.
- shall ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.

The following information must be made available at the pre-start meeting:

- Timeframes for key stages of the works authorised under this consent
- Resource consent conditions
- Erosion and Sediment Control Plan
- Traffic Management Plan
- Construction Management Plan
- Erosion and sediment control plan

Advice Notes:

To arrange the pre-start meeting required by condition above please contact the Team Leader [specify area] Monitoring to arrange this meeting or email monitoring@aucklandcouncil.govt.nz . The conditions of consent should be discussed at this meeting. All information required by the council and listed in that condition should be provided 2 days prior to the meeting.

Ensure the quality of fill used on the site is acceptable.

3. All imported fill used must:
 - a) comply with the definition for 'cleanfill material' in the Auckland Unitary Plan (Operative in Part) – ([Chapter J1](#) Definitions).
 - b) be solid material of a stable, inert nature and
 - c) not contain hazardous substances or contaminants above recorded natural background levels of the receiving site.

Additional condition for when certification is required

4. Within 10 working days following the completion of earthworks, the suitably qualified engineering professional responsible for supervising the works must provide to Council, written evidence that all fill used on the subject site has the characteristics set out in condition of this consent. Written evidence must be in the form of a receipt, compaction certificate(s) or similar.

Ensure dust does not cause adverse effects

5. There must be no airborne or deposited dust beyond the subject site as a result of the earthworks activity, that in the opinion of the Team Leader Compliance Monitoring, is noxious, offensive, or objectionable.

Advice Notes:

In accordance with the above condition in order to manage dust on the site consideration should be given to adopting the following management techniques:

- *stopping of works during high winds*
In assessing whether the effects are noxious, offensive, or objectionable, the following factors will form important considerations:
- *The frequency of dust nuisance events*
- *The intensity of events, as indicated by dust quantity and the degree of nuisance*
- *The duration of each dust nuisance event*
- *The offensiveness of the discharge, having regard to the nature of the dust*
- *The location of the dust nuisance, having regard to the sensitivity of the receiving environment.*

It is recommended that potential measures as discussed with the council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring at [monitoring@aucklandcouncil.govt.nz] for more details. Alternatively, please refer to the Ministry for the Environment publication "Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions."

Ensure supervision and certification of geotechnical works.

6. The construction of the road must be in accordance with the Geotechnical Interpretive Report EB2 and EB3 prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000004 Rev 0 dated 20 April 2022 and Geotechnical Factual Report EB2 and EB3 prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000003 dated 9 September 2022 and must be supervised by a suitably qualified

engineering professional. In supervising the works, the suitably qualified engineering professional must ensure that they are constructed and otherwise completed in accordance with the approved plans.

Certification from a suitably qualified engineering professional responsible for supervising the works must be provided to Council, confirming that the works have been completed in accordance with the above condition 6 within ten (10) working days following completion. Geotechnical Completion Report must be submitted to the council.

Ensure stability of the site/neighbouring sites.

7. All earthworks must be managed to ensure that they do not lead to any uncontrolled instability or collapse either affecting the site or adversely affecting any neighbouring properties. In the event that such collapse or instability does occur, it must immediately be rectified.

Construction Traffic Management Plan (CTMP)

- (a) A CTMP must be prepared prior to the Start of Construction.
- (b) A CTMP must be submitted to the Manager for information at least 10 working days prior to the Start of Construction.
- (c) The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic and transport effects. To achieve this objective, the CTMP must include:
 - (i) methods to manage the effects of temporary traffic management activities on traffic, with consideration of cumulative construction effects from other projects occurring in the area (as relevant).
 - (ii) measures to manage the safety of all transport users. This may include, but must not be limited to:
 - a. identification of detour routes
 - b. temporary speed limits; and
 - c. other methods to safely manage and maintain traffic flows, pedestrians, and cyclists, on existing roads (e.g., Reeves Road).
 - (iii) methods to maintain functional and operational vehicle access to property and/or private roads where practicable, or to provide alternative access arrangements when it will not be maintained;
 - (iv) methods for recognizing and providing for the ongoing operation of Auckland Transport managed passenger transport services (including along Great South Road);
 - (v) the estimated numbers, frequencies, routes, and timing of traffic movements, including any specific non-working or non-movement hours to manage vehicular and pedestrian traffic near schools or to manage traffic congestion;
 - (vi) identification of site access routes and access points for heavy vehicles, the size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors;

- (vii) identification of any appropriate traffic management measures;
- (viii) methods that will be undertaken to communicate traffic management measures to affected road users, pedestrians, and cyclists (e.g., residents/public/stakeholders/emergency services).

Engineering Plans

8. Prior to the commencement of any public infrastructure on this development, the consent holder must submit engineering plans (including engineering calculations and other specifications) to the council for certification.

The engineering plans submitted for certification must detail all works associated with the development and must be in accordance with current Council Engineering Standards, but not limited to.

- a) Public Stormwater Reticulation
- b) Public Wastewater Reticulation and water supply
- c) Approved Stormwater Management Plans

Advice Notes

- *The Engineering Plan Application forms including lodgement and fees can be found at the following Auckland Council website:*

<https://www.aucklandcouncil.govt.nz/building-and-consents/engineering-approvals/Pages/default.aspx>

- *the Network Discharge Consent Requirements [WQ] and details of flood assessment and pipe capacities must be covered under Stormwater Management Plans. The SMP must include the following:*
 - *10-year and 100-year rainfall data used in the design*
 - *Flood assessment results for 10-year and 100-year post-development scenarios covering the upsizing of pipes to resolve overland flow path issues*
 - *Assess each category against NDC Schedule 4 Development Requirements for Transport Projects*

Conclusion

I have proposed conditions that mitigate the adverse effects on the environment, and I support granting land use consent LUC604071243, part of BUN60407121.

Technical Memo – Specialist Unit

To: Celia Wong – Senior Planner, Resource Consents – South, Auckland Council
Warwick Pascoe – Principal Project Lead, Premium Resource Consents, Auckland Council

From: Samantha Langdon – Specialist (Earth and Stream Works), Specialist Unit, Auckland Council

Date: 23 March 2023

1.0 APPLICATION DESCRIPTION

Application and property details

Applicant's Name: Auckland Transport

Application numbers: EB2: BUN60407133
• LUC60407134 (earthworks)
EB3R: BUN60407121
• LUC60407123 (earthworks)
• LUS60412895 (streamworks)

Activity type: Regional earthworks (land disturbance; works within 10m of a natural inland wetland)
Streamworks (works within the bed of a watercourse)

Purpose description: Earthworks and streamworks to facilitate the construction of the Eastern Busway (EB2 and EB3R) and associated stormwater outfall structures (EB3R)

Site addresses: Various, however, applications have been lodged with the following site address:
EB2: 5 Reeves Road, Pakuranga Heights
EB3R: 207 Ti Rakau Drive, Pakuranga Heights

2.0 INTRODUCTION, PROPOSAL, SITE AND LOCALITY DESCRIPTION

Reviewer Qualifications and Experience

- 2.1 I am employed as a Specialist within the Earth, Streams and Trees Team of Auckland Council's Specialist Unit. I have been employed in the Specialist role since November 2020. In this role I primarily provide specialist input into resource consent applications, however, I also provide input to compliance teams regarding earth and streamworks matters.

- 2.2 Prior to this, I was employed by Auckland Regional Council as an earthworks, streamworks and stormwater management specialist; an employee of AR & Associates Ltd assisting with planning, earthworks and streamworks input; and more recently, I was a contractor to Auckland Council between the period of March 2017 and November 2020. In the latter role I was engaged to undertake compliance monitoring of regional earthworks and streamworks consents and provided specialist input for earthworks applications.
- 2.3 I hold a Bachelor of Science (majoring in Geology and Biological Sciences) from the University of Auckland (2007).
- 2.4 As part of this assessment, I visited the site on two occasions to observe the proposed earthworks areas; the streams and wetlands located within the subject site and the approximate locations of the proposed stormwater outfalls (where access allowed).
- 2.5 This memo assesses the regional earthworks and streamworks activities relating to both the EB2 application (BUN60407133) and EB3R application (BUN60407121). Headings are used to differentiate each application where necessary. However, due to the common effects, the assessment is split into assessment of activities.

Proposal relevant to this assessment only

- 2.6 The applicant is seeking resource consent for earthworks in relation to the construction of approximately 5km of the Eastern Busway and associated stormwater upgrades, which includes streamworks for the construction of rip rap within the stream bed.
- 2.7 A full description of the EB2 and EB3R applications are included in the following documents and as detailed in the drawings listed in Appendix 1 of this memo:

	Title (Documents have been prepared by Eastern Busway Alliance)	Revision; Date
EB2	Report: <i>“Eastern Busway 2, Assessment of Effects on the Environment, Document Reference: EB234-1-PL-RP-Z2-000017”</i>	Rev 3, 11/08/2022
	Additional information received via s92 on 4 November 2022	
	Letter: <i>“Re. Response to Council further information requests for the EB2 Application Package”</i>	03/11/2022

	Title (Documents have been prepared by Eastern Busway Alliance)	Revision; Date
EB3R	Report: <i>“Eastern Busway 3 Residential, Assessment of Effects on the Environment, Document Reference: EB234-1-PL-RP-Z3-000018”</i>	Rev 2, 10/08/2022
	Additional information received via s92 on 10 November 2022 and 17 February 2023.	
	Letter: <i>“Re. Response to Council further information requests for EB3R Application Package”</i>	10/11/2022
	Memo: <i>“Eastern Busway – EB3 Residential Stream Memorandum, Stormwater Effects Assessment: Streams,</i>	Rev C 31/10/2022

	<i>Document Number: EB-ME-3-PL-000001(A) – superseded by the assessment dated 26/01/2023</i>	
	<i>Letter: “Re. Response to Council further information requests regarding ecological assessment for EB3R”</i>	17/02/2023
	<i>Report: “Eastern Busway – EB3 Residential, Freshwater Ecological Impact Assessment: EB3R Stormwater Outfalls</i>	Rev 1 26/01/2023
	<i>“Outfall drawings” submitted as Attachment 2 to letter received 10 November 2022 and Attachment 3 to letter received 17 February 2023.</i>	

Relevant to both	<i>Report: “Eastern Busway EB2 and EB3 Residential, Terrestrial and Freshwater Ecological Effects Assessment, Document Number: EB234-1-PL-RP-Z2-000031”</i>	Rev 1, 18/07/2022
	<i>“Eastern Busway EB2 and EB3 Residential, Erosion and Sediment Control Effects Assessment, Document Number: EB234-1-PL-RP-Z2-000024”</i>	Rev 1 18/07/2022
	<i>“Eastern Busway EB2 and EB3 Residential, Construction Methodology Overview, Document Number: EB234-1-PL-RP-Z2-000033”</i>	Rev A, 18/07/2022
	<i>“Eastern Busway – EB2/ EB3R, Erosion and Sediment Control Plan, Document Number: EB234-1-PL-RP-Z2-000037”,</i>	Rev 1 25/07/2022

In brief:

2.8 EB2:

- (a) EB2 package includes the construction of the busway around the Pakuranga Town Centre (Pakuranga Road, William Roberts Road, Ti Rakau Drive and Reeves Road), extending to the west along Pakuranga Highway to Millen Ave, and extending south-east along Ti Rakau Drive before joining with the EB3R project area at the intersection of Mattson Road; the construction of the Reeves Road Flyover and associated MSC walls; Pakuranga Bus Station; cycle and pedestrian upgrades; and the upgrade of stormwater infrastructure.
- (b) To facilitate the construction of the EB2 activities, earthworks will consist of 40,300m³ of cut and 22,000m³ of fill over 35,000m² (3.5 hectares). These figures include the cut volumes (10,300m³) for the milling operations associated with the Ti Rakau Drive widening, and the fill volumes (12,000m³) required to construct the MSE wall at the Reeves Road Flyover. A maximum fill depth of 9.6m is proposed and associated with filling of the MSC wall associated with the Reeves Road Flyover. The extent of earthworks is shown by the solid blue line on EB2 consent drawings Rev B dated 25/08/2022.
- (c) The application includes the upgrade to three existing stormwater outfalls and construction of two new outfalls. All stormwater outfalls associated with EB2 are located adjacent to or within the coastal marine area (CMA) of the Tamaki River. The two new outfalls will be located within 100m of natural inland wetlands.

- (d) To note, the s92 response received 4 November 2022 confirms that the boundary between the EB2 area and EB3R area is at the intersection of Reeves Road, SEART and Ti Rakau Drive. The stormwater outfall upgrade to stream 2 (i.e. Outfall 2 adjacent to MCC_108699) has been removed from the EB2 works extent. For this reason, no streamworks have been considered under the EB2 application.

2.9 EB3R:

- (a) EB3R package includes the construction of the busway along Ti Rakau Drive between the Reeves Road and Te Rakau Drive intersection through to Riverhills Park and the western side of the existing bridge; Edgewater and Gossamer Bus Stations; the upgrade of stormwater infrastructure including outfalls to three streams; formation of a swale within Riverhills Park; and construction of a bridge abutment adjacent to Riverhills Park and associated MSC walls.
- (b) To facilitate the construction of the EB3R activities, earthworks will consist of 27,500m³ of cut and 32,000m³ of fill over 68,000m² (6.8 hectares). These figures include the cut volumes (7,500m³) for the milling operations associated with the Ti Rakau Drive widening, and the fill volumes (17,000m³) required to construct the MSE wall for the western bridge abutment. A maximum fill depth of up to 10m is proposed for the filling of the MSC wall associated with the construction of the western bridge abutment.
- (c) Streamworks are required for the installation of erosion and scour protection associated with two new stormwater outfalls and the upgrade of an existing outfall, and associated stream bed disturbance, which will be undertaken within the upper reach of three streams. The streams have been identified as streams 2, 3a and 3b in the Freshwater Ecological Impact Assessment dated 26/01/23. Details of these works are included in the documents provided in the s92 responses received 10th November 2022 and 17th February 2023.

To summarise:

- Each outfall to each stream will consist of a pipe and perpendicular wingwall, with the extent of the pipe structure endpoint situated on/setback from the stream bank. No stormwater outfall pipes will be located within the bed of the stream.
- Rock rip rap will form the erosion and scour protection immediately below each outfall pipe and will be constructed within each stream bed (being within the bankfull width of the stream). Table 5-1 in section 5.1.4 of the Freshwater Ecological Impact Assessment, estimates the rock rip rap to be 3m in width.
- Proposed new **Outfall 02** will be constructed at the upper reach of stream 2, close to the existing outfall MCC_108699. To note, the configuration of this proposed outfall has been amended via the s92 response process. Originally proposed as an upgrade to existing outfall MCC_108699, the revised design is now for the construction of new reticulation and outfall located to the east of the existing outfall.

The new rock rip rap associated with **Outfall 02** will be **12.08m** in length and having a total area of 36.24m² within the stream bed. Construction will require

approximately 17.3m of streamworks, with 5.2m of those streamworks extending downstream of the structure.

- Proposed new **Outfall 300** will be constructed at the upper reach of stream 3a, immediately adjacent to the existing outfall MCC_108703. The associated rock rip rap will be **10.87m** in length and having a total area of 32.6m² within the stream bed. Construction will require approximately 31.7m of streamworks, with 4.1m of those streamworks extending upstream of the structure, and **16.7m** downstream of the structure.
- Existing **Outfall MCC_108707**, currently located within the upper extent of stream 3b, will be upgraded. The upgrade will involve the removal of the existing outfall pipe from the bed of the stream, reinstatement of the stream channel, and installation of rock rip rap through the length of the reinstated stream to provide for erosion and scour protection from the upgraded outfall. The rock rip rap will extend a further **2m** (6m²) into the bed of the existing stream when measured below the original pipe outlet. Construction of the rock rip rap will require an additional **10.4m** of streamworks downstream of the structure.

It is currently unclear what length of stream will be reinstated. As such, it is currently unknown what the total length of erosion and scour protection will be installed downstream of the revised MCC_108707 outfall location, and therefore, what the total length of streamworks is proposed within stream 3b.

- 2.10 Earthworks to construct the EB2 and EB3R project areas are anticipated to take over four years to complete, with an estimated completion date during 2027.
- 2.11 An Erosion and Sediment Control (ESC) Assessment and supporting Erosion and Sediment Control plan (ESCP) has been provided to support both the EB2 and EB3R application packages to demonstrate the general objectives and indicative ESC management measures proposed to be implemented on site.
- 2.12 The applicant proposes to provide a Site Specific ESCP (SS-ESCP) and Chemical Treatment Management Plan (ChTMP), prior to the commencement of each stage of earthworks to confirm the proposed ESCs to be implemented to manage discharges from the construction works.

Requests for further information

- 2.13 Following receipt of the EB3R s92 response on 17 February 2023, a further request for clarification was sent on 10 March 2023 requesting the following information to be provided. At the time of finalising this memo, these items have not yet been addressed:
- (a) a request for the “*Outfall Plans*” (included as Attachment 1 in the Nov 2022 response and Attachment 3 in the February 2023 response) to be updated with a title and date to easily reference within reporting documents, and to update the legend to clarify what the green shading represents.
 - (b) request for a more detailed description of the proposed streamworks within each stream to better understand the level of effect, including:

- to clarify the extent of any preparation / bed disturbance required to install the rip rap structures (e.g. clarification whether the drawing titled “*Vegetated Riprap Outfall Typical Details*”, drawing number EB-2-D-2-SW-DG-000021, Rev A, dated 22/04/2022, relates to stream outfalls, or just outfalls within the CMA), and
 - to demonstrate that the extent of physical in-stream works have been minimised to reduce effects on the stream bed.
- (c) a request to update the streamworks length as listed in Attachment 1 of the February s92 response, to address the discrepancies with the “*Outfall Plans*”, and to clarify the length of stream to be reinstated at MCC_108707;
- (d) a request to provide the calculations for the sizing and extent of the rock rip rap to further justify the total length of rock rip rap required for each outfall and to demonstrate that the length of rock rip rap has been minimised;
- (e) a request to clarify that the length of riparian planting / management proposed to offset the stream structure effects, is additional to the re-planting required to address the removal of riparian vegetation (assessed by Ms Claire Webb, Consultant Terrestrial Ecologist to the Council).

I would recommend that the information to address these items is provided prior to the hearing.

Amendments to the National Policy Statement for Freshwater Management 2020 (NPS:FM) and National Environmental Standards for Freshwater Amendment Regulations No 2 2022 (NES-FW)

- 2.14 With respect to earthworks and streamworks activities, the applicant originally sought consent under the NES-FW for earthworks within 10m of a natural wetland (Regulation 45(2)), and for the temporary diversion and discharge of water within 100m of a natural wetland (Regulation 45(4)), associated with the proposed ESC.
- 2.15 Previously under the NPS:FM, ‘natural wetlands’ within the CMA were subject to the NES-FW. Furthermore, two ‘natural inland wetlands’ had been identified within the riparian margins of CMA alongside Pakuranga Highway (EB2), as detailed in the Terrestrial and Freshwater Ecological Report dated July 2022.
- 2.16 Due to the amendments to the NES-FW effective 5th January 2023, consent is no longer required for these activities, for the following reasons:
- (a) The definition of ‘natural wetland’ in the NPS:FM has been amended to ‘natural inland wetland’, and now excludes wetlands within the CMA.
 - (b) Based on the setbacks shown on the “Outfall drawings”, earthworks are shown to be located outside of the 10m setback from the ‘natural inland wetlands’ located adjacent to the EB2 project area. Therefore, consent is not required under Regulation 45(2) of the NES-FW.
 - (c) Given the nature of the earthworks, and the setback from the ‘natural inland wetlands’,

the temporary diversion and discharge of treated sediment-laden water is not shown to enter the wetlands directly, and is not anticipated to result in the temporary change in water level range or hydrological function of either of the 'natural inland wetlands'. For these reasons, consent pertaining to the temporary diversion and discharge of water during earthworks assessed by this memo is not required under Regulation 45(4) or 45(5) of the NES-FW (2022).

Site Description

2.17 The applicant provides a description of the site in the following documents:

- Section 6 of the Assessment of Effects for EB2 (6.15 ecology),
- Section 4 of the Assessment of Effects for EB3R,
- Section 4 of the Terrestrial and Freshwater Ecological Effects Assessment, and
- Section 3 of the Freshwater Ecological Impact Assessment: EB3R Stormwater Outfalls report.

I generally concur with these descriptions.

2.18 Specifically, of note:

EB2:

- Two natural inland wetlands are located within the riparian margins of the tributary of the Tamaki River, adjacent to the Pandora Place Esplanade Reserve. There are no Significant Ecological Areas (SEA) associated with this area. There are no streams located within EB2 project area.
- Treated sediment-laden discharges from the EB2 area will be directed to tributaries of the Pakuranga Creek and Tamaki River. Any discharges to the northern Bus Stop Reserve outfall will enter a SEA identified as the "Tamaki River East Roost" (SEA-M1-47) under the AUP:OP, due to its "*regionally important wildlife habitat*".

EB3R:

- Three unnamed tributaries of the Tamaki River are located within the EB3R project area. These are described in the Freshwater Ecological Impact Assessment. There are no natural inland wetlands currently identified within EB3R project area.
- The receiving environments are deemed sensitive receiving environments. The CMA downstream of the on-site streams and the Riverhills Park area are identified as a SEA (SEA-M2-45b) under the AUP:OP, due to "*the mangrove areas of Pakuranga Creek are regarded as the best example of mangrove habitat in the Tamaki Estuary*".
- Furthermore, the CMA to the south of Ti Rakau Drive is identified as a SEA (SEA-M1-45a), due to large and regionally important roosting sites of wading birds within the Tamaki Estuary.

GIS Locations

2.19 The following GIS co-ordinates are relevant to the proposed streamworks activities.

Activity	Freshwater Body	Type	Co-ordinates
Structure – stream 2	Permanent Stream	Rock Rip rap	1766856.05; 5912586.04
Structure – stream 3a	Permanent Stream	Rock Rip rap	1766963.6; 5912427.35
Structure – stream 3b	Permanent Stream	Rock Rip rap	1767071.68; 5912353.87
10m setback	Natural inland wetland – west	n/a	1766176.33; 5912898.91
10m setback	Natural inland wetland – east	n/a	1766423.72; 5912784.87
Offset & Compensation	Permanent Stream	Riparian Planting	TBC – streams 2, 3a and 3b

3. REASON FOR CONSENT

Resource Consent EB2:

Auckland Unitary Plan Operative in Part (AUP:OP):

- 3.1 Regional land use consent for earthworks is required under the provisions of Chapter E26 Infrastructure, of the AUP(OP).
- 3.2 **Restricted Discretionary activity** land use consent is required under (A107) of Activity table E26.5.3.2 for earthworks associated with Infrastructure activities, other than for the maintenance, repair, renewal or minor infrastructure upgrading in all zones, which are greater than 2,500m² within the sediment control protection area.
- 3.3 **Restricted Discretionary activity** land use consent is required under (A102) of Activity table E26.5.3.2 for earthworks associated with Infrastructure activities, other than for the maintenance, repair, renewal or minor infrastructure upgrading in all zones, which are greater than 10,000m² and up to 50,000m² that are located on land with a slope equal to or greater than 10 degrees outside the sediment control protection area.
- 3.4 The EB2 application proposes earthworks over a total area of approximately 3.5 hectares, that is not intended to be undertaken using a methodology to be below permitted activity thresholds. As such, the application requires regional consent with the proposed earthworks assessed as restricted discretionary activity.

Resource Consent EB3R:

Auckland Unitary Plan Operative in Part (AUP:OP):

Earthworks:

- 3.5 Regional land use consent for earthworks is required under the provisions of Chapter E26 Infrastructure, of the Auckland Unitary Plan (Operative in Part) (AUP).
- 3.6 **Restricted Discretionary activity** land use consent is required under (A107) of Activity table E26.5.3.2 for earthworks associated with Infrastructure activities, other than for the maintenance, repair, renewal or minor infrastructure upgrading in all zones, which are greater than 2,500m² within the sediment control protection area.
- 3.7 **Restricted Discretionary activity** land use consent is required under (A102) of Activity table E26.5.3.2 for earthworks associated with Infrastructure activities, other than for the maintenance, repair, renewal or minor infrastructure upgrading in all zones, which are greater than 10,000m² and up to 50,000m² that are located on land with a slope equal to or greater than 10 degrees outside the sediment control protection area.
- 3.8 The EB3R application proposes earthworks over a total area of approximately 6.8 hectares, that is not intended to be undertaken using a methodology to be below permitted activity thresholds. As such, the application requires regional consent with the proposed earthworks assessed as restricted discretionary activity.

Streamworks:

- 3.9 Regional streamworks consent is required under the provisions of Chapter E.3 Lakes, rivers, streams and wetlands, of the AUP(OP).
- 3.10 Activity (A44) in Activity table E3.4.1 provides for new structures and the associated erosion and scour protection and stream bed disturbance, not complying with the general or specific standards.
- 3.11 Erosion and scour protection proposed to be placed below the new stormwater outfalls within the bed of stream 2 (12.08m associated with Outfall 2/MCC_108699) and stream 3a (10.87m associated with Outfall 300/MCC_108703) exceed 5m in length when measured from the outfall endpoints. As the lengths exceed standard E3.6.1.14(1)(b), consent is required as a **discretionary activity**.
- 3.12 To enable the installation of the erosion and scour protection for Outfall 300/ MCC_108703, the downstream extent of disturbance is greater than 10m when measured from the edge of the new rock rip rap structure. As the streamworks length does not meet standard E3.6.1.14(2), this activity is to be assessed as a **discretionary activity**.
- 3.13 The MCC_108707 outfall would be considered an existing structure under table E3.4.1. The removal of the existing MCC_108707 pipe from the bed of stream 3b would generally be subject to (A24). However, as the stream bed disturbance will exceed 10m, the upgrade of MCC_108707 would not meet standard E3.6.1.10(1)(a), and therefore, consent is required under (A26) and assessed as a **discretionary activity**.

- 3.14 As the proposed erosion and scour associated with MCC_108707 is not associated with a new structure (E3.6.1.14(1)(b)) or the extension of an existing structure (E3.6.1.12(2)(b)), this activity would defer to (A1) as an activity that is not otherwise provided for and assessed as a **discretionary activity**. It is currently unknown the length of stream channel to be reinstated, and therefore the total length of rock rip rap subject to this assessment. The applicant has only accounted for the 2m that extends past the original outfall endpoint.
- 3.15 Overall, based on the current figures, application LUS60412895 will authorise a total length of **24.88m** (74.85m²) of structures within the bed of a stream, and a total length of **27.1m** of associated streamworks.
- 3.16 It is requested that the applicant **clarify** the total length of rock rip rap proposed to be placed below outfall MCC_108707, so that it may be included within the scope of the streamworks application.

4. TECHNICAL ASSESSMENT OF EFFECTS

- 4.1 This report provides a review of the earthworks construction methodologies proposed for construction of the Eastern Busway project (EB2 and EB3R) should they be granted consent. Although this report covers the regional aspects of construction of the Eastern Busway, it is noted that the district and geotechnical related matters for the earthworks are addressed in a separate report from Ms Maria Baring, Development Engineer for the Council.
- 4.2 Additionally, this report covers the assessment of the proposed in-stream structures, streamworks construction methodologies and associated proposed offset. However, the assessment for the removal of riparian vegetation (including adjacent to streams or natural inland wetlands), and works within the CMA are addressed in separate reports from Ms Claire Webb (consultant Terrestrial Ecologist for the Council), and Ms Kala Sivaguru (Coastal specialist for the Council), respectively.
- 4.3 The applicant identifies and assesses the effects of the proposed earthworks and streamworks activities on the environment that are likely to arise and any proposed mitigation or offset in the following documents:
- section 9.4.4 of the EB2 AEE,
 - section 7.4.4 of the EB3R AEE,
 - section 3 and 6 of the ESC Assessment Report,
 - section 3.1 of the overarching ESCP for EB2 and EB3R,
 - section 6 of the Terrestrial and Freshwater Ecological Effects Assessment, and
 - section 4 and 5 of the Freshwater Ecological Impact Assessment.
- 4.4 For the construction related effects of EB2 and EB3R, this assessment covers the actual and potential adverse effects of the proposed earthworks, stream construction works and stream structures, on the receiving environment with regard to:
- **Staging and extent of earthworks**

- **Sediment discharge** to the immediate receiving environment; being the adjacent unnamed streams, natural inland wetlands and the coastal marine habitat of the Tamaki River and Waitemata Harbour. Sediment can degrade aquatic values such as water quality, smother habitat for aquatic fauna within these receiving environments, and directly impact aquatic fauna by blocking their breathing apparatus.

4.5 For the proposed stormwater outfalls associated with EB3R, this assessment covers the actual and potential adverse effects of the proposed in-stream structures on the receiving environment with regard to:

- **Fish mortality** during streamworks
- **Avoidance and minimisation** to demonstrate the purpose of the structures in that location and that the length of structures are designed to be the minimum size necessary for its purpose
- **Loss of stream ecological function** as a result of placement of structures within the bed of the stream, including assigning ecological value of the streams
- **Thermal increases and reduction in connectivity to stream bed** as a result of placement of rock rip rap within the bed of the stream
- **Fish passage**

Staging and extent of earthworks

4.6 The applicant has identified that staging of works will be required to minimise district-assessment related effects and enable a practical approach to the sequence of construction. From an environmental effects perspective, the staging of earthworks will reduce the risk of sediment-laden discharges and cumulative effects on the receiving environment. As the SS-ESCPs will likely be guided by the staging of works, I recommend that an indicative **staging plan** is provided prior to earthworks to clarify the locations of works, and timing and duration of the overall earthworks activities.

4.7 The application drawings do not currently include a contour plan or cut / fill plan. Contour plans and cut / fill plans generally assist to identify locations of higher risk and any changes to the direction of runoff to better determine whether the proposed ESCs are suitable for the management of sediment-laden runoff. Longitudinal sections have been provided for 'control string' lines of the proposed EB2 and EB3R alignments. Although these drawings provide some detail for the general cut / fill across the project, they do not show the full range of extent and depth of earthworks, particularly along the boundaries of the earthworks. To facilitate review of the finalised SS-ESCP, a recommendation has been included below requiring that a **final contour plan and cut / fill plan** is provided prior to commencement of each stage of earthworks.

4.8 As noted in the ESC Assessment, the applicant has offered a review condition to enable additional ESCs to be imposed if required. Given that a SS-ESCP is required prior to each stage of earthworks, a review condition is not considered necessary in this instance.

Sediment discharge – Earthworks

- 4.9 Section 3.3.1 of the ESC Assessment Report concludes that an estimate of sediment yield (i.e universal soil loss equation (USLE)) is not warranted. Given that the majority of works will involve redevelopment of existing paving, progressive stabilisation via cut and cover methodology, the use of aggregate for the majority of fill, and the narrow alignment available for ESC, I concur that a USLE is not required to determine the effects from the earthworks.
- 4.10 A combined ESCP report dated July 2022 has been provided to support both the EB2 and EB3R applications. The ESCP provides the overarching principles and procedures to manage the potential sediment discharges that may be generated during the construction of the busway. I concur that the overarching ESCP has been designed in accordance with Auckland Council guidance document number 005, "*Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region*", June 2016, Incorporating Amendment 2 (GD05) and includes:
- a. **Clean water diversions** to be constructed uphill of the earthworks areas where required via 'hotmix bunds' or existing kerb and channel as described in section 4.14 of the ESCP. This will ensure that surface water is directed around the earthworks area so that clean water does not enter the area and contribute to the amount of water that needs to be treated on the site.
 - b. **Stabilised construction entrances** will be formed off the main entrance to each stage for the duration of earthworks as noted in section 4.10 of the ESCP. This will ensure that the site access points do not become a source of sediment, reducing the risk of construction vehicles tracking sediment out onto the public roads.
 - c. Two **stabilised 'laydown' areas** are proposed as discussed in the ESC Assessment Report. The primary laydown area will be located at 169/171 Pakuranga Road, which will also include the main designated stockpiling area for the EB2 and EB3R project areas. The secondary laydown area will be located at 220/220 Ti Rakau Drive for the western abutment works. These areas will be generally managed via aggregate hardstand.
 - d. A **cut and cover methodology**, as described in section 4.13 of the ESCP, will be implemented for the much of the works areas, including for redevelopment of existing roading areas, where hardfill is used to achieve final contour levels, or for small discrete areas. The locations of implementation of this methodology can be identified in the finalised SS-ESCPs.
 - e. **Decanting Earth Bunds (DEB)** and **Silt Fences** are proposed to treat sediment laden water that may be generated throughout the earthworks activity as described in sections 4.15 and 4.16 of the ESCP.
 - i. Silt Fences will form the primary sediment control along with the cut and cover methodology. Silt Fences will be installed below the area of earthworks, particularly for areas located outside of the existing road surface. Use of Silt Fences for these areas is considered appropriate and accords with GD05.

- ii. DEBs will manage runoff from filling operations. The applicant has provided specifications for the proposed DEB which generally accord with GD05 including a 2% storage volume for the contributing catchment, be fitted with a floating 'T-bar', and have an all-weather maintenance access.
 - iii. Chemical Treatment will be implemented for the DEBs and other impoundment/retention devices. The application of chemical treatment is considered industry best practice and GD05 recommends that DEBs be chemically treated.
- f. **Dirty water diversion bunds** installed to direct sediment laden water to the DEBs for treatment prior to discharge to the receiving environment as described in section 4.14 of the ESCP.
- g. As part of the treatment train approach, **Cesspit Inlet Protection** and **Silt Socks** will be installed as secondary controls as discussed in sections 4.17 and 4.18 of the ESCP. These measures are appropriate to protect the stormwater inlets and small discrete areas throughout the project area, particularly given that the earthworks will be undertaken in proximity to 'live' stormwater inlets.
- h. A **Dewatering Procedure** has been included in Appendix B of the ESCP. The dewatering of trenches, piles, and other excavations will be undertaken in accordance with the dewatering procedure. This is appropriate and a recommendation has been included below.
- i. **Staging of earthworks** and **progressive stabilisation** as areas are completed to reduce extent of exposed areas and cumulative effects of sediment on the receiving environment as noted in section 4.12 of the ESCP. Given that the majority of the earthworks will be generally undertaken on land with low gradients, involve reworking of existing roading areas, and will be filled using hardfill material, no maximum area restrictions are recommended.
- j. Implementation of a **management and monitoring regime** as detailed in section 5 of the ESCP, which proposes regular inspections of erosion and sediment controls, actively monitor weather conditions, pre- and post- rain event protocols, clarity and pH monitoring, management response if an untreated discharge occurs, and reporting protocols.
- 4.11 Considering the nature of the earthworks as discussed above, the level of treatment provided by the proposed sediments controls, monitoring regime and the temporary nature of the activity, the residual level of sediment that may reach the natural inland wetlands, streams and the wider coastal receiving environment is expected to be low.

Finalised Plan

- 4.12 The applicant proposes to submit a finalised SS-ESCP that is designed in accordance with the overarching ESCP and GD05 prior to each stage of works. I concur with this approach. As such, recommendations have been included below.

- 4.13 As noted above, the applicant proposes to implement chemical treatment of DEBs and all impoundment/retention devices. A ChTMP has been provided as appendix A of the ESCP that sets out the general protocols, monitoring and management of chemical treatment. The ChTMP has been reviewed and is appropriate, with the following **recommendations**:
- as identified in the ChTMP, it is recommended that bench testing and the finalised ChTMP methodology is confirmed in the SS-ESCPs ahead of earthworks commencing and implementation of the plan;
 - I recommend that chemical treatment is implemented via a rainfall activated methodology where possible as per industry best practice;
 - a recommendation has been included requiring chemical treatment be implemented in accordance with the approved ChTMP and finalised methodology that will be submitted as part of the SS-ESCPs.

- 4.14 As noted above, the applicant has included a Dewatering Procedure in Appendix B of the ESCP, which sets out the management of dewatering during earthworks. The Dewatering Procedure has been reviewed and is appropriate, with the following **recommendations**:
- given the variable nature of the sites, I recommend that each SS-ESCP must include a finalised Dewatering Procedure for the specific stage.
 - to ensure all discharges from the project area are treated and managed in accordance with the Dewatering Procedure and GD05, a recommendation is included below that requires all discharges from the project area as a result of land disturbance, including from dewatering of excavations, meets 100mm depth of clarity prior to discharge.

Decanting Earth Bunds

- 4.15 As noted above, DEBs are proposed to be installed for the main filling areas. Although section 4.16 of the ESCP notes that “*the inlet to the DEB will set at least 5m away from the outlet*”, it does not clarify that the shape of the DEB will meet the 3:1 length to width recommendations of GD05. This design feature enhances the settlement of sediment through the DEB impoundment area and reduces resuspension of sediment as it enables one entry point into the device. Furthermore, it is unclear the total catchment likely to be directed to the DEBs, and whether this will be consistent with GD05. For these reasons, a recommendation has been included requiring the DEBs to be designed and constructed in accordance with GD05.
- 4.16 As DEBs may also be used for the treatment of pumped discharges during dewatering, I have included a recommendation that a forebay is installed at the inlet end of the device. The forebay will facilitate the settlement of sediments from dewatering prior to entering the main DEB impoundment area and enable batch dosing of chemical treatment, thereby improving the treatment efficiency of the DEB device.

10m Wetland Setback

- 4.17 This assessment assumes that no earthworks will be undertaken within 10m of a natural inland wetland. To ensure this separation distance between all works, including the installation of erosion and sediment controls and natural inland wetlands, is implemented

and maintained, I have included a recommendation requiring that the 10m setback from the edge of the natural inland wetlands is identified by fencing or similar to prevent incursion and maintain this setback for the duration works.

Approval for the removal of controls

- 4.18 In section 4.6 of the overarching ESCP, the applicant has proposed that written approval will be obtained from Council prior to the decommissioning of any erosion and sediment control device, with the exception of the criteria listed in section 4.5 of that document. I concur that this is appropriate and will ensure communication will be maintained between the construction site manager and the Council compliance team. A recommendation has been included below.

Timing / seasonal restriction

- 4.19 The applicant proposes to undertake earthworks over a period of 4 years. Earthworks and streamworks of this nature impose a higher risk if undertaken outside of the Auckland Council earthworks season (1 October – 30 April of any year) during the wetter months and as such, a seasonal restriction has been recommended to ensure that the potential effects associated with the proposal are managed appropriately should winter works be proposed. The provision of a winter works approval has also been offered by the applicant via page 20 of the ESC Assessment Report.

- 4.20 Furthermore, the Assessment identifies the potential for some stream margins to exhibit spawning habitat for Inanga. For this reason, an additional seasonal restriction is recommended to avoid works taking place during spawning season.

Sediment discharge – Streamworks

- 4.21 As the streamwork activities were primarily identified during the s92 request process, limited detail has been provided for the proposed erosion and sediment controls and streamworks methodology for construction of the stormwater outfalls to the streams, and installation of the rock rip rap. At the time of writing this memo, the extent of streamworks remains unclear as noted in paragraph 2.13 above.

- 4.22 It is acknowledged that section 3.2.2 of the ESC Assessment Report provides an indicative methodology that generally reflects a best practice approach to streamworks, including works undertaken during a period of fine weather, dam and divert methodology, de-fishing of the works area, and pumping any impounded sediment-laden water to a sediment control device.

- 4.23 However, the overarching ESCP identifies the use of Silt Fences as the primary control for installation of the stormwater outfalls and erosion and scour protection. A Silt Fence would not be considered best practice and would be impractical for permanent streams.

- 4.24 Although the current information is partly incomplete and inconsistent, I consider that the streamworks methodology and associated ESC measures can be finalised prior to commencement of works. This finalised methodology will ensure that the management of streamworks will be designed and sediment-laden water generated during the streamworks activities effectively treated, to avoid and/or mitigate adverse effects on the receiving

environment.

- 4.25 The finalised plan can also clarify the length of stream bed disturbance and extent of isolated work areas, and to demonstrate that streamworks will be minimised to the shortest length required for the installation of the structures.

Finalised Plan

- 4.26 I acknowledge that the applicant has offered SS-ESCPs to be prepared prior to works. However, given the discrete and specific nature of the streamworks activities, I recommend that a separate Streamworks Management Plan (StMP) is prepared prior to commencement of construction of the stormwater outfalls and associated erosion and scour protection, to demonstrate that the streamworks methodology and associated erosion and sediment controls will be designed and implemented in accordance with best practice. A recommendation has been included below.

Native Fish Capture and Relocation

- 4.27 The Freshwater Ecological Impact Assessment had identified the presence of native fish and eels during the site visit. To avoid fish mortality, I recommend that a Native Fish Capture and Relocation Plan (NFCRP) be prepared and submitted to Council for certification, and streamworks are undertaken in accordance with the certified NFCRP methodology.

Structures within the stream bed

Avoidance and minimisation

- 4.28 In the s92 response received 17 February 2023, the applicant has confirmed that none of the stormwater outfall pipes or wingwall aprons will extend into the stream bed, thereby avoiding impermeable encasement or reclamation of the stream bed.
- 4.29 Where stormwater reticulation enters the receiving environment, erosion and scour can occur at the point of discharge. The AUP(OP) provides for the installation of erosion and scour protection below stormwater outfalls for up to 5m in length. However, the proposed rock rip rap structures will be greater than 10m in length within each stream.
- 4.30 No calculations are currently available to demonstrate that the length of the erosion and scour protection structures have been designed to be the minimum size necessary for its purpose. As the streamworks consent, should it be granted, authorises the maximum size of the structure, I recommend that information to demonstrate minimisation of structures is provided prior to the hearing.
- 4.31 For the avoidance of doubt, and should this information not be available, I have included a recommendation for a finalised Stream Structure and Daylighting Design Plan (SSDDP) to be provided that details the erosion and scour protection design.

Loss of stream ecological function and proposed offset

- 4.32 The Freshwater Ecological Impact Assessment has used a methodology to assign ecological value of the streams that I am not familiar with. To support my review, I had engaged Mr Connor Whiteley, consultant Freshwater Ecologist to the Council, to review the presented methodology and the Stream Ecological Valuation (SEV) provided to support the application.
- 4.33 On receipt of Mr Whiteley's review, I am of the opinion that there are a number of concerns with the parameters and assumptions included with the non-peer reviewed methodology. Therefore, I have not given weight to this to determine the current and potential ecological values of the streams. However, I acknowledge that the applicant has undertaken a SEV assessment, which is recognised as a robust method to establish ecological value of the streams. The site ecologist's MCI and eDNA results have also been provided to support the SEV.
- 4.34 Mr Whiteley's review of the SEV concludes that the SEV methodology has been undertaken appropriately and the findings are accepted to determine the current and potential ecological value of the streams. Furthermore, the Ecological Compensation Ratio (ECR) is correctly applied and the calculations for SEVm-C and SEVm-P scores are supported.
- 4.35 As such, based on the SEV assessment, I concur that streams 2 and 3b within the impact reach have moderate value, and stream 3a exhibits poor (low) value.
- 4.36 I concur that erosion and scour protection is required at the outfall to mitigate effects from stormwater discharges to the streams. However, the installation of rock rip rap within the bed of the stream can result in an increase in thermal temperature and a reduction in connectivity to stream bed. The increase in temperature can be mitigated via improvements in shading over the stream. While it is acknowledged that the riparian vegetation that will be removed to enable the construction works will generally be re-planted, the 3m wide extent of rock rip rap will likely reduce the effectiveness of the re-planting. In addition, there will be a time lag before the planting becomes established and canopy cover achieved.
- 4.37 To further offset the effects of the in-stream structures, the applicant proposes to undertake riparian planting along the downstream reach of the affected streams (streams 2, 3a and 3b). Using the ECR calculation, the applicant proposes to undertake **63m (189m²)** of riparian planting to offset the rock rip rap. This is acceptable based on the current information.
- 4.38 On balance, the proposed replanting of removed riparian vegetation for construction, and the proposed offset riparian planting, I concur that the potential effects from installation of the rock rip rap will be effectively managed. This is assuming that the applicant:
- has demonstrated that the length of the rock rip rap is minimised to what is required to reduce erosion and scour, and
 - the total length of riparian planting / management proposed to offset the stream structure effects, is additional to, the re-planting required to replace the riparian vegetation that will be removed for construction of the reticulation and outfalls. To note, section 5.1.5 of the Freshwater Ecological Impact Assessment estimates that

there is approximately 195m (585m²) available within the 3 on-site streams. I recommend that the location and detail of the offset be identified in the SSDDP.

- 4.39 Regarding the ongoing monitoring and maintenance of the offset riparian planting, I recommend that these requirements are incorporated into the terrestrial ecology Stream Restoration Plan monitoring requirements recommended by Ms Webb.
- 4.40 Given that the rock rip rap is located in the headwaters of the streams, I consider any additional effects as a result of the occupation of the rock rip rap within the stream bed to be low.

Stream 3b: pipe reduction of outfall MCC_108707 and proposed rip rap

- 4.41 As part of the upgrade of MCC_108707, the reticulation that extends into the stream will be removed and the stream reinstated. However, rock rip rap will be placed within the bed of the reinstated stream to provide erosion and scour protection for the outfall. Furthermore, an additional 2m length of rip rap will be constructed in the existing stream reach.
- 4.42 The full length of rock rip rap associated with MCC_108707 has not been included in the proposed riparian planting offset (only the final 2m). This is likely due to the assumption that the daylighting of the stream would offset the rock rip rap. The Freshwater Ecological Impact Assessment states “*the view of replacing pipe with permeable rock rip rap should be considered as a positive outcome for this stream (providing a functional ‘gain’ of stream habitat)*”. However, this has not been quantified.
- 4.43 The SEV/ECR method could be used to quantify the difference in overall outcome between daylighting the existing stream and comparing it to the inclusion of the rock rip rap. However, in the absence of an SEV/ECR assessment, and in an attempt to quantify the positive outcome of daylighting, I would expect as best practice that the riparian margins would be restored as part of the ‘daylighted’ section as this will reduce the severity of effects of the outfall and riprap at that location. The shading will also assist with instream thermal effects from rocks/concrete within the stream in addition to its other benefits. I recommend that the details of the proposed daylighting and associated riparian planting be provided within the SSDDP to confirm this outcome.
- 4.44 Taking a conservative approach, if the applicant was to confirm/demonstrate that the riparian margin of the daylighted reach would be planted, and that the planting would be additional to the offset proposed for the rock rip rap effects (which includes the additional 2m for stream 3b) and any additional terrestrial assessment requirements, then it is likely that on balance, the effects of the rock rip rap placed within the reinstated stream reach would have been addressed.

Fish Passage

- 4.45 The stormwater outfalls essentially form the upper headwaters of the stream catchments, and do not extend to upstream freshwater habitats. Therefore, I concur that no fish passage is required.

Submissions

- 4.46 I have reviewed the submissions received in response to notification of this resource consent application. I confirm that none of the submissions relate to the proposed streamworks or works in proximity to natural wetlands.
- 4.47 I note that where submissions relate to the proposed earthworks, they are in relation to district related matters, such as construction traffic, access, noise, vibration and dust effects. These effects fall outside of my assessment. No submissions appear to relate to regional earthworks effects, such as management of sediment-laden discharges to the receiving environment.
- 4.48 For these reasons, no further assessment is provided with regards to submissions.

Conclusion

- 4.49 I conclude that the resulting effects on the freshwater environment will be appropriately managed and mitigated:
- a. The proposed erosion and sediment control measures during earthworks and streamworks will mitigate the potential adverse effects from sedimentation on the freshwater receiving environment, including any potential loss in value of ecosystem health within the streams.
 - b. The structures proposed within the bed of the stream will be adequately addressed by way of demonstrating minimisation of structures and the proposed riparian offset planting.

5. STATUTORY CONSIDERATIONS

- 5.1 Section 11 of the EB2 AEE and section 9 of the EB3R AEE identifies the relevant objectives and policies relevant to regional earthworks and associated water quality. I concur with the AEE, with the addition of the regional streamworks objectives and policies of Chapter E3 of the AUP(OP), in particular: Objectives 2-5 and Policies 2 to 5, 7, 8, 15 and 18 are considered relevant in this case.

6. RECOMMENDATION AND CONDITIONS

6.2 Recommendation

The assessment in this memo does not identify any reasons to withhold consent, and the aspects of the proposal considered by this memo could be granted consent, subject to recommended conditions, for the following reasons:

1. The expected level of effect is low within the immediate receiving environment. It is unlikely that the sensitivity of the receiving environment to the potential adverse effects of structures within the stream bed and sediment discharges will be compromised given the expected given the nature of the proposed works and the implementation of suitable designs, control technologies and appropriate on-site management techniques.

2. Subject to the imposition of consent conditions, it is considered that the effects on the immediate freshwater receiving environment will be appropriately managed.

6.3 Duration of consent

A standard duration of 5 years for the earthworks is recommended to allow for any delays in the commencement and completion works.

For the rock rip rap structures within the stream bed, the maximum expiry of 35 years is recommended.

Conditions

- 6.4 It is appropriate to recommend a suite of consent conditions including timing of the earthworks and streamworks, finalised plans, the monitoring, maintenance and chemical treatment of erosion and sediment controls, progressive stabilisation of the site and finalised offset plans. The inclusion of these conditions is consistent with similar earthworks and streamworks operations granted consent for in the Auckland Region, and the wider site, and will ensure that the effects of the proposed works will be appropriately managed and mitigated.

Consideration of the draft conditions:

- 6.5 The applicant has provided a draft set of draft conditions that are generally consistent with Council's standard earthworks conditions and have generally been incorporated into my recommended conditions below, however, some amendments have been made.
- 6.6 I have amended or adopted the following key draft conditions provided by the applicant that relate to sediment discharges and have included tracked changes where relevant for reference.

6.7 General:

- a. As a general comment, it is recommended that the conditions are amended to replace the word "shall" with "must", as the conditions are more direct / enforceable and will assist Auckland Council's compliance team in providing a higher level of certainty. The term 'must' is also used in legislation. I have included examples of these changes within the proposed conditions copied below that relate to management of land disturbance and streamworks.

Resource Consent Conditions EB2:

- b. Draft **condition 4** has been adopted with minor changes.
- c. Draft **condition 9** has generally been adopted, with the deletion of a few of the exclusions. I consider the enabling works, relocation of services and establishment of site entrances to be subject to the finalised SS-ESCPs. Therefore, these works should only commence following certification of the pre-commencement requirements:

Unless listed in Condition 1 above or otherwise stated, all Management Plans required by the conditions of this consent ~~shall~~ must be submitted to the Council for certification at least

10 working days prior to commencement of construction works (excluding ~~enabling works, site clearance, site investigations, relocation of services and establishment of site entrances and temporary construction fencing~~). All works ~~shall~~ must be carried out in accordance with the approved Management Plans. No related construction works ~~shall~~ must commence until written approval or certification of all relevant Management Plans for those works have been received, unless otherwise approved in writing by the Council.

- d. Draft **condition 10** specifying timeframes of approval has not been adopted. The reference to '*deemed to have certification*' and setting of a timeframe for Council's response should be deleted. The management plans are to ensure that any residual adverse effects that were unable to be addressed during the application phase (albeit due to detailed design being unavailable at the time of the application, or changes to design or methodology as a result of site conditions not otherwise known) are appropriately considered as works progress to avoid, mitigate or remedy any potential adverse effects. Without appropriate review, the management plan may not achieve the objectives of the condition. Furthermore, communication between the site project team and Council should be encouraged. For these reasons, it is recommended that condition 10 be **deleted**.

However, should the decision maker recommend adopting this condition and supporting advice note, I recommend that the timeframes and wording be adjusted to factor in unforeseen delays in response. Please see below for recommended edits.

Condition 10: If the consent holder does not receive a written response from Council within 10 working days of the Management Plan(s) being submitted for certification, the Management Plan(s) will be deemed to have certification and the consent holder can commence the related construction works.

Advice Note: The Council will acknowledge receipt of any Management Plan submitted for certification within ~~2~~ 5 working days. The Council will confirm if any information required for certification is missing from any submitted management plan within ~~5~~ 10 working days. Where no further information is required, the Council will provide certification to the consent holder within 10 working days of submission of the Management Plan. If further information has been requested, the Council will provide confirmation of certification to the consent holder within 5 working days of the requested information that satisfactorily addresses the further information request being provided.

- e. Draft **condition 11** has been adopted with a slight amendment:
“...confirms those amendments are within scope of this consent...”
- f. Draft **condition 12** and **13** have been adopted with amendments from 'shall' to 'must'.
- g. Draft **condition 14** has been adopted with slight amendments:
“...unless otherwise modified by the process in Conditions 9 to 13 above and Conditions X.3 below, or a relevant higher standard as referred to through the conditions below.”
- h. Draft **condition 15** has generally been adopted by condition **X.3** below with amendments to reference the ESC Assessment Report and include additional ESC

criteria.

- i. Draft **condition 16** has been adopted with minor amendments by condition **X.9**.
- j. Draft **condition 17** has been adopted by condition **X.5** below with the following amendments:

Within ten (10) working days following implementation and completion of the specific erosion and sediment controls required by the certified Site Specific Erosion and Sediment Control Plan (SSESCP) and condition ~~45~~ **X.3**, and prior to commencement of the earthwork activity within the subject area or stage referred to in the SSESCP, the consent holder must provide to Council written certification prepared by a suitably qualified and experienced person must provide written certification confirming that the erosion and sediment controls measures have been constructed and completed in accordance with the SSESCP for that particular area of or stage, the Erosion and Sediment Control Plan, Auckland Council's Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05) and any higher standard referred to through the conditions below.

~~Advice note:~~

Certified controls ~~are to~~ must include the decanting earth bunds, any other impoundment device sediment retention ponds dewatering devices, clean and dirty water diversions, silt fences, and stabilised construction entranceways. Information supplied, if applicable, must include:

- Details on the contributing catchment area;
- Size of structure;
- Retention volume of structure (dead storage and live storage measured to the top of the primary spillway);
- Dimensions and shape of structure;
- Position of inlets/outlets; and
- Stabilisation of the structure.

Advice Note:

Suitable documentation for certification of erosion and sediment control devices, can be obtained in Appendix C of Guidance Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 2 (GD05): Erosion and Sediment Control construction quality checklists.

- k. Draft **condition 18** has been adopted with minor amendments by condition **X.16**.
- l. Draft **condition 19** has been adopted with minor amendments by condition **X.17**.
- m. Draft **condition 20** has been adopted with minor amendments by condition **X.7**.
- n. Draft **condition 21** has been adopted with minor amendments by condition **X.19**.

Resource Consent Conditions EB3R:

- o. Draft **condition 4** has been adopted with minor changes.
- p. Draft **conditions 12 to 16** are the same as conditions 9 to 13 under EB2. The recommendations of paragraph 6.7 (items c to f) are relevant, with amendments included in conditions 12 to 16 below.
- q. Draft **condition 53** has been adopted with slight amendments as outlined for EB2 draft condition 14.

- r. Draft **condition 54** has generally been adopted by condition **X.4** below with amendments to reference the ESC Assessment Report and include additional ESC criteria.
- s. Draft **condition 55** has been adopted with minor amendments by condition **X.12**.
- t. Draft **condition 56** has been adopted with minor amendments by condition **X.8**.
- u. Draft **condition 57** has been adopted with minor amendments by condition **X.19**.
- v. Draft **condition 58** has been adopted with minor amendments by condition **X.20**.
- w. Draft **condition 59** has been adopted with minor amendments by condition **X.11**.
- x. Draft **condition 60** has been adopted with minor amendments by condition **X.22**.

6.8 I have also included additional conditions as per my recommendations above regarding winter earthworks/streamworks, and confirmation of design and management of streamworks. Standard earthworks and streamworks conditions regarding monitoring and maintenance, stabilisation, implementation and compliance with the standards are also included. The inclusion of these conditions is consistent with similar earthworks operations for which consent has been granted in the Auckland Region, and the wider site, and will ensure that the effects of the proposed earthworks will be appropriately managed.

General conditions

6.9 The following general conditions are recommended:

- S36 and charges;
- access to the site; and
- works undertaken in accordance with the application documents and plans.

6.10 The following additional conditions are recommended:

EB2: LUC60407134 (Earthworks) Conditions

Duration

- 4 Resource consent LUC60407134 (earthworks) must expire 5 years from the date of issue unless it has been surrendered or cancelled at an earlier date pursuant to the RMA.

Management Plans – Certification and Review

- 9 Unless listed in Condition **1** above or otherwise stated, all Management Plans required by the conditions of this consent must be submitted to the Council for certification at least 10 working days prior to commencement of construction works (excluding site investigations and establishment of temporary construction fencing). All works must be carried out in accordance with the approved Management Plans. No related construction works must commence until written approval or certification of all relevant Management Plans for those works have been received, unless otherwise approved in writing by the Council.
- 10 [Deleted or, if retained, as per recommended changes in paragraph **6.7d** above]
- 11 Any certified Management Plan may be amended, if necessary, to reflect any minor changes in design, construction materials, methods or management of effects to align

with the conditions of consent. Any amendments are to be agreed by the Council in writing prior to implementation of any changes. Re-certification is not required in accordance with Condition 9, if Council confirms those amendments are within scope of this consent and any changes to the draft Management Plans are clearly identified.

- 12 Any amendments to a certified Management Plan that may result in a materially different outcome must be submitted to the Council in accordance with Condition 9 to certify these amendments are consistent with the relevant condition(s) prior to implementation of any changes. Where a Management Plan was prepared in consultation with interested or affected parties, any material changes to that Plan must be prepared in consultation with those same parties.
- 13 Management Plans may be submitted in parts or stages to address activities or to reflect the staged implementation of the Project. If submitted in part, management plans must clearly show the linkage with the Management Plans for adjacent stages and interrelated activities.

Pre-commencement Requirements

- 14 All works must be undertaken in accordance with the Erosion and Sediment Control Plan (ESCP) listed in Condition 1, unless otherwise modified by the process in Conditions 9 to 13 above, Conditions X.3 below, or a relevant higher standard as referred to through the conditions below. The purpose of the ESCP is to provide overarching principles and procedures to manage the environmental impacts associated with erosion and sediment control (ESC) during construction of the Eastern Busway Project (Package EB2).
- X.1 Prior to the commencement of earthworks, an indicative staging plan must be submitted to the Council. The purpose of the staging plan is to identify the works areas that will correspond with the final site specific erosion and sediment control plans required by condition X.3.
- X.2 Prior to commencement of each stage of earthworks, a final contours plan and cut / fill plan must be prepared and submitted to Council with the finalised Site Specific Erosion and Sediment Control Plans required by Condition X.3. The plans must include, but not limited to, details of the existing levels, design levels and cut / fill depths of the earthworks across the entire stage of works.
- X.3 Prior to the commencement of earthworks within a given area or stage, a Site Specific Erosion and Sediment Control Plan (SSESCP) must be prepared in accordance with Auckland Council's *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region Guideline Document 2016/005* ("GD05") and submitted to Council for certification in accordance with Condition 9. No earthworks activity within the specific area or stage must commence until the Council has certified that the SSESCP satisfactorily meets the requirements of GD05.

The SSESCP and earthworks methodology must contain sufficient detail to address the following matters:

- a. Contour information;
- b. Specific erosion and sediment control works for all earthworks activities in accordance with the site Erosion and Sediment Control Plan and Sediment Control Effects Assessment referenced in Condition 1 and in general accordance with

Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05)*, including confirmation of:

- i. decanting earth bund design to meet GD05, or a relevant higher standard as referred to through the conditions below;
 - ii. that all earthworks and erosion and sediment control measures will be located a minimum of 10m from the edge of all natural inland wetlands;
 - iii. finalised Dewatering Procedures to ensure discharges from trenches, excavations or any discharges that will enter the stormwater reticulation or directly to the receiving environment will achieve a minimum of 100mm depth of clarity prior to discharge;
 - iv. management of water during concrete pours;
 - v. finalised controls and methodology for MSC and retaining wall construction.
- c. Identify the extent of all natural wetlands and the 10m setback;
 - d. chemical treatment design and details including bench testing results and confirmation of rainfall activated methodology where possible;
 - e. catchment boundaries of works and devices installed;
 - f. location of the work;
 - g. details of construction methods;
 - h. design criteria, typical and site-specific details of erosion and sediment control;
 - i. design details for managing the treatment, disposal and/or discharge of contaminants (e.g. concrete wash water);
 - j. monitoring and maintenance requirements;
 - k. details relating to the management of exposed areas (e.g. grassing, mulching).

Advice Note:

In the event that minor amendments to the ESCP are required, any such amendments should be limited to the scope of this consent. Any amendments which may affect the performance of the ESCP or the total area of earthworks may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to Council, prior to implementation to confirm that they are within the scope of this consent.

X.4 Prior to the commencement of earthworks for the EB2 site, the consent holder must hold a pre-start meeting that:

- is located on the subject site;
- is scheduled **not less than five days** before the anticipated commencement of earthworks;
- includes representation from Auckland Council compliance monitoring officer[s]; and
- includes representation from the contractors who will undertake the works.

The meeting must discuss the erosion and sediment control measures, the works methodologies and monitoring regime, and must ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.

The following information must be made available at the pre-start meeting:

- Timeframes for key stages of the works authorised under this consent;
- Resource consent conditions;

- The finalised Site Specific Erosion and Sediment Control Plan and methodology; and
- The Chemical Treatment Management Plan.

A pre-start meeting must be held prior to the commencement of the earthworks activity in each period between October 1 and April 30 that this consent is exercised.

Advice Note:

To arrange the pre-start meeting required by Condition (X.4) please contact the Council on monitoring@aucklandcouncilgovt.nz, or 09 301 01 01. The conditions of consent should be discussed at this meeting. All additional information required by the Council should be provided 2 days prior to the meeting.

- X.5 Within ten (10) working days following implementation and completion of the specific erosion and sediment controls required by the certified Site Specific Erosion and Sediment Control Plan (SSESCP) and condition X.3, and prior to commencement of the earthwork activity within the subject area or stage referred to in the SSESCP, the consent holder must provide to Council written certification prepared by a suitably qualified and experienced person confirming that the erosion and sediment control measures have been constructed and completed in accordance with the SSESCP for that particular area or stage, the Erosion and Sediment Control Plan, Auckland Council's Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05) and any higher standard referred to through the conditions below.

Certified controls must include the decanting earth bunds, any other impoundment device dewatering measures (including design of intake structures), clean and dirty water diversions, silt fences, and stabilised construction entranceways. Information supplied, if applicable, must include:

- Details on the contributing catchment area;
- Size of structure;
- Retention volume of structure (dead storage and live storage measured to the top of the primary spillway);
- Dimensions and shape of structure;
- Position of inlets/outlets; and
- Stabilisation of the structure.

Advice Note:

Suitable documentation for certification of erosion and sediment control devices, can be obtained in Appendix C of Guidance Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 1 (GD05): Erosion and Sediment Control construction quality checklists.

Seasonal Restriction and abandonment of works

- X.6 Earthworks on the subject site must not be undertaken between 01 May and 30 September in any year, without the submission of a 'Request for winter works' for approval to Council. All requests must be renewed annually prior to the approval expiring and no works must occur until written approval has been received from Council. All winter works will be re-

assessed monthly or as required to ensure that adverse effects are not occurring in the receiving environment and approval may be revoked by Council upon written notice to the consent holder.

Advice Note:

Any request for winter works outside these periods will require information addressing the level of risk, contingency methods to manage the risk, including demonstrating that the selected contractor has established experience and record of compliance with the resource consent conditions. Any request for 'winter works' (excluding any period to protect fish spawning habitat), should include:

- *Description of scope of works proposed for the period outside 1 May to 30 September*
- *Measures to prevent sediment discharge from the specific works, especially during periods of heavy rainfall*
- *Details of the area(s) that are already stabilised*
- *Amended stream management plan and methodology/ or erosion sediment control plan detailing stabilisation to date and time / staging boundaries with proposed progression of stabilisation / re-vegetation (and integration between any stream management plan and erosion sediment control measures);*
- *Contact details of the contractor who will undertake stabilisation of the site (including dates expected on site);*
- *Contingencies proposed if contractor above becomes unavailable*
- *Details of site responsibilities, specifically for erosion and sediment controls and stabilisation processes over period.*

X.7 Immediately upon completion or abandonment of earthworks on the subject site, all areas of bare earth must be permanently stabilised to the satisfaction of the Council.

Advice Note:

Should the any earthworks be completed or abandoned, bare areas of earth associated with the works must be permanently stabilised against erosion. Measures may include:

- *The use of mulching or natural fibre matting.*
- *Top-soiling, grassing and mulching of otherwise bare areas of earth.*
- *Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Alternatively, please refer to Auckland Council Guidance Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 1 (GD05).

Wetland Set Back Requirements

X.8 All earthworks, including all erosion and sediment controls, must be setback a minimum of 10m from the edge of the natural wetland as identified in the report titled "Eastern Busway

EB2 and EB3 Residential, Terrestrial and Freshwater Ecological Effects Assessment", dated 18 July 2022. Prior to the commencement of earthworks, including construction of reticulation and outfalls authorised by this consent, a suitably qualified and experienced ecologist must identify the 10m setback from all natural inland wetlands and a sturdy, framed, protection fence must be erected along the 10m setback. The fence must remain in place until the completion of all works on the site and no work must be carried out, or materials stored, within the protected wetland area.

Advice Note:

A 'day-glow' barrier mesh or 'pigtail' fence/wire or rope would be sufficient for this purpose.

During Earthworks

- X.9 The erosion and sediment control measures must be constructed and maintained in general accordance with the Council's GD05 and any amendments to that document, except where a higher standard is detailed in the documents listed in these consent conditions, in which case the higher standard is to apply. A record of any maintenance work shall be kept and be supplied to the Council on request.
- X.10 All perimeter controls must be operational before earthworks commence. All 'clean water' runoff from stabilised surfaces including catchment areas above the site itself must be diverted away from earthworks areas via a stabilised system, so as to prevent surface erosion.
- X.11 All Decanting Earth Bunds utilised during earthworks must be designed and constructed in accordance with GD05, including having a 3:1 length to width ratio. For DEBs that will be used for treatment of dewatering or with a catchment greater than 3,000m², the DEB must be constructed with an additional 10% capacity forebay that is a minimum of 1m deep, and extended the entire width of the device, with a geotextile lined Spreader Bar.
- X.12 The decanting earth bunds and any other authorised impoundment device utilised as part of the earthworks must be chemically treated in accordance with the approved Chemical Treatment Management Plan (ChTMP) listed in condition 1, and the finalised chemical treatment details as certified by condition X.3 above.

Advice Note:

In the event that minor amendments to the ChTMP are required, any such amendments must be limited to the scope of this consent. Any amendments which affect the performance of the ChTMP may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to the Council prior to implementation to confirm that they are within the scope of this consent.

- X.13 All dewatering from the EB2 project area must be undertaken in accordance with the Dewatering Management Plan, and any updates to this plan certified by the Site Specific Erosion and Sediment Control Plans. All discharges from the EB2 project area must achieve a minimum of 100mm depth of clarity prior to discharge in accordance with Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05).
- X.14 Prior to the removal of any erosion and sediment control device required as a condition of

resource consent, written certification must be provided to the Council by a suitably qualified and experienced person to confirm that all areas of bare earth have been permanently stabilised against erosion in accordance with GD05 and can be directed to a Clean Water Diversion.

- X.15 Notice must be provided to the Council at least (2) working days prior to the removal of any erosion and sediment control works specifically required as a condition of resource consent or by the certified Erosion and Sediment Control Plan.
- X.16 The operational effectiveness and efficiency of all erosion and sediment control measures specifically required as a condition of resource or by the Erosion and Sediment Control Plans must be maintained throughout the duration of earthworks activity, or until the site is permanently stabilised against erosion.

Advice note:

As a guide, maintenance of the erosion and sediment control measures should seek to ensure that the accumulated sediment be removed from sediment retention devices prior to reaching 20% storage live storage capacity. Sediment removed from treatment devices should be placed on stable ground where it cannot re-enter the device or be washed into any watercourse.

Where maintenance work is required to ensure the effectiveness of these erosion and sediment control measures, the record should include the date, time and details on the nature of any maintenance. The site manager (or equivalent) will need to ensure regular inspections of these measures, and particularly within 24 hours after any rainstorm event. Where it is identified that erosion and sediment control measure have become ineffective and maintenance is required, Council should be contacted (email monitoring@aucklandcouncil.govt.nz).

- X.17 The consent holder must take all practical measures to prevent deposition of soil, mud, dirt or other debris on roads and footpaths outside the works area of Eastern Busway Project (Package EB2). In the event that deposition of earth, mud, dirt or other debris on any road or footpath outside the works area resulting from earthworks activity on the project area occurs, it is to be removed immediately. In no instance must roads and/or footpaths to be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses and/or receiving waters.

Advice Note:

In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent, or address discharges should they occur:

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces using street-sweepers*
- *silt and sediment traps*

- *catchpit protection*

In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned. It is recommended that you discuss any potential measures with Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact Council for more details. Alternatively, please refer to Auckland Council Guideline Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016 (GD05).

- X.18 The site must be progressively stabilised against erosion at all stages of the earthworks activities, and must be sequenced to minimise the discharge of contaminants to surface water in accordance with the approved Erosion and Sediment Control Plan.

Advice Note:

Stabilisation measures may include:

- *the use of waterproof covers, geotextiles, or mulching*
- *top-soiling, grassing and hay mulching of otherwise bare areas of earth*
- *aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

It is recommended that you discuss any potential measures with Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact Council for more details. Alternatively, please refer to Auckland Council Guideline Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016 (GD05).

- X.19 The sediment and erosion controls at the site of the works are to be inspected on a regular basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the erosion and sediment controls. A record is to be maintained of the date, time and any maintenance undertaken in association with this condition, in accordance with the certified Erosion and Sediment Control Plan, which is to be forwarded to the Council on request.

EB3R: LUC60407123 (Earthworks) and LUS60412895 (Streamworks) conditions

Duration

- 4 Resource consent LUC60407123 (earthworks) must expire 5 years from the date of issue unless it has been surrendered or cancelled at an earlier date pursuant to the RMA.
- X.1 Resource consent LUS60412895 (structures within the bed of a stream) must expire 35 years from the date of issue unless it has been surrendered or cancelled at an earlier date pursuant to the RMA.

Management Plans – Certification and Review

- 12 Unless listed in Condition 1 above or otherwise stated, all Management Plans required by the conditions of this consent must be submitted to the Council for certification at least 10 working days prior to commencement of construction works (excluding site investigations and establishment of temporary construction fencing). All works must be carried out in

accordance with the approved Management Plans. No related construction works must commence until written approval or certification of all relevant Management Plans for those works have been received, unless otherwise approved in writing by the Council.

- 13 [Deleted or, if retained, as per recommended changes in paragraph **6.7** above]
- 14 Any certified Management Plan may be amended, if necessary, to reflect any minor changes in design, construction materials, methods or management of effects to align with the conditions of consent. Any amendments are to be agreed by the Council in writing prior to implementation of any changes. Re-certification is not required in accordance with Condition **12**, if Council confirms those amendments are within scope of this consent and any changes to the draft Management Plans are clearly identified.
- 15 Any amendments to a certified Management Plan that may result in a materially different outcome must be submitted to the Council in accordance with Condition **12** to certify these amendments are consistent with the relevant condition(s) prior to implementation of any changes. Where a Management Plan was prepared in consultation with interested or affected parties, any material changes to that Plan must be prepared in consultation with those same parties.
- 16 Management Plans may be submitted in parts or stages to address activities or to reflect the staged implementation of the Project. If submitted in part, management plans must clearly show the linkage with the Management Plans for adjacent stages and interrelated activities.

Pre-commencement Requirements

- 53 All works must be undertaken in accordance with the Erosion and Sediment Control Plan (ESCP) listed in Condition **1**, unless otherwise modified by the process in Conditions **12** to **16** above, Conditions **X.4** and **X.6** below, or a relevant higher standard as referred to through the conditions below. The purpose of the ESCP is to provide overarching principles and procedures to manage the environmental impacts associated with erosion and sediment control (ESC) during construction of the Eastern Busway Project (Package EB3R).

Regional Earthworks

- X.2 Prior to the commencement of earthworks, an indicative staging plan must be submitted to the Council. The purpose of the staging plan is to identify the works areas that will correspond with the final site specific erosion and sediment control plans required by condition **X.4**.
- X.3 Prior to commencement of each stage of earthworks, a final contours plan and cut / fill plan must be prepared and submitted to Council with the finalised Site Specific Erosion and Sediment Control Plans required by Condition **X.4**. The plans must include, but not limited to, details of the existing levels, design levels and cut / fill depths of the earthworks across the entire stage of works.
- X.4 Prior to the commencement of earthworks within a given area or stage, a Site Specific Erosion and Sediment Control Plan (SSESCP) must be prepared in accordance with Auckland Council's *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region Guideline Document 2016/005* ("GD05") and submitted to Council for certification in accordance with Condition **12**. No earthworks activity within the specific

area or stage must commence until the Council has certified that the SSESCP satisfactorily meets the requirements of GD05.

The SSESCP and earthworks methodology must contain sufficient detail to address the following matters:

- a. Contour information
- b. Specific erosion and sediment control works for all earthworks activities in accordance with the site Erosion and Sediment Control Plan and Sediment Control Effects Assessment referenced in Condition 1 and in general accordance with Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05), including confirmation of:
 - i. decanting earth bund design to meet GD05, or a relevant higher standard as referred to through the conditions below;
 - ii. finalised Dewatering Procedures to ensure discharges from trenches, excavations or any discharges that will enter the stormwater reticulation or directly to the receiving environment will achieve a minimum of 100mm depth of clarity prior to discharge;
 - iii. management of water during concrete pours;
 - iv. finalised controls and methodology for MSC and retaining wall construction.
- c. Identify the location of streams;
- d. chemical treatment design and details including bench testing results and confirmation of rainfall activated methodology where possible;
- e. catchment boundaries of works and devices installed;
- f. location of the work;
- g. details of construction methods;
- h. design criteria, typical and site-specific details of erosion and sediment control;
- i. design details for managing the treatment, disposal and/or discharge of contaminants (e.g. concrete wash water);
- j. monitoring and maintenance requirements;
- k. details relating to the management of exposed areas (e.g. grassing, mulching).

Advice Note:

In the event that minor amendments to the ESCP are required, any such amendments should be limited to the scope of this consent. Any amendments which may affect the performance of the ESCP or the total area of earthworks may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to Council, prior to implementation to confirm that they are within the scope of this consent.

Streamworks

- X.5 At least twenty (20) working days prior to the commencement of streamworks, the consent holder must prepare a finalised Stream Structure and Daylighting Design Plan (SSDDP) for the EB3R stormwater outfall structures located within, or within 10m of the bed of streams, and submit to the Council for certification. The purpose of the SSDDP is to provide the detailed design of the erosion and scour protection structures associated

with the EB3R outfalls, and the reinstated stream associated with any daylighting of existing in-stream structures.

The SSDDP must include as a minimum:

- a) Detailed design of the erosion and scour protection associated with the stormwater outfalls to a stream that demonstrates in-stream structures will not exceed the lengths approved by this consent;
- b) Final stream channel design for any daylighted reach of stream;
- c) A Riparian Planting Plan that aims to enhance the ecological function of the riparian margins adjacent to the installed erosion and scour protection, and provides details for the offset planting as proposed by the report title *Eastern Busway – EB3 Residential, Freshwater Ecological Impact Assessment: EB3R Stormwater Outfalls* dated 26/01/2023, including:
 - i. Details of the riparian planting to a minimum width of 10m along 63m (189m²) of the streams identified as streams 2, 3a and 3b in the application documents;
 - ii. Details of the riparian planting, to a minimum width of 10m, associated with removal of the pipe and ‘daylighting’ of the upper reach of stream 3b;
 - iii. Plans showing riparian planting of streams to be carried out, including a list of species, numbers to be planted, their common and botanical names, method of planting, planting locations and densities Site preparation details including timing;
 - iv. Pest plant and animal control methodologies;
 - v. Planting methodologies;
 - vi. Annual planting maintenance details;
 - vii. Eco-sourcing details.

Advice Note:

For avoidance of doubt, the riparian planting to a minimum width of 10m along 63m (189m²) is for the offset of the in-stream structures. This is required to be additional to the required riparian planting associated with the daylighting of stream 3b, and the replanting requirements of the outfalls, erosion and scour protection and associated construction areas that are required to address the terrestrial ecology matters.

- X.6 Prior to the commencement of the streamworks activity, a finalised streamworks management plan (StMP), must be submitted to the Council for certification. The purpose of the StMP is to provide a finalised streamworks methodology and management measures that enables effects of streamworks to be managed during construction in accordance with best practice.

Streamworks activities must not commence until written certification is provided from the council.

The StMP must include as a minimum but not be limited to:

- a. management measures to demonstrate how erosion and sediment controls will avoid sediment or sediment laden water entering the stream in accordance with

- Erosion and Sediment Control Effects Assessment referenced in Condition 1 and best practice, including the location and details of the sediment retention device(s) to demonstrate the device meets GD05 treatment efficiencies;
- b. demonstrate the length of streamworks will be minimised to the length required to install the structure;
 - c. management of contaminants to water (e.g. hydrocarbons, construction materials);
 - d. management of native fish capture and relocation;
 - e. methodology for diverting upstream flows during the streamworks, including how sufficient flow will be maintained at all times below the site of the works to maintain in-stream biota;
 - f. a detailed methodology for the installation of the structures and
 - g. details of final streambed remediation or stabilisation upon completion of stream works.

Regional Earthworks and Streamworks

X.7 Prior to the commencement of earthworks and streamworks for the EB3R site, the consent holder must hold a pre-start meeting that:

- is located on the subject site;
- is scheduled **not less than five days** before the anticipated commencement of earthworks;
- includes representation from Auckland Council compliance monitoring officer[s]; and
- includes representation from the contractors who will undertake the works.

The meeting must discuss the erosion and sediment control measures, streamworks management plan, the earthworks and streamworks methodologies, and monitoring regime, and must ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.

The following information must be made available at the pre-start meeting:

- Timeframes for key stages of the works authorised under this consent;
- Resource consent conditions;
- The finalised Site Specific Erosion and Sediment Control Plan and methodology;
- The Chemical Treatment Management Plan; and
- The finalised Streamworks Management Plan and methodology.

A pre-start meeting must be held prior to the commencement of the earthworks activity in each period between October 1 and April 30 that this consent is exercised.

Advice Note:

To arrange the pre-start meeting required by Condition (X.7) please contact the Council on monitoring@aucklandcouncilgovt.nz, or 09 301 01 01. The conditions of consent should be discussed at this meeting. All additional information required by the Council should be provided 2 days prior to the meeting.

X.8 Within ten (10) working days following implementation and completion of the specific erosion and sediment controls required by the certified finalised Site Specific Erosion and Sediment Control Plan and the Streamworks Management Plan, and prior to commencement of the earthworks or streamworks, the consent holder must provide to

Council written certification prepared by a suitably qualified and experienced person confirming that the erosion and sediment control measures have been constructed and completed in accordance with the Erosion and Sediment Control Plan, Auckland Council's Guideline Document 2016/005 '*Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region*' (GD05) and any higher standard referred to through the conditions below. Written certification must be in the form of a report or any other form acceptable to the Council.

Certified controls must include the dewatering measures (including design of intake structures), Decanting Earth Bunds, any other impoundment device, temporary stream diversion methods, Clean Water Diversions, Dirty Water Diversions, Silt Fences, and stabilised entranceways. Information supplied if applicable, must include:

- Contributing catchment area;
- Size of structure;
- Retention volume of structure (dead storage and live storage measured to the top of the primary spillway);
- Dimensions and shape of structure;
- Position of inlets/outlets; and
- Stabilisation of the structure

Advice Note:

Suitable documentation for certification of erosion and sediment control devices, can be obtained in Appendix C of Guidance Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 1 (GD05): Erosion and Sediment Control construction quality checklists.

Seasonal Restriction and abandonment of works

X.9 Earthworks and Streamworks on the subject site must not be undertaken between 01 May and 30 September in any year, without the submission of a 'Request for winter works' for approval to Council. All requests must be renewed annually prior to the approval expiring and no works must occur until written approval has been received from Council. All winter works will be re-assessed monthly or as required to ensure that adverse effects are not occurring in the receiving environment and approval may be revoked by Council upon written notice to the consent holder.

Advice Note:

Any request for winter works outside these periods will require information addressing the level of risk, contingency methods to manage the risk, including demonstrating that the selected contractor has established experience and record of compliance with the resource consent conditions. Any request for 'winter works' (excluding any period to protect fish spawning habitat), should include:

- *Description of scope of works proposed for the period outside 1 May to 30 September*
- *Measures to prevent sediment discharge from the specific works, especially during periods of heavy rainfall*
- *Details of the area(s) that are already stabilised*
- *Amended stream management plan and methodology/ or erosion sediment control*

plan detailing stabilisation to date and time / staging boundaries with proposed progression of stabilisation / re-vegetation (and integration between any stream management plan and erosion sediment control measures);

- *Contact details of the contractor who will undertake stabilisation of the site (including dates expected on site);*
- *Contingencies proposed if contractor above becomes unavailable*
- *Details of site responsibilities, specifically for erosion and sediment controls and stabilisation processes over period.*

X.10 To protect downstream fish (inanga) spawning habitat, streamworks must not be undertaken, nor will any written approval be provided, during the spawning season (1 September to 1 December).

X.11 Immediately upon completion or abandonment of earthworks on the subject site, all areas of bare earth must be permanently stabilised to the satisfaction of the Council.

Advice Note:

Should the any earthworks be completed or abandoned, bare areas of earth associated with the works must be permanently stabilised against erosion. Measures may include:

- *The use of mulching or natural fibre matting.*
- *Top-soiling, grassing and mulching of otherwise bare areas of earth.*
- *Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Alternatively, please refer to Auckland Council Guidance Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 1 (GD05).

During Earthworks

X.12 The erosion and sediment control measures must be constructed and maintained in general accordance with the Council's GD05 and any amendments to that document, except where a higher standard is detailed in the documents listed in these consent conditions, in which case the higher standard is to apply. A record of any maintenance work shall be kept and be supplied to the Council on request.

X.13 All perimeter controls must be operational before earthworks commence. All 'clean water' runoff from stabilised surfaces including catchment areas above the site itself must be diverted away from earthworks areas via a stabilised system, so as to prevent surface erosion.

X.14 All Decanting Earth Bunds utilised during earthworks must be designed and constructed in accordance with GD05, including having a 3:1 length to width ratio. For DEBs that will be used for treatment of dewatering or with a catchment greater than 3,000m², the DEB must be constructed with an additional 10% capacity forebay that is a minimum of 1m deep, and extended the entire width of the device, with a geotextile lined Spreader Bar.

- X.15 The decanting earth bunds and any other authorised impoundment device utilised as part of the earthworks must be chemically treated in accordance with the approved Chemical Treatment Management Plan (ChTMP) listed in condition 1, and the finalised chemical treatment details as certified by condition X.4 above.

Advice Note:

In the event that minor amendments to the ChTMP are required, any such amendments must be limited to the scope of this consent. Any amendments which affect the performance of the ChTMP may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to the Council prior to implementation to confirm that they are within the scope of this consent

- X.16 All dewatering from the EB3R project area must be undertaken in accordance with the Dewatering Management Plan, and any updates to this plan certified by the Site Specific Erosion and Sediment Control Plans. All discharges from the EB3R project area must achieve a minimum of 100mm depth of clarity prior to discharge in accordance with Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05).
- X.17 Prior to the removal of any erosion and sediment control device required as a condition of resource consent, written certification must be provided to the Council by a suitably qualified and experienced person to confirm that all areas of bare earth have been permanently stabilised against erosion in accordance with GD05 and can be directed to a Clean Water Diversion.
- X.18 Notice must be provided to the Council at least (2) working days prior to the removal of any erosion and sediment control works specifically required as a condition of resource consent or by the certified Erosion and Sediment Control Plan.
- X.19 The operational effectiveness and efficiency of all erosion and sediment control measures specifically required as a condition of resource or by the Erosion and Sediment Control Plans must be maintained throughout the duration of earthworks activity, or until the site is permanently stabilised against erosion.

Advice note:

As a guide, maintenance of the erosion and sediment control measures should seek to ensure that the accumulated sediment be removed from sediment retention devices prior to reaching 20% storage live storage capacity. Sediment removed from treatment devices should be placed on stable ground where it cannot re-enter the device or be washed into any watercourse.

Where maintenance work is required to ensure the effectiveness of these erosion and sediment control measures, the record should include the date, time and details on the nature of any maintenance. The site manager (or equivalent) will need to ensure regular inspections of these measures, and particularly within 24 hours after any rainstorm event. Where it is identified that erosion and sediment control measure have become ineffective and maintenance is required, Council should be contacted (email monitoring@aucklandcouncil.govt.nz).

- X.20 The consent holder must take all practical measures to prevent deposition of soil, mud, dirt or other debris on roads and footpaths outside the works area of Eastern Busway Project (Package EB2). In the event that deposition of earth, mud, dirt or other debris on any road or footpath outside the works area resulting from earthworks activity on the project area occurs, it is to be removed immediately. In no instance must roads and/or footpaths to be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses and/or receiving waters.

Advice Note:

In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent, or address discharges should they occur:

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces using street-sweepers*
- *silt and sediment traps*
- *catchpit protection*

In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned. It is recommended that you discuss any potential measures with Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact Council for more details. Alternatively, please refer to Auckland Council Guideline Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016 (GD05).

- X.21 The site must be progressively stabilised against erosion at all stages of the earthworks activities, and must be sequenced to minimise the discharge of contaminants to surface water in accordance with the approved Erosion and Sediment Control Plan.

Advice Note:

Stabilisation measures may include:

- *the use of waterproof covers, geotextiles, or mulching*
- *top-soiling, grassing and hay mulching of otherwise bare areas of earth*
- *aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

It is recommended that you discuss any potential measures with Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact Council for more details. Alternatively, please refer to Auckland Council Guideline Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016 (GD05).

- X.22 The sediment and erosion controls at the site of the works are to be inspected on a regular basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the erosion and sediment controls. A record is to be maintained of the date, time and any maintenance undertaken in association with this condition, in accordance with the certified Erosion and Sediment Control Plan, which is to be forwarded to the Council on request.

Native fish capture and relocation

- X.23 Prior to the commencement of any streamworks, a Native Fish Capture and Relocation Plan must be submitted to the Council for certification. The purpose of the Native Fish Capture and Relocation Plan is to ensure fish will be appropriately removed prior to commencement of works from an area subject to the stream works, to avoid fish mortality. The Native Fish Capture and Relocation Plan must be prepared by a suitably qualified and experienced Freshwater Ecologist and include the following detail, but not be limited to:
- a) Methodologies to capture fish within the impact streams and wetland habitats, or justification there is no habitat for native fish present at the time of earthworks;
 - b) Fishing effort;
 - c) Details of the relocation site;
 - d) Storage and transport measures including prevention of predation and death during capture;
 - e) Euthanasia methods for diseased or pest species; and
 - f) Confirmation on the habitat availability of the relocation site to support fish at the time of streamworks.
- X.24 Native fish capture and relocation must be undertaken in accordance with the certified Native Fish Management Plan, and must only be undertaken by a suitably qualified and experienced freshwater ecologist. The freshwater ecologist must also be onsite during the dewatering process to ensure that any remaining native fish that is not caught during de-fishing are salvaged.
- X.25 The consent holder must provide a Fish Salvage Report detailing the relocation site, the species and number of freshwater fauna relocated prior to and during dewatering, to the Council within 5 days of completion of the native fish capture and relocation. These results must be uploaded into NIWA's New Zealand native freshwater Fish database.

During Streamworks

- X.26 Unless otherwise agreed in writing by the Council, the consent holder must complete the construction of the erosion and scour protection and associated streamworks activity to the stage of finalised re-vegetation and / or stabilisation of stream beds within a **5 day** period from the commencement of the activity.
- X.27 The consent holder must ensure that all exposed work areas associated with the streamworks, including the bed and banks of the stream and any adjacent overland surface flow paths (for normal flows at the time of year the works are undertaken) are stabilised at the end of each construction day.

Advice Note:

If there are any sediment and erosion control plans or measures within the floodplain or beyond, the consent holder is advised to integrate any stream works stabilisation measures with the design of sediment and control measures to avoid any sediment discharge to the stream.

- X.28 Streamworks must be carried out only during periods when all flows, up to the 24 hour 20 year return period storm event, are diverted around the area of works.
- X.29 During any periods of flow greater than the capacity of the diversion, up to the 100 year flood event, a stabilised flow path, in accordance with Auckland Council's Guidance

Document: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland region (GD05) must be provided. Any stabilised flow path must be designed and implemented to ensure:

- no scour or erosion occurs;
 - no sediment is generated or discharged to water; and
 - flows pass safely around or through the area of works, with minimum nuisance and damage to infrastructure and properties from obstruction of flows or flood debris.
- X.30 All streamworks must be undertaken in accordance with the certified streamworks management plan as required by Condition X.6. All required control measures and methodologies must be in place prior to the streamworks commencing and be maintained for the duration of the streamworks activity.
- X.31 Any changes to the approved streamworks management plan must be submitted to the Council demonstrating that the changes to the management plan incorporates best practice methodologies for managing effects from the streamworks and that the adverse effects from the streamworks remain the same or less. Any changes to the approved plan must only be implemented once certified in writing by the Council.
- X.32 All water discharged from the streamworks site and associated sediment control devices during the streamworks operation must achieve a minimum of 100mm depth of clarity prior to discharge in accordance with Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05).
- X.33 All pumps used to dewater the stream must have a 3 mm mesh screen to prevent fish from entering the pump, and be elevated to avoid pumping of sediments from the stream bed.
- X.34 Machinery must not enter the wetted cross section of the bed of the stream at any time and machinery associated with the streamworks activity must be operated (including maintenance, lubrication and refuelling) in a way, which ensures no hazardous substances such as fuel, oil or similar contaminants are discharged.

In the event that any discharge occurs, works must cease immediately, and the discharge must be mitigated and/or rectified.

Advice Note:

Refuelling, lubrication and maintenance activities associated with any machinery should be carried out away from any water body with appropriate methods in place so if any spillage does occur that it will be contained and does not enter the water body. If a construction management plan is required under any land use consent, you are advised to include any maintenance / servicing areas as part of that construction management plan.

- X.35 The use of construction materials, such as concrete products or grout, must only occur outside the wetted cross section of the bed of the stream. Any mixing of construction materials must occur outside the 100 year floodplain, and using methods so that if a spillage does occur it will be contained to avoid it entering the water body.

Advice Note:

If a construction management plan is required under any land use consent, you are advised to include any maintenance / servicing areas as part of that construction management plan.

- X.36 Any sediment or material excavated from the bed of the stream must be stockpiled outside the 100 year flood plain area, with appropriate erosion and sediment control measures in accordance with Auckland Council's Guidance Document: *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland region* (GD05).

Advice Note:

If there are any sediment and erosion control plans or measures within the floodplain or beyond, you are advised to integrate any requirement for stockpiling areas for stream bed spoil with the design of sediment and control measures to avoid any sediment discharge to the stream.

- X.37 Prior to any re-diversion of stream flows on the new erosion and scour protection, the stream bed and banks must be stabilised against erosion using best practice methods.

Advice Note:

Best practice measures may include biodegradable materials such as wool fibre and cocofibre matting.

Streamworks Construction

- X.38 The construction of the erosion and scour protection, and stream daylighting must be undertaken in accordance with the Stream Structure and Daylighting Design Plan certified by condition **X.5**.
- X.39 Any planting required by the Stream Structure and Daylighting Design Plan, must be undertaken by the end of the next planting season (April to September) following the commencement of streamworks, and maintained (including weed management) for a period of no less than 5 years or until canopy closure has been achieved.

Post-development as-built plans and Offset works

- X.40 Within twenty (20) working days following completion of the installation of the structure, the consent holder must provide a certified (signed) as-built plans that confirms that the structure, and stream daylighting, have been constructed in accordance with the approved design and ecological assessment certified by condition **X.5**.

The consent holder must engage at their own expense a suitably qualified professional engineer to prepare and certify these plans.

- X.41 Within twenty (20) working days following completion of the Riparian Planting Plan certified by condition **X.5**, the consent holder must provide information, including a location plan, to certify that planting has been undertaken in accordance with the certified Riparian Planting Plan.
- X.42 The consent holder must contact the Council to initiate the preparation of covenants for the perpetuity protection of the offset works (as certified by condition **X.5**). A copy of the updated Computer Register (record of title) showing that the covenants have been registered must be provided to the Council prior to completion of the respective offset and enhancement works.

The covenants must:

- a. Require the ongoing protection of the offset works and ecological enhancement works in perpetuity;
- b. Be drafted by the council's nominated Solicitor at the consent holder's cost; and
- c. Be registered against the Computer Register(s) (record of title) to the affected land by the consent holder at their cost; and require the consent holder to:
 - i. be responsible for all legal fees, disbursements and other expenses incurred by the council in connection with the covenant, and procure its solicitor to give an undertaking to the council for payment of the same; and
 - ii. indemnify the council for costs, fees, disbursements and other expenses incurred by the council as a direct or indirect result of the council being a party to this covenant.

7. REVIEW

Memo prepared by:

Samantha Langdon



Specialist - Earth, Streams and Trees, Specialist Unit, Resource Consents

Date:

23 March 2023

Technical memo reviewed and approved for release by:

David Hampson



Team Leader - Earth, Streams & Trees Specialist Unit, Resource Consents

Date:

24 March 2023

Appendix 1

Documents and drawings reviewed as part of the assessment for regional earthworks and streamworks:

EB2:

Title / Drawing Number: (Documents have been prepared by Eastern Busway Alliance)	Revision; Date
Report: " <i>Eastern Busway 2, Assessment of Effects on the Environment, Document Reference: EB234-1-PL-RP-Z2-000017</i> "	Rev 3, 11/08/2022
Additional information received via s92 on 4 November 2022	
Letter: " <i>Re. Response to Council further information requests for the EB2 Application Package</i> "	03/11/2022
" <i>Key Plan</i> " EB-2-R-2-PL-DG-100002,	Rev B, 25/08/2022
" <i>General Legend</i> " EB-2-R-2-PL-DG-100004,	Rev B, 25/08/2022
" <i>Ti Rakau Drive Consent Plan Sheet 1 of 9</i> " EB-2-R-2-PL-DG-1000101,	Rev B, 25/08/2022
" <i>Ti Rakau Drive Consent Plan Sheet 2 of 9</i> " EB-2-R-2-PL-DG-1000102	Rev B, 25/08/2022
" <i>Pakuranga Road Consent Plan Sheet 3 of 9</i> " EB-2-R-2-PL-DG-1000111	Rev B, 25/08/2022
" <i>Pakuranga Road Consent Plan Sheet 4 of 9</i> " EB-2-R-2-PL-DG-1000112	Rev B, 25/08/2022
" <i>Pakuranga Highway / Reeves Road Consent Plan Sheet 5 of 9</i> " EB-2-R-2-PL-DG-1000121	Rev B, 25/08/2022
" <i>Pakuranga Highway / Reeves Road Consent Plan Sheet 6 of 9</i> ", EB-2-R-2-PL-DG-1000122	Rev B, 25/08/2022
" <i>Pakuranga Highway / Reeves Road Consent Plan Sheet 7 of 9</i> " EB-2-R-2-PL-DG-1000123	Rev B, 25/08/2022
" <i>Pakuranga Highway / Reeves Road Consent Plan Sheet 8 of 9</i> " EB-2-R-2-PL-DG-1000124	Rev B, 25/08/2022
" <i>Pakuranga Highway / Reeves Road Consent Plan Sheet 9 of 9</i> " EB-2-R-2-PL-DG-1000125	Rev B, 25/08/2022
" <i>Reeves Road Flyover Consent Plan Sheet 1 of 2</i> " EB-2-R-2-PL-DG-1000131	Rev B, 25/08/2022
" <i>Reeves Road Flyover Consent Plan Sheet 2 of 2</i> " EB-2-R-2-PL-DG-1000132	Rev B, 25/08/2022
" <i>Pakuranga Hwy / Reeves Rd Flyover Plan and Longitudinal Section MCPH – Sheet 2 of 3</i> " EB-2-D-2-RD-DG-000321	Rev A 29/03/2022
" <i>Pakuranga Hwy / Reeves Rd Flyover Plan and Longitudinal Section MCPH – Sheet 3 of 3</i> " EB-2-D-2-RD-DG-000322	Rev A 29/03/2022
" <i>General Arrangement Overall Plan, Plan and Elevation</i> " EB-2-D-2-ST-DG-003105	Rev A 15/04/2022
" <i>Cover Sheet and Locality Plan</i> "	Rev A

EB-2-D-2-SW-DG-000001	22/04/2022
"General Legend" EB-2-D-2-RD-SK-000010	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 1 of 10", EB-2-D-2-RD-SK-000011	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 2 of 10" EB-2-D-2-RD-SK-000012	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 3 of 10" EB-2-D-2-RD-SK-000013	Rev A 18/07/2022
"Pakuranga Road Erosion Control Plan Sheet 4 of 10" EB-2-D-2-RD-SK-000014	Rev A 18/07/2022
"Pakuranga Road Erosion Control Plan Sheet 5 of 10" EB-2-D-2-RD-SK-000015	Rev A 18/07/2022
"SEART / Reeves Road Erosion Control Plan Sheet 6 of 10" EB-2-D-2-RD-SK-000016	Rev A 18/07/2022
"SEART / Reeves Road Erosion Control Plan Sheet 7 of 10" EB-2-D-2-RD-SK-000017	Rev A 18/07/2022
"SEART / Reeves Road Erosion Control Plan Sheet 8 of 10" EB-2-D-2-RD-SK-000018	Rev A 18/07/2022
"SEART / Reeves Road Erosion Control Plan Sheet 9 of 10" EB-2-D-2-RD-SK-000019	Rev A 18/07/2022
"SEART / Reeves Road Erosion Control Plan Sheet 10 of 10" EB-2-D-2-RD-SK-000020	Rev A 18/07/2022
"General Legend" EB-2-D-2-SW-DG-000004	Rev A 22/04/2022
"Vegetated Riprap Outfall Typical Details" EB-2-D-2-SW-DG-000021	Rev A 22/04/2022
"Vegetated Riprap Outfall 06-05 & 89-19 Sheet 2 of 8" EB-2-D-2-SW-DG-000022	Rev A 22/04/2022
"Vegetated Riprap Outfall MCC_108699 Sheet 7 of 8" EB-2-D-2-SW-DG-000027,	Rev A 22/04/2022
"TiRakau Drive Drainage Layout Plan Sheet 3 of 3" EB-2-D-2-SW-DG-000103	Rev A 22/04/2022
"Pakuranga Highway / Reeves Road Drainage Layout Plan Sheet 2 of 5" EB-2-D-2-SW-DG-000122	Rev A 22/04/2022

EB3R:

Title (Documents have been prepared by Eastern Busway Alliance)	Revision; Date
Report: "Eastern Busway 3 Residential, Assessment of Effects on the Environment, Document Reference: EB234-1-PL-RP-Z3-000018"	Rev 2, 10/08/2022
Additional information received via s92 on 10 November 2022 and 17 February 2023.	
Letter: "Re. Response to Council further information requests for EB3R Application Package"	10/11/2022
Memo: "Eastern Busway – EB3 Residential Stream Memorandum, Stormwater Effects Assessment: Streams, Document Number: EB-ME-3-PL-000001(A)"	Rev C 31/10/2022

Letter: "Re. Response to Council further information requests regarding ecological assessment for EB3R"	17/02/2023
Report: "Eastern Busway – EB3 Residential, Freshwater Ecological Impact Assessment: EB3R Stormwater Outfalls"	Rev 1 26/01/2023
"Outfall drawings" submitted as Attachment 2 to letter received 10 November 2022 and Attachment 3 to letter received 17 February 2023.	
"Cover Sheet and Locality Plan" EB-2-R-3-PL-DG-100001	Rev A 31/05/2022
"Ti Rakau Drive Consent Plan Sheet 1 of 6" EB-2-R-3-PL-DG-100131	Rev A 31/05/2022
"Ti Rakau Drive Consent Plan Sheet 2 of 6" EB-2-R-3-PL-DG-100132	Rev A 31/05/2022
"Ti Rakau Drive Consent Plan Sheet 3 of 6" EB-2-R-3-PL-DG-100133	Rev A 31/05/2022
"Ti Rakau Drive Consent Plan Sheet 4 of 6" EB-2-R-3-PL-DG-100134	Rev A 31/05/2022
"Ti Rakau Drive Consent Plan Sheet 5 of 6" EB-2-R-3-PL-DG-100135	Rev A 31/05/2022
"Ti Rakau Drive Consent Plan Sheet 6 of 6" EB-2-R-3-PL-DG-100136	Rev A 31/05/2022
"Gossamer Drive Layout Plan" EB-2-R-3-PL-SK-100140	Rev A 31/05/2022
"Ti Rakau Drive Busway Plan and Longitudinal Section MC20 – Sheet 3 of 3" EB-2-D-3-RD-DG-000303	Rev A 28/03/2022
"Ti Rakau Drive Eastbound Plan and Longitudinal Section MCEB – Sheet 3 of 3" EB-2-D-3-RD-DG-000313	Rev A 28/03/2022
"Outfall Typical Details" EB-2-D-3-SW-DG-000026	Rev A 08/04/2022
"General Legend" EB-2-D-3-RD-SK-000009	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 1 of 6" EB-2-D-3-RD-SK-000010	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 2 of 6" EB-2-D-3-RD-SK-000011	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 3 of 6" EB-2-D-3-RD-SK-000012	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 4 of 6" EB-2-D-3-RD-SK-000013	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 5 of 6" EB-2-D-3-RD-SK-000014	Rev A 18/07/2022
"Ti Rakau Drive Erosion Control Plan Sheet 6 of 6" EB-2-D-3-RD-SK-000015	Rev A 18/07/2022

Relevant to both EB2 and EB3R:

Report: "Eastern Busway EB2 and EB3 Residential, Terrestrial and Freshwater Ecological Effects Assessment, Document Number: EB234-1-PL-RP-Z2-000031"	Rev 1, 18 July 2022
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<i>"Eastern Busway EB2 and EB3 Residential, Erosion and Sediment Control Effects Assessment, Document Number: EB234-1-PL-RP-Z2-000024"</i>	Rev 1 18/07/2022
<i>"Eastern Busway EB2 and EB3 Residential, Construction Methodology Overview, Document Number: EB234-1-PL-RP-Z2-000033"</i>	Rev A, 18/07/2022
<i>"Eastern Busway – EB2/ EB3R, Erosion and Sediment Control Plan, Document Number: EB234-1-PL-RP-Z2-000037",</i>	Rev 1 25/07/2022

From: rsimonds@ftl.co.nz
To: [Warwick Pascoe](#)
Cc: [Marija Jukic](#)
Subject: BUN60407133: EB2 - 5 Reeves Rd, Pakuranga Heights & BUN60407121 : EB3R - 207 Ti Rakau Drive, Pakuranga - PA Check Groundwater
Date: Thursday, 18 August 2022 11:10:07 am

Good Morning Warwick,

Apologies for the long email, in a nutshell it's a PA in relation to dewatering and groundwater diversion. Please note the Footnote
Please forward to the processing planner

Thank You

We have undertaken a review of the following documents:

- A report titled "*Eastern Busway EB2 and EB3 Residential – Groundwater Permitted Activity Assessment*" prepared by Eastern Busway Alliance (EBA) dated 18 July 2022, Document No. EB234-1-PL-RP-Z2-000044 Rev 1, referred to as the "GPAA" below .
- A report titled "*Eastern Busway EB2 – Assessment of Effects on the Environment*" prepared by EBA, dated 28 June 2022, Document No. EB234-1-PL-RP-Z2-000017 Rev C, referred to as the "EB2 – AEE" below.
- A report titled "*Eastern Busway EB3 Residential - Assessment of Effects on the Environment*" prepared by EBA, dated 27 June 2022, Document No. EB234-1-PL-RP-Z2-000018 Rev C, referred to as the "EB3R – AEE" below.

We have combined our review of EB2 & EB3R which reflects the submitted GPAA.

Observations

-

The Project consists of the following packages:

- Eastern Busway 2 (EB2) – Pakuranga Town Centre, including the Reeves Road Flyover (RRF) and Pakuranga Bus Station
- Eastern Busway 3 Residential (EB3R) – Ti Rakau Drive from the South Eastern Arterial (SEART) to Pakuranga Creek, including Edgewater and Gossamer Intermediate Bus Stations.

and includes:

- 5km of two-lane busway
- New bridge for buses across Pakuranga Creek
- Improved active mode infrastructure (walking and cycling) along the length of the busway
- Three intermediate bus stations
- Two major interchange bus stations.

EBA state: "*A high-level conceptual groundwater model has been developed to provide an understanding of the expected groundwater levels across EB2 and EB3R. This model was developed using the geological investigation logs and active groundwater level monitoring piezometers across EB2 and EB3R. This groundwater assessment involves:*

- *Creating a hydrogeological flow map model*

- *Converting the expected maximum trenching/excavation depths into elevations (in m RL) and comparing them to local groundwater elevations*
- *Assessing if the proposed excavations are likely to extend below the top of the shallow groundwater table.”*

EBA has identified the following specific Project elements

- Stormwater drainage
- Underground utilities
- Road cuts
- Piling
- Ground improvements (if required)
- MSE walls.

EBA state: *“This groundwater assessment looks at whether the excavation of trenches for stormwater and utilities along with any excavation of new road levels will impact natural groundwater level.”*

Open Trenching

-
EBA describe the open trenching works for installation and relocation of underground services and utilities, including stormwater pipes. EBA state: *“The trenching operations will be staged operations and will comprise a cut to waste trenching excavation, civil works and a stabilised backfill. A detailed methodology for these works can be found in the construction methodology appended to the Assessment of Environmental Effects. **Water diversion for trenching associated with utility relocation is expected to take no more than 10 days.”** We note this proposed duration.*

Piling

-
EBA indicate the piles for the Reeves Road Flyover (RRF) will be greater than 1.5m in diameter however the state: *“ Piling works are to be conducted using drilling fluid, maintaining a positive pressure head inside the pile bore, and with no dewatering expected. **Therefore, groundwater inflow will not be an issue during construction. Based on this methodology, this groundwater memo will not consider the effects piling will have on natural groundwater.”** We concur with this approach.*

Excavation

-
EBA state: *“The expected earthworks are largely at or above grade with limited cuts comprising approximately 30,000m³ for EB2 and 20,000m³ for EB3R of approximately <1.5m BGL.” ... “Due to the gentle slopes of the Project area, the relatively small area of earthworks proposed for a project of this scale, and the staged nature of the works, these works are considered very unlikely to have an effect on the groundwater system. Further to this, any excavation that is expected to extend below the natural groundwater surface is expected to take no more than 10 days.” **Based on the groundwater level measurements presented in the GPAA, we concur with this assertion.***

Retaining Wall 214

-

This mechanically stabilised earth (MDE) wall is located near the Ti Rakau Drive bridge and has a maximum embedment of 0.6mbgl. EBA state: *“Both the shallow foundation of this MSE wall, and the included subsoil drain design, indicate that groundwater is unlikely to be impacted”*. **We concur with this assertion.**

Methodology & Analysis

-

EBA has created **groundwater flow maps** along the route of EB2 & EB3R and these maps are presented in Appendix C of the GPAA. EBA state: *“The data considered in this groundwater flow map (Appendix C – Flow Maps) was collected from the six piezometers installed in 2021, and two historical piezometers installed in 2018. These piezometers were selected as they contained groundwater data that had been collected over the same week, reducing the impact of climate variability”*. **We consider that this data is adequate to prepare the maps.**

EBA approach Auckland Council to obtain copies of any existing consent for groundwater takes in the vicinity of the route of EB2 & EB3R and they state: ***“There are no known current consents for groundwater takes in the EB2 or EB3R area.”***

In order to determine the **maximum excavation depths** across EB2 & EB3R, EBA has referred to the “Geometric Reference Design” for permanent excavations and the “Utilities Reference Design” and the “Stormwater Design” for temporary excavations.

EBA state: *“The geometric reference design drawings for EB2 and EB3R show that the **road is to be constructed on fill or at grade with minor cuts of approximately <1.5m BGL.**”*

EBA indicate that the temporary excavations required for the utilities trenches are expected to be shallower than the excavations required for the stormwater lines. **Hence their groundwater model has been developed using stormwater invert levels (IL) as the maximum excavation trench depths** expected during construction, which are all less than 5mbgl. **We concur with this approach.**

In order to assess whether or not these temporary excavations extend below the show groundwater table, EBA has converted trench excavation depths to relative elevations and have plotted these on the groundwater flow maps.

Assumptions

EBA outline their assumptions as follows:

- To assess the annual groundwater fluctuation, two piezometers from historic investigations have been used (DH18_103 and DH18_104)
- The levels for the road extension have been taken from appended geometric drawings, dated 13/08/2021
- Stormwater has been assumed to be the deepest underground installation and therefore will have the deepest associated trenches
- The pipe levels have been taken from the appended stormwater drawings, dated

13/08/2021 (EB2) and 17/08/2021 (EB3R).

We consider that these assumptions are valid.

In the GPAA, EBA describe the existing land-use, topography, ground conditions and the measured groundwater levels.

The ground conditions along the route are Tauranga Group alluvial deposits overlying East Coast Bays Formation (ECBF) EBA state: *“The ground conditions across this section of the Project are well understood and comprise a mixture of fine-grained soils, mainly clays, silts and sands, with a less than 0.5 m thick peat layer at about 16 m depth (RL -5 m), over rock.”* *“Near surface the soils are firm to stiff overlying a layer of saturated dense pumiceous silty fine and medium sand underlain by firm locally low strength silts and clays with sand lenses.”*

EBA has used groundwater level data from a total of eight piezometers along the route of EB2 & EB3R. Six piezometers were installed in 2021 (DH204, DH205, DH210, DH212, WB203 & WB213) and two piezometers were installed in 2018 (DH18-103 & DH18-104) The monitoring data is presented in Appendix B of the GPAA. EBA note that the screens for seven of the piezometers are set within the Tauranga Group alluvial deposits and one extends within the underlying East Coast Bays Formation (ECBF).

In relation to Chapter E7 in the “EB2 – AEE” and the “EB3R – AEE”, EBA state: *“the stormwater excavations are a road network linear trenching activity, where no one part of the trench will be open for more than 10 days, this is considered permitted activity. The piling works will involve piles with an external diameter of greater than 1.5m, which will be drilled into rock head. However, these do not exceed 1 hectare in total area and do not impede the flow of groundwater over a length of more than 20 m. Therefore, these are also considered a permitted activity.”*

Based on the groundwater level monitoring data, the groundwater flow maps and the proposed excavation levels, in, EBA has undertaken an assessment of the proposed activity against AUP (OP) Standards E7.6.1.6 (1 to 3) and E7.6.1.10 (1 to 6) in Table 4 in the GPAA and they conclude: ***“Based on the above, the works fully comply with the permitted activity rules and related standards.”***

Conclusions

-

We concur with the assessment undertaken by EBA and consider that the proposal (EB2 and EBR3 works as described above) is a Permitted Activity when assessed against AUP Standards E7.6.1.6 (1 to 3) & E7.6.1.10 (1 to 6) and a Consent for dewatering and groundwater diversion is **not** required.

If you have any queries please let me know.

Important Footnote:

In Section 6.15.2 of the “EB2 – AEE”, EBA has identified two wetlands *“within 100m of the EBA footprint”* and in Section 7.3.3 in relation to the National Environmental Standards for Freshwater (NES-FW) EBA state: *“EB2 (as part of the overall Project) qualifies as “specified*

infrastructure in the NES-F”.

EBA identifies that under NES-FW Regulation 45(3) a restricted discretionary Resource Consent is required.

The description of the activity is given as: “*The taking, use, damming, diversion, or discharge of water within, or within a 100 m setback from, a natural wetland is a restricted discretionary activity if it—*

(a) is for the purpose of maintaining or operating specified infrastructure or other infrastructure; and

(b) does not comply with any of the conditions in regulation 46(4), but does comply with the conditions in subclause (5) of this regulation.”

EBA has added the following comment: “*Stormwater discharges are proposed from two new outfalls into a mangrove dominated coastal wetland beside SEART..*

The GPAA does not provide an assessment of the construction or operational drawdown effects (if any), on the “Natural Wetland”, this assessment may be elsewhere in the Application documents, such as the Terrestrial and Freshwater Ecological Effects Assessment.

Kind Regards,

Richard Simonds – Senior Geotechnical Engineer



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Level 1, 21 El Kobar Drive, East Tamaki, PO Box 204 006, Highbrook, Auckland 2161, NZ

From: Warwick Pascoe <warwick.pascoe@aucklandcouncil.govt.nz>

Sent: Wednesday, 17 August 2022 4:16 pm

To: Richard Simonds <rsimonds@ftl.co.nz>

Subject: RE: Eastern Busway docs have arrived - please review urgently ahead of notification decision

Hi Richard,

Hopefully you wont have to download all of them!

My understanding is that the GW assessment argues that the works will comply with the PA standards

Thanks for looking at this straight away!

Technical memorandum for resource consent applications for Eastern Busway 2 (BUN60407133) and Eastern Busway 3R (BUN60407121) for works on Ti Rakau Drive, Pakuranga Road, Reeves Road, Cortina Place and the South-Eastern Highway (SEART): Archaeology

To: Celia Wong, Senior Planner, Resource Consents South 5

And to: Warwick Pascoe, Principal Project Lead, Premium Resource Consents

From: Myfanwy Eaves, Senior Specialist: Archaeology, Cultural Heritage Implementation, Heritage Unit, Auckland Council CPO

1. Application details

Applicant's name: Auckland Transport (AT) (**Applicant**)

Application number: BUN60407133 application for Eastern Busway Stage 2 (EB2) and BUN60407121 application for Eastern Busway Stage 3 (EB3R)

Activity type: Various

Site address: 5 Reeves Road, Pakuranga incorporating Pakuranga Town Centre, Reeves Road Flyover (RRF) and Pakuranga Bus station (**the Project Area**)

2. Introduction

Qualifications and relevant experience

- 2.1. My name is Myfanwy May Eaves, and I am a Senior Specialist Archaeology at Auckland Council (**Council**).
- 2.2. I have a Bachelor of Arts (BA) and Master of Arts (MA) (Hons) from Auckland University in Anthropology and Chinese. I also have a Master of Social Sciences (MSocSci) (IA) from the University of Birmingham, United Kingdom in Industrial Archaeology.
- 2.3. In my current role, which I have been in for eight (8) years, I am required to undertake technical reviews of land use applications and provide advice and assessments to Council officers on matters relating to archaeology and historic heritage.
- 2.4. Prior to my time at the Council, I studied and worked in archaeology and associated roles both overseas and in New Zealand: Australia, mainland China, England, and Wales as well as various locations around New Zealand. I have a clear understanding of matters ranging from physical

excavation, the care and documentary progression of objects (and sites) from discovery to storage and international shipping.

- 2.5. I am a member of the New Zealand Archaeological Association (**NZAA**), the International Council on Monuments and Sites NZ/ Te Mana o Nga Pouwhenua o Te Ao (**ICOMOS NZ**) and the Australasia Society for Historic Archaeology (**ASHA**).
- 2.6. Due to the overall low risk to archaeology presented by the Project, I did not consider it necessary to undertake a site visit. However, I have travelled around application site on numerous occasions and am generally familiar with the area.

Expert Witness Code of Conduct

- 2.7. I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this evidence. Other than where I state that I am relying on the advice of another person, this evidence is within my area(s) of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express. I have qualified my evidence where I consider that any part of it may be incomplete or inaccurate, and identified any information or knowledge gaps, or uncertainties in any scientific information or mathematical models and analyses that I am aware of, and their potential implications. I have stated in my evidence where my opinion is not firm or concluded because of insufficient research or data or for any other reason and have provided an assessment of my level of confidence, and the likelihood of any outcomes specified, in my conclusion.

3. Overview and scope of technical memorandum

- 3.1. The Applicant, in its capacity as a requiring authority, has given notice to the Council of its requirement for designations to develop, construct, operate and maintain the necessary structures and facilities to:
 - a. Extend William Roberts Road to connect with Cortina Place and Ti Rakau Drive.
 - b. Modify the South-Eastern Highway (SEART) off-ramp at Ti Rakau Drive.
 - c. Extend the existing Panmure to Pakuranga busway including a new bus station at Pakuranga.
 - d. Establish local walking, cycling and stormwater infrastructure.
 - e. Establish a Construction Yard at 169 – 173 Pakuranga Road.

(together, **the Resource Consent applications, as well as separate NoRs**).

- 3.2. The resource consent applications and the NoRs were publicly notified (at the request of the Applicant) on 11 March 2023.
- 3.3. I initially reviewed the resource consent applications in August 2022¹ and confirmed that there are no recorded historic heritage sites within the Project area that are identified in Schedule 14

¹ Appendix 27 with the AEE: *Eastern Busway EB2 and EB3 Residential, Archaeological Effects Assessment*, July 2022, by A Cruikshank and H Glover.

Historic Heritage Schedule to the Auckland Unitary Plan – Operative in Part (AUP OP). As I was satisfied that all matters had been addressed from a historic heritage and archaeological perspective, I made no further requests for information pursuant to s92 of the RMA.

3.4. I have reviewed all submissions for EB2 (13) and EB3R (5). I note none discuss historic heritage or archaeology specifically.

3.5. One EB2 submitter(#6 The Warehouse Group) considers the application at a higher statutory level. They state that the applications do:

(i) Not promote the sustainable management of natural and physical resources;

(ii) Not amount to and promote the efficient use and development of resources;

(iii) Not be consistent with the purpose and principles in Part 2 of the RMA;

(iv) Generate significant adverse effects on the operation and viability of [The Warehouse Pakuranga] branch; and

(v) Not warrant being upheld in terms of section 171 of the RMA.

3.6. The taking of this approach is not for this author to discuss. However, with regards to Part 2 (RMA) Matters of National significance and section 6(f) Historic heritage, I consider the recommendations supplied by the authors of the archaeological assessment (Cruikshank and Glover) as appropriate for this large-scale project.

3.7. The statutory framework they recommend is an external process under Heritage NZ Pouhere Taonga Act 2014 (HNZPTA). The HNZPTA is time-constrained to prior to 1 January 1900. In order to achieve RMA-based outcomes it is appropriate to request a minor addition to the associated monitoring methodology – the Archaeological Management Plan (AMP) – and this is suggested below as a condition.

3.8. Under the HNZPT Act, an archaeological authority (a third-party permit) allows for the destruction in part or whole of a place through controlled archaeological investigation and subsequent scientific analysis which increases the knowledge values of the place and its context in the wider area. This is relevant in Pakuranga, as most of the suburb was developed with heavy earthworks in the 1960s with no systemic archaeological survey of the area.

3.9. A controlled archaeological investigation is *replacement by record* as the archaeological place is not preserved, the archaeological place *is replaced via the retention of a sub-set of the archaeological place* and the dissemination of the results of the investigations.

3.10. Therefore, an appropriate condition is to require the applicant to share their results of any archaeological investigation with the public, to increase the knowledge and awareness of the historic heritage of Pakuranga.

4. Recommended conditions

4.1. To achieve RMA Historic heritage outcomes, an addendum to the AMP must be provided and certified by the Manager Heritage Unit (heritageconsents@aucklandcouncil.govt.nz) at least two weeks prior to earthworks commencing on site.

4.2. Matters to be included in the addendum must include (but not be limited to):

- Provision in the methodology for circa 1900 and post 1900 sites and artefacts to be recorded, and for the potential for retention of artefacts for reuse in the road reserve area (or similar) near where they are found. This reuse is to be developed between the consent holder and representatives from the Heritage Unit.
 - Final reports submitted to comply with external requirements (archaeological authority) should also be shared with the schools, and similar, in the area.² This is to enable institutions to develop an understanding of NZ history in their community.
- 4.3. Standard advice notes regarding the Accidental Discovery Rule (ADR) and the Protected Objects Act 1975 are suggested, for completeness.

Conclusion and recommendations

- 4.4. Overall, I agree with and support the recommendations contained in Appendix 27 *Archaeological Assessment*. A granted Archaeological Authority is an appropriate mechanism to guide works across this extensive project area, and this can be extended to Historic heritage through the provision of an addendum to address historic heritage matters outlined above.
- 4.5. To conclude, from an archaeological and historic heritage perspective, the Project will result in little to no risk to unknown sites or objects provided an Archaeological Authority from HNZPT is obtained prior to earthworks commencing.. The suggested methodology proposed by the Applicant is appropriate to manage any risk of damaging or destroying the historic heritage resource.

Signed:



Dated:

15 March 2023

² The Ministry of Education website lists 25 schools in the area. Both primary and secondary schools should receive a digital copy of any reporting. Also, larger institutions like, like MetLifeCare, should receive a copy too.

Technical memorandum for a notice of requirement for Eastern Busway Stage EB2 (NoR EB2) and resource consent applications for Eastern Busway Stage EB2 (BUN60407133) and Eastern Busway Stage EB3R (BUN60407121): Landscape

To: David Wren, Consultant Planner NoRs
Celia Wong, Council Planner Resource Consents

To: David Wong, Senior Policy Planner, Planning Central/South
Warwick Pascoe, Principal Project Lead Premium Resource Consents

From: Rob Pryor, Consultant Landscape Architect, LA4 Landscape Architects

1. APPLICATION DETAILS

Applicant's name: Auckland Transport (**Applicant**)

Application number: NoR EB2, EB2 BUN60407133 and EB3R BUN60407121

Site address: 5 Reeves Road, Pakuranga Heights (**EB2**) and including parts of South Eastern Arterial (**SEART**). Ti Rakau Drive, Reeves Road, Pakuranga Road and William Roberts Road; and 207 Ti Rakau Drive, Pakuranga Heights (**EB3R**) and including Ti Rakau Drive from Reeves Road to Riverhills Park at Pakuranga Creek

2. INTRODUCTION

QUALIFICATIONS AND RELEVANT EXPERIENCE

- 2.1. My full name is Robert James Pryor. I am a registered landscape architect and a Director of LA4 Landscape Architects (**LA4**), a position I have held since 1996.
- 2.2. I hold a Bachelor of Science degree in Psychology from Otago University (1980) and a post-graduate Diploma of Landscape Architecture from Lincoln University (1984). I am a registered member of the New Zealand Institute of Landscape Architects, a member of the Resource Management Law Association and a member of The Urban Design Forum NZ.
- 2.3. I have over 36 years' experience undertaking landscape assessments for clients in both the public and private sectors on a wide variety of major projects within a range of landscape settings. I specialise in the preparation of landscape and visual effects assessments and have undertaken numerous assessments.
- 2.4. I have been involved in an extensive range of local authority, public and private sector work. As landscape architect for the Wellington City Council, I was responsible for coordinating, designing,

and overseeing the implementation of the city's landscape and urban development projects. Since becoming a Director of LA4, I have specialised in visual assessment and landscape evaluation.

- 2.5. Prior to becoming a director of LA4, I worked for the firm for three years as a Landscape Architect (1993-1996). Prior to that I was a Director of Bannatyne Pryor Associates in Wellington (1989-1993) and Landscape Architect for Wellington City Council (1984-1989).
- 2.6. I am a registered member of Tuia Pita Ora, New Zealand Institute of Landscape Architects, a member of the Resource Management Law Association and member of the Urban Design Forum.

3. EXECUTIVE SUMMARY RECOMMENDATIONS

EASTERN BUSWAY STAGE 2 (EB2) NOR AND RESOURCE CONSENTS RECOMMENDATIONS

Having considered the NoR EB2 and the resource consent applications for EB2 for their natural character, landscape and visual effects considerations, and the associated set of conditions, I consider that the NoR EB2 should be recommended confirmed with amended Conditions 39 and 40 UDLP and the EB2 resource consents should be granted.

EASTERN BUSWAY STAGE 3 RESIDENTIAL (EB3R) RESOURCE CONSENT RECOMMENDATIONS

Having considered the EB3R resource consent applications for EB3R for their natural character, landscape and visual effects considerations, and the associated set of conditions, I consider that the EB3R resource consents should be granted with amended Condition 40 UDLP.

RECOMMENDED AMENDMENTS TO CONDITIONS

Amendments should be made to Conditions 39 and 40 EB2 NoR and Condition 40 EB3R resource consents to seek the following outcomes:

- a. Urban Design Landscape Plan (**UDLP**) to focus design and landscaping on the future more intensively developed environment under the National Policy Statement: Urban Development 2020 (**NPS:UD**).
- b. Additional trees should be provided on the west side of Ti Rakau Drive between Pakuranga Road and Pakuranga Highway (SEART) in EB2; the northern side of Pakuranga Highway (SEART) prior to the intersection of Ti Rakau Drive in EB2; the Reeves Road Flyover in the vicinity of William Roberts Road north; the northern side of Ti Rakau Drive between Reeves Road and William Roberts Road South in EB3R; Ti Rakau Park frontage to Ti Rakau Drive; the northern side of Ti Rakau Drive from the Ti Rakau Park frontage along to Pakuranga Creek; Ti Rakau Drive frontage to Riverhills Park; and busway station platforms at Pakuranga, Edgewater and Gossamer Stations.

NOTICE OF REQUIREMENT NOR EB2

- 3.2. The Applicant as a requiring authority has served the Council with a notice of requirement (**NoR**) for an extension of the existing Panmure to Pakuranga busway along Ti Rakau Drive, with the construction of a new Pakuranga Bus Station, the construction and operation of the Reeves Road Flyover, modifications to the SEART off-ramp at Ti Rakau Drive, and local walking, cycling and stormwater infrastructure. This is Eastern Busway Stage 2 (**EB2**) at Pakuranga Heights, generally on the roads around and through the Pakuranga Town Centre (**Project**).

EB2 RESOURCE CONSENTS

The Applicant has applied for resource consents to enable the development, construction, operation and maintenance of a new Eastern Busway Stage 2 (**EB2**) and accompanying walking and cycling facilities and stormwater infrastructure and a Reeves Road Flyover at Pakuranga Heights, generally on the roads around the Pakuranga Town Centre (**Project EB2** BUN60407133).

EB3R RESOURCE CONSENTS

- 3.3. The Applicant has applied for resource consents to enable the development, construction, operation and maintenance of a new Eastern Busway Stage 3R (**EB3R**) and accompanying walking and cycling facilities and stormwater infrastructure at Pakuranga Heights, generally on Ti Rakau Drive between Reeves Road and Riverhills Park at Pakuranga Creek (**Project EB3R** BUN60407121).
- 3.4. The NoR EB2 and EB2 resource consent application were publicly notified (at the request of the applicant) on 21 November 2022, and submissions on the NoR EB2 and EB2 resource consent application closed on 19 December 2022. EB3R resource consent application was publicly notified and submissions closed on 1 February 2023.
- 3.5. I have reviewed the Applicant's NoR EB2 and EB3R, and the relevant supporting information with reference to the requirements of relevant provisions in the Auckland Unitary Plan (Operative in Part) (**AUP-OP**) and overarching policy set out the National Policy Statement: Urban Development 2020 (**NPS:UD**), to assist the preparation of the Council's reporting planners' reports under s42A of the RMA.
- 3.6. More specifically, my technical memorandum assesses natural character, landscape and visual considerations and the associated effects on amenity associated with the NoR and resource consent applications and will cover the following matters:
 - a. Summary of the NoR and resource consent Project (Section 4)
 - b. Assessment of Natural Character, Landscape and Visual Effects (Section 5)
 - c. Mitigation measures (Section 6)
 - d. Reeves Road Flyover landscape effects (Section 7)
 - e. Statutory considerations (Section 8)
 - f. Submissions relevant to landscape and visual amenity considerations (Section 9)
 - g. Recommendations and conditions (Section 10)
- 3.7. In preparing this technical memorandum, I have reviewed the following documents relevant to the NoR EB2 and EB2 and EB3R resource consent applications:
 - a. EB2 Assessment of Effects dated 11 August 2022 (**AEE**) and EB3R AEE 17 August 2022
 - b. EB2 Proposed Conditions Set (AEE, Appendix 3)
 - c. EB3R Proposed Conditions Set (AEE, Appendix 4)
 - d. EB2 and RRF Combined Plans (AEE, Appendix 4) and EB3R Consent Plans 19 August 2022
 - e. EB2 and EB3R Landscape, Ecological and Arboricultural Mitigation Plans (AEE, Appendix 5 and 3)

- f. EB2 and EB3R Natural Character, Landscape and Visual Effects Assessment (AEE, Appendix 21 and 18)
- g. EB2 and EB3R Open Spaces Effects Assessment (AEE, Appendix 32 and 8)
- h. Section 92 further information response dated 3 November 2022 (**Section 92 Response**) including its Attachments
- i. Submissions received on the NoR EB2 and on both EB2 and EB3R resource consent applications.

4. SUMMARY OF THE PROJECT

4.1. The Eastern Busway has been developed to meet the following objectives (**Project Objectives**):

- Provide a multi modal transport corridor that connects Pakuranga and Botany to the wider network and increases access to a choice of transport options
- Provide transport infrastructure that integrates with existing land use and supports a quality, compact urban form
- Provide transport infrastructure that improves linkages, journey time and reliability of the public transport network
- Contribute to accessibility and place shaping by providing better transport connections between, within and to the town centre
- Provide transport infrastructure that is safe for everyone

4.2. The Eastern Busway NoRs, if confirmed, will:

- Designate land in the AUP:OP to authorise works relating to the construction, operation, and maintenance of the Project, subject to conditions;
- Authorise land use activities that would otherwise require resource consent under District Plan provisions under section 9(3) of the RMA; and
- Restrict the use of land that would prevent or hinder works to which the designation relates, without the requiring authority's consent.

EB2 NoR

4.3. The EB2 NoR is for the construction, operation, and maintenance of the Eastern Busway Stage 2 on land between the intersection of Ti Rakau Drive/ South-Eastern Highway (SEART) and Pakuranga Road/William Roberts Road/Reeves Road, Pakuranga.

Key features of the Project include:

- an extension of the existing Panmure to Pakuranga busway, through and past the Pakuranga Town Centre, with the construction of a new Pakuranga Bus Station
- the construction and operation of the Reeves Road Flyover
- modifications to the SEART off-ramp at Ti Rakau Drive
- local walking, cycling and stormwater infrastructure.

- 4.4. The EB2 section of the Project commences from the intersection of Ti Rakau Drive and Pakuranga Road, connecting with EB1, and traverses west along Ti Rakau Drive to the intersection of SEART. The north-south extent of EB2 is between SEART and Pakuranga Road along Reeves Road and William Roberts Road. The main components of EB2 are:

Busway and Pakuranga Town Centre Bus Station

A segregated dedicated two-way busway is proposed along Ti Rakau Drive to provide prioritised access for bus services between Pakuranga Town Centre and Botany. From Pakuranga Road to SEART, the busway will run on the northern side of Ti Rakau Drive.

Reeves Road Flyover (RRF)

The RRF will provide two general traffic lanes in each direction connecting SEART to Pakuranga Road, to reduce local traffic congestion along Pakuranga Road and Ti Rakau Drive. The RRF will start opposite Paul Place Reserve, pass over Ti Rakau Drive and Reeves Road, before finishing at a new intersection with Pakuranga Road. Traffic lanes for the RRF will be elevated and run through the centre of SEART, requiring the relocation of the SEART off-ramp to the north of the existing off-ramp.

Walking and Cycling Facilities

EB2 includes improvements to active transport infrastructure and connections. This includes a new cycleway, improved footpaths, and new pedestrian crossings. These works will improve the safety and connectivity of walking and cycling links across Pakuranga Town Centre.

Supporting Works

A range of works will be undertaken in support of the EB2 package. This includes the relocation of network utility services, new street lighting, earthworks, removal of vegetation, landscaping, stormwater upgrades, environmental restoration and mitigation and temporary construction sites.

EB3R RESOURCE CONSENTS

- 4.5. The EB3R section of the busway is a continuation of EB2 from the intersection of SEART and Ti Rakau Drive, with the proposed dedicated busway proceeding centrally along Ti Rakau Drive towards Gossamer Drive and Riverhills Park in the east. EB3R will largely occur within land vested as road or land currently owned by Auckland Transport. The construction of EB3R will take a staged approach to minimize disruption to the existing road network and its users. The main components of EB3R are:

Edgewater and Gossamer Intermediate Bus Stations

EB3R includes two intermediate bus stations on Ti Rakau Drive, located within the vicinity of Edgewater Drive and Gossamer Drive. Both stations will have separate platforms for eastbound and westbound bus movements. A range of street furniture and structures will also be constructed, such as modular bus shelters pedestrian linkages, electronic messaging signage, seating and cycling storage facilities.

Western Bridge Abutment

EB3R includes construction of the western bridge abutment for a new future bridge across Pakuranga Creek. The abutment will be located within the area that is currently the south-

eastern section of Riverhills Park. Only the bridge abutment is included in the EB3R package of works. The remaining parts of the bridge will form part of the EB3C approval package.

Walking and Cycling Facilities

Provision has been made for walking and cycling along the route of EB3R. This includes footpaths and uni-directional cycleways located on either side of Ti Rakau Drive from SEART to Gossamer Drive. Signalised pedestrian crossings will be provided at key intersections along Ti Rakau Drive, including adjacent to the proposed Edgewater bus station.

Associated changes to the road network

The proposed changes to the road network include lane arrangement and intersection reconfigurations and changes to the parking arrangement and access to Edgewater Drive Shops. Changes are also proposed to the access arrangements for residential properties along the EB3R alignment. New westbound lanes for general traffic will be established within the land which has been acquired by Auckland Transport and will be vested as road once it becomes operative, as the busway alignment replaces the existing westbound lanes.

Supporting Works

A range of works will be undertaken in support of the EB3R package. This includes the relocation of network utility services, new street lighting, removal of vegetation, earthworks, landscaping, stormwater upgrades, environmental restoration and mitigation and temporary construction sites.

5. ASSESSMENT OF NATURAL CHARACTER, LANDSCAPE AND VISUAL EFFECTS

Eastern Busway Stage 2 – EB2

5.1. Applicant Assessment of Natural Character, Landscape and Visual Effects

5.2. The applicant's assessment states (Chapter 6):

The EB2 works involve construction activities that are primarily focused within the road corridors focused around the Pakuranga Town Centre. The key construction activities include the realignment of SEART, construction of the Reeves Road Flyover, works along Pakuranga Road, cul-de sac heads along William Roberts Road, widening of Ti Rakau Drive, street enhancements and construction of stormwater outfalls.

EB2 is focused around the Pakuranga Town Centre within an established urban environment. Key arterial roads surrounding the Pakuranga Town Centre and part of EB2 include SEART, Ti Rakau Drive and Pakuranga Road. The area includes a range of commercial properties focused within and around the town centre, with residential properties and open space radiating out.

*As works tend to occur along the road corridor, in an environment which is modified, effects are generally contained to the designation or just beyond in the case of viewing audiences. During construction, the greatest **landscape effects** will be due to the removal of vegetation, being moderate adverse. However, this will be temporary, occurring for a short period prior to replacement mitigation planting. Once replacement planting has established, residual effects on vegetation during operation are considered to be low beneficial.*

*There will be some effects to the **open space** values within the EB2 area, with the greatest effects being on Paul Place Reserve. In relation to Paul Place Reserve, the project will impact*

aspects of this reserve due to the realignment of the road corridor in addition to the proposed SEART off ramp. This will result in adverse effects considered low during construction, remaining as low adverse during operation. Effects are considered to be low during construction and operation due to the loss of the southern portion of the reserve due to the realignment of SEART. Works will have a slight impact on the edges of Fairburn Reserve, considered to be very low during construction. Works will result in low adverse effects in relation to Bus Stop Reserve principally due to the proposed works in relation to the stormwater outfall. Works will however be temporary, with the areas of open space being reinstated following construction. It is considered that this will result in very low neutral effects following construction.

In relation to urban development and land use, it is considered any effects during construction will be low adverse due to the removal of land uses (particularly residential) as a result of the project alignment. Following construction, it is anticipated that any residual space that is suitable for development will in future be developed, in line with the underlying zoning. Overall, it is considered residual effects will be very low neutral. The landscape characteristics of the EB2 area will change however much of the works will occur within the road corridor. The greatest change will be as a result of the construction of the RRF. Overall, effects on **landscape character** during construction will be moderate, reducing to low once the project is completed.

Natural character effects within the coastal environment will be limited due to the broadly modified and managed nature of the area. Any effects on the natural character values during construction are likely to be no more than low adverse, reducing to very low neutral (i.e., essentially the same condition as currently observed), once the project is complete.

Landform effects will principally be as a result of grading to accommodate the proposed road levels and surfaces with much of the earthworks occurring within or alongside the existing road corridors. Some works are proposed along the margins of the Tāmaki River in relation to the proposed stormwater outfalls resulting in localised effects. Overall landform effects during construction are anticipated to be low adverse. During operation, following completion of the project, and considering the permanent (but limited) change to the topographical values, it is considered effects will be very low adverse.

Vegetation effects during construction will involve the removal of 61 protected trees (i.e. trees that require resource consent to be removed) and 177 non-protected trees (i.e. trees that can be removed without resource consent). Prior to mitigation planting, it is considered that effects on vegetation values will be moderate adverse, however such effects will be temporary. Following completion of the project (including implementation and establishment of tree planting), effects will reduce. 351 trees will be planted throughout the corridor in addition to suitable supportive lower planting such as ground covers. The planting palette is focused on indigenous species that relate to the site and coastal environment and once fully established it is considered any residual effects will be low beneficial.

In relation to effects on **landscape features**, it is considered that there will be up to low adverse effects during construction, these would be upon open space, the coastal environment of the Tāmaki River, the vegetated embankments as well as views of Maungarei / Mount Wellington. Following construction, it is considered that residual effects overall would be very low. In considering urban development and land use, any construction effects are anticipated to be low adverse, with change occurring along the edges of the areas. Following construction, effects will be very low neutral with any further change anticipated to be in relation to future redevelopment of areas of land, vacated as part of the project.

Natural character effects will result from works within the coastal interface in relation to the proposed outfalls. The effects are anticipated to be low adverse during construction, reducing to very low neutral once the project is complete during operation.

In considering **visual effects**, the greatest visual effects are anticipated to be on those residential viewing audiences adjacent to the construction of EB2, in addition to those in the open grass area to the north of the Pakuranga Community Centre. The effects on these viewing audiences would be up to moderate-high. Such effects may remain for some residents (particularly those along William Roberts Road), which are proximate to the RRF following construction.

LA4 Assessment of Natural Character, Landscape and Visual Effects – EB2

5.3. The EB2 works are largely contained within a highly modified urban environment influenced by the Pakuranga Town Centre and surrounding roading network including Pakuranga Road, Pakuranga Highway (SEART) and Ti Rakau Drive. The works are largely contained within the road corridor which reduces the sensitivity of the environment to change as proposed by the Project.

5.4. In terms of **landscape effects**, the removal of 61 protected trees and 177 non-protected trees within the road reserve and private land would result in a moderate adverse effect. The Landscape, Ecological and Arboricultural Mitigation Plans illustrate the proposed landscape mitigation planting, ecological mitigation planting, grass areas and specimen trees (including grades of 45L, 80L and 160L). Approximately 350 trees are to be planted as part of the mitigation for EB2. I consider that this will assist to mitigate the tree removal in some areas but note that there are large areas of the Project where no tree planting is proposed.

5.5. The Eastern Busway Alliance response to the pre-lodgement comments on street tree omissions was:

“In terms of determining the omission of trees, while landscaped areas were considered, specialists have worked with the EBA design and construction team given the constraints of existing and proposed utilities and services which cannot be moved or relocated to an alternative location. Transport Design Manual standards and ongoing asset maintenance was also considered during this process.”

5.6. Areas of concern in EB2 include the northern side of Pakuranga Highway (SEART) prior to the intersection of Ti Rakau Drive which shows a 30m plus width of grassed road berm with tree plantings restricted to the residential boundary. Large grade trees (160L) would be beneficial in this location to reduce the scale of the RRF (noting the presence of Transpower’s HV transmission lines in the vicinity). Similarly the 7m wide paved median strip along Ti Rakau Drive in the vicinity of the Pakuranga Station is devoid of any vegetation and would benefit from large grade trees. Additional trees should also be provided on the west side of Ti Rakau Drive between Pakuranga Road and Pakuranga Highway (SEART) and around the Reeves Road Flyover in the vicinity of William Roberts Road north.

5.7. The EB2 works would impact on a number of **open space** areas in the vicinity including Fairburn Reserve, Bus Stop Reserve, Paul Place Reserve. Works on Fairburn Reserve will be restricted to the northern and eastern boundaries through the realignment of the Pakuranga Road / Ti Rakau Drive intersection with very low adverse landscape effects. Bus Stop Reserve is required for works in relation to the stormwater outfall connection and would result in low adverse landscape effects. Paul Place Reserve located alongside SEART would be impacted by the Project due to the proposed realignment of the road corridor including the SEART off-ramp. The

works would require the removal of a large area of grassed open space. As the reserve is largely used as passive open space primarily for pedestrian connectivity between the surrounding residential area and Pakuranga Town Centre I consider there would be low adverse landscape effects.

- 5.8. In terms of **landscape character** it is considered that there will be a high degree of change to the character of the area particularly during construction activities. This will be resultant from earthworks, construction equipment and machinery, temporary construction footbridge, realignment and alteration of roads and berms and the construction of the RRF. This would result in adverse landscape character effects for the duration of the works. The works are largely in the vicinity of the road corridor which will reduce their impact. Construction of the RRF is within the corridor and is a permitted activity. Following construction and implementation of the Landscape, Ecological and Arboricultural Mitigation Plans I consider there would be low adverse landscape character effects.
- 5.9. Effects on **natural character** will be restricted to earthworks and dredging of the coastal margins and CMA to construct the stormwater outfalls. Any adverse effects during construction are considered to be low, and very low following construction.
- 5.10. Temporary **visual effects** will result from construction activities, elements and structures during the course of the Project. Permanent visual effects will result following the construction of the Project and include the completed elements and structures including the RRF, realigned road corridor, lighting poles, signage and proposed landscape mitigation planting and street trees.
- 5.11. In terms of recreational viewing audiences in Paul Place Reserve, Bus Stop Reserve and Fairburn Reserve I consider there would be low adverse visual effects due to the extent of works and degree of visibility. Recreational users of the Pakuranga Community Centre and surrounding grounds would be most affected by the construction activities of the RRF and completed flyover structure. For this viewing audience there will be moderate to high adverse visual effects during and following construction.
- 5.12. For commercial viewing audiences, their sensitivity to change would be low due to commercial activities being an established part of the area and as such there will be low adverse visual effects. Travelling viewing audiences are transient in nature and views would be experienced for a short duration. Views would also be experienced along the general alignment of an existing road corridor and the visual effects would not be too dissimilar to those currently experienced (apart from the new RRF). I consider for this audience the adverse visual effects would be low and anticipated in such an environment.
- 5.13. Residential viewing audiences would be the most sensitive to change, living locally and occupying a large area along the edges of EB2, particularly along SEART and Ti Rakau Drive. These residents are also located within the environs of the existing road corridor. The residential properties along Ti Rakau Drive between Palm Avenue and Pakuranga Highway (SEART) and the newly exposed 'front row' properties accessed off Tiraumea Drive will be exposed to close views towards the RRF. During construction activities there will be moderate to high adverse visual effects due to the proximity of the works and the disruption it will bring. Following construction the adverse visual effects will be moderate. Views from more distant residential areas would be filtered by intervening vegetation and buildings within the line of sight. Views from these areas would be within the context of the existing built form and road corridor and the adverse visual effects would be low.

Eastern Busway Stage 3 Residential – EB3R

Applicant Assessment of Natural Character, Landscape and Visual Effects

5.14. The applicant's assessment states (Chapter 6):

EB3R works are focused along the Ti Rakau Drive road corridor with the key construction activities being the widening of Ti Rakau Drive to allow for a dedicated busway and cycleway, the western Ti Rakau Bridge abutment and street enhancements. Stormwater outfalls will be required which will affect the CMA and works will also take place within Ti Rakau Park and Riverhills Park. To widen Ti Rakau Drive, a number of residential properties along the southern side of the road corridor will be removed.

*During construction, **landform effects** will largely be a result of grading to accommodate new road levels and surfaces. Some works will be required on the coastal interface in relation to the proposed outfalls. Overall, it is considered that landform effects during construction will be low, reducing to very low adverse during operation.*

***Effects on vegetation** will be as a result of tree removal along the road corridor and within affected residential properties and parks. It is considered that adverse effects during construction will be low moderate however such effects will be temporary, reducing to very low beneficial effects once new planting, with a particular focus on indigenous tree species, will be established.*

***Effects on open space** during construction will be low adverse for Ti Rakau Park where works affect the southern portion. Works in Riverhills Park will be greater in magnitude and result in moderate adverse effects. Works within Freemantle Place Esplanade Reserve will result in very low adverse effects due to the proposed outfall occurring during construction. Once the project is completed, effects will generally reduce however it is recognised that the removal of open space as a result of the Project will result in residual adverse effects.*

*During construction, the **landscape features** of EB3R are considered to have low-moderate adverse effects as a result of the project impacting areas of open space. Residual effects however are generally considered to be beneficial due to the proposed enhancements to Ti Rakau Park and Riverhills Park as a result of the project. Effects on the urban development and land use are considered to be low adverse during construction, with low beneficial effects following construction.*

*Effects on **landscape character** are considered to be low-moderate, reducing to low following project completion.*

*In relation to **natural character effects**, these are considered to be low adverse during construction, reducing to very low neutral once the project is complete.*

***Visual effects** will also be greater during construction, with the highest effects on residential viewing audiences located adjacent to EB3R, in particular the properties on the southern side of Ti Rakau Drive that are currently located one section back from the road which will become the new road frontage. Following construction it is anticipated that any residual effects on these viewing audiences would be low adverse.*

LA4 Assessment of Natural Character, Landscape and Visual Effects – EB3R

- 5.15. In terms of effects on **open space** during construction, works in Ti Rakau Park involve the removal of a number of trees required for the William Roberts Road extension. The Landscape Ecological and Arboricultural Mitigation Plan includes no details for mitigation planting in this area. This mitigation planting needs to be addressed. Works in Riverhills Park will be greater in magnitude and result in the removal of 72 mature trees along Ti Rakau Drive and Gossamer Drive to facilitate the Gossamer Station and rotation of the No. 1 playing field. The Open Spaces Effects Assessment (**OSEA**) notes that mitigation planting will include tree replacement at 3:1 ratio with a total of 216 native trees, however these are not included in the Landscape Ecological and Arboricultural Mitigation Plan with only 14 trees indicated adjacent to the Pakuranga Creek. This mitigation planting needs to be addressed. The NCLVEA noted that during construction, the landscape features of EB3R are considered to have low-moderate adverse effects as a result of the Project impacting areas of open space. It considered that residual effects however are generally considered to be beneficial due to the proposed enhancements to Ti Rakau Park and Riverhills Park as a result of the Project. I am uncertain as to how this conclusion was reached given that the Landscape Ecological and Arboricultural Mitigation Plans do not show these enhancements.
- 5.16. In terms of **landscape effects**, tree removal along the road corridor (primarily the western side), within affected properties and within Ti Rakau Park and Riverhills Road will have adverse landscape effects. The Landscape, Ecological and Arboricultural Mitigation Plans illustrate the proposed landscape mitigation planting, ecological mitigation planting, grass areas and specimen trees (including grades of 45L, 80L and 160L). I consider that this will assist to mitigate the tree removal in some areas but note that there are large areas of the Project where no tree planting is proposed. Areas of concern include the Ti Rakau Park frontage to Ti Rakau Drive; the northern side of Ti Rakau Drive from the Ti Rakau Park frontage along to Pakuranga Creek; as Ti Rakau Drive frontage to Riverhills Park; and busway station platforms at Edgewater and Gossamer Stations.
- 5.17. Effects on **natural character** will be restricted to earthworks and dredging of the coastal margins and CMA to construct the stormwater outfalls. Any adverse effects during construction are considered to be low and very low following construction.
- 5.18. In terms of **landscape character** it is considered that there will be a high degree of change to the character of the area particularly during construction activities. This will be resultant from earthworks, construction equipment and machinery, road widening, realignment and alteration of roads and berms. This would result in adverse landscape character effects for the duration of the works. The works are largely in the vicinity of the road corridor which reduces their impact. The most noticeable change in landscape character will be for the newly exposed dwellings on the southwestern side of Ti Rakau Drive. Following construction and implementation of the Landscape, Ecological and Arboricultural Mitigation Plans I consider there would be low adverse landscape character effects.
- 5.19. Residential viewing audiences would be the most sensitive to visual change, living locally and occupying a large area along the edges of EB3R, particularly Ti Rakau Drive. These residents are also located within the environs of the existing road corridor. Temporary **visual effects** will result from construction activities, elements and structures during the course of the Project. Permanent visual effects will result following the construction of the Project and include the completed elements and structures, realigned road corridor, lighting poles, signage and proposed landscape mitigation planting and street trees. The highest adverse visual effects will be on the residential viewing audiences located adjacent to EB3R, in particular the properties on

the southwestern side of Ti Rakau Drive that are currently located one property back from the road which will become the new road frontage. Following construction. And implementation of the Landscape, Ecological and Arboricultural Mitigation Plans it is anticipated that any adverse visual effects on these viewing audiences would be low.

6. MITIGATION

- 6.1. The NCLVEA notes in considering the nature of the Project and the anticipated change to the receiving environment, there are a number of measures which will help to mitigate the natural character, landscape and visual effects associated with the Project. It is recommended that such measures are included as part of EB2 and EB3R and have been considered in this assessment of mitigating landscape and visual effects. The NCLVEA notes that (Section 7):

The implementation of mitigation measures ensures adverse effects as a result of the project are appropriately managed and provides for enhancement opportunities. Mana whenua engagement is a key step in the process and mana whenua should continue to be engaged in in relation to Urban Design and Landscape Design aspects.

A series of Landscape Ecological and Arboricultural mitigation plans have been provided as part of them application which are appended to this assessment (refer Appendix 3: Landscape, Ecological and Arboricultural Mitigation Plans). This series of plans depicts the anticipated level of mitigation planting across the EB2 and EB3R areas and have been taken into account when determining the residual /operational effects.

An Urban Design and Landscape Plan (UDLP) will also be prepared to ensure high quality design and environmental outcomes including consideration of above ground structures. Mitigation planting in this plan should reflect the extent of planting illustrated in the aforementioned Landscape Ecological and Arboricultural mitigation plans. During construction, measures should also be in place to limit adverse natural character, landscape and visual amenity effects. This includes, but is not limited to, reducing the extent of works as far as practicable, installing appropriate construction hoarding with interpretive panels and minimising night time lighting with consideration of neighbouring residential properties in particular.

- 6.2. The following mitigation measures are proposed as part of the Project.

MANA WHENUA ENGAGEMENT

- 6.3. Engagement with Mana whenua is a key component of the Project including input into the UDLP. This includes but is not limited to:
- appropriate use of Te Aranga principles
 - treatment of residual open spaces
 - the selection and supply of plant species and planting designs
 - the potential for enhancement of habitat associated with the kawau (black shag) and other identified areas of customary importance such as the Tāmaki River
 - opportunities to enhance cultural values and sites by incorporating cultural recognition
 - elements into features of the project. Cultural recognition elements may include Māori carvings and/or art, pou and/or other cultural features and/or markers to recognise and provide for the cultural relationship of mana whenua with the land directly affected by the project.

6.4. I consider that engagement with Mana whenua is a key component to the Project by providing opportunities to enhance cultural values and sites by incorporating cultural recognition.

URBAN DESIGN AND LANDSCAPING PLAN

6.5. A comprehensive UDLP is to be prepared. This includes but is not limited to:

- Urban design details for the works
- Landscape design details for the works
- Type, number and location of replacement tree planting
- Lighting, signage and street furniture details
- All large specimen trees to be a minimum planter bag size of 160 litre, small trees to be 45 litre, shrubs 2 litre and groundcovers 1 litre
- Measures to achieve a safe level of transition for cycling and walking modes, including providing advanced warning and signage to cyclists and pedestrians, and safe and convenient cycling transitions at the ends of the project
- Design features and methods for cultural expression and in order to reflect outcomes agreed through mana whenua engagement
- Design features associated with the management of stormwater, including both hard and soft landscaping
- A maintenance plan and establishment requirements over a three-year period for landscaping and five years for specimen trees following planting.

6.6. I note that the objective of the UDLP is to “mitigate any landscape and visual effects of the Eastern Busway Project”. The UDLP is required to include ‘urban design’ details for specified works, such as stations and road widenings and the RRF, and ‘landscape design’ details for specified works in parks and within Ti Rakau Drive. I consider that the proposed UDLP condition, for a required management plan and its certification, will achieve the landscape and visual effects outcomes, as has largely been achieved in EB1.

6.7. In my pre-lodgement Technical Review, dated 19 August 2022, I noted that:

The government’s National Policy Statement on Urban Development (NPS-UD) came into force in August 2020. The NPS-UD directs Auckland Council to enable more building height and housing density within and around Auckland’s city centre, metropolitan centres and rapid transit stops such as train and busway stations. It would be useful to understand how the proposed mitigation measures have addressed potential intensification and increased building height and scale within the EB2 and EB3R sites.

6.8. I concur with Mr Trevor Mackie, consultant urban designer/planner for Council, that the landscape and visual effects to be managed and the performance required of the mitigation in the UDLP should have more of a focus on the future environment, which will likely have a greater scale and intensity of built environmental than the existing environment. A focus on the future environmental context, as well as the existing environment, would be beneficial in terms of the size and scale of the mitigation tree plantings proposed.

CONSTRUCTION SPECIFIC MITIGATION MEASURES

- 6.9. Mitigation measures to be implemented during construction are outlined under Section 7.3 including limiting works areas, minimising earthworks, minimising vegetation removal, installing construction hoardings with interpretive material regarding the project and minimising construction lighting.

DESIGN AND IMPLEMENTATION MITIGATION MEASURES

- 6.10. Design and Implementation Mitigation Measures are outlined under Section 7.4 covering:

- Road Corridor
- Reeves Road Flyover
- Bus Stations
- Vegetation

- 6.11. In terms of the Road Corridor the NCLVEA recommends:

- *Design the road to be the minimum width and have the minimum number of lanes practicable, particularly at intersections, to reduce the visual and physical severance impacts of the corridor.*
- *Provide trees and planting along the transport corridor to reinforce the existing planted character, soften the interface with adjoining uses, reduce the apparent width of the corridor, define views towards landmarks and highlight key nodes*

- 6.12. As noted earlier there are large areas of the Project devoid of tree planting with the applicant citing 'the constraints of existing and proposed utilities and services which cannot be moved or relocated to an alternative location' being the reason. In my opinion further consideration should be given for additional tree planting throughout the Project area.

- 6.13. I address the Reeves Road Flyover under Section 7 of this report.

- 6.14. I consider the bus station mitigation measures are appropriate and include high quality design outcomes and incorporation of tree planting to signalise the stations along the corridor. I note however that a number of the bus stations lack significant tree plantings, particularly the Pakuranga Station in EB2 and Edgewater and Gossamer Stations in EB3R which should be addressed further.

- 6.15. In terms of vegetation mitigation the NCLVEA recommends:

- *Consider initiatives from local Iwi to incorporate culturally significant planting or landscaping elements*
- *Use street tree planting for shade as well as to soften the edges of the transport corridor, creating a pleasant walking and waiting environment*
- *Use planting to screen off the Project from adjacent private properties where adverse effects will require mitigation and frame orientation views, while increasing the amenity of the Project.*

LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS

- 6.16. Landscape Ecological and Arboricultural Mitigation plans have been prepared which demonstrate the proposed locations of the landscape and tree planting areas (Appendix 5, AEE).

The plans illustrate the proposed extents of landscape mitigation planting, ecological mitigation planting, and new tree locations. The plans also indicate plant grades (45L, 80L and 160L). As part of the pre-lodgement Technical Review, I requested an indicative tree planting, shrub, and groundcover planting list or palette to better understand the overall design intent and effectiveness of the mitigation proposed. An indicative list of indigenous specimen trees and typical groundcovers has been provided, subject to co-design workshops with Mana Whenua and consultation with Auckland Council. Large size trees (height 10m+, width 8m+) include pohutukawa (*Metrosideros excelsa*), totara (*Podocarpus totara*), puriri (*Vitex lucens*), pukatea (*Laurelia novae-zealandiae*) and kahikatea (*Dacrycarpus dacrydioides*). Medium size trees (height 6m+, width >5m) include pohutuakwa (*Metrosideros excelsa* 'Mistral'), titoki (*Alectryon excelsus*) kohekohe (*Dysoxylon spectabile*) and kowhai (*Sophora mycrophylla*). Medium size upright trees (height 5m+, width <4m) include rewarewa (*Knightia excelsa*), ribbonwood (*Plagianthus regius*), pigeonwood (*Hedycarya arborea*) and nikau palm (*Rhopalostylis sapida*).

6.17. I consider that tree species selected are appropriate specimens and will assist to integrate the Project into the landscape. As outlined earlier, I do have concerns at areas within the Project that are sparse of tree plantings including the western side of Ti Rakau Drive between Pakuranga Road and SEART, northeastern side of Te Rakau Drive between Matson Road and Roseburn Place, northern side of Pakuranga Highway (SEART) in the vicinity of the RRF, and between the RRF and William Roberts Road North.

6.18. The applicant should consider the provision of more trees to these areas in line with the Design and Implementation Mitigation Measures – Vegetation:

- *Use street tree planting for shade as well as to soften the edges of the transport corridor, creating a pleasant walking and waiting environment*
- *Use planting to screen off the Project from adjacent private properties where adverse effects will require mitigation and frame orientation views, while increasing the amenity of the Project.*

7. REEVES ROAD FLYOVER LANDSCAPE AND VISUAL EFFECTS

7.1. The NCLVEA has not specifically undertaken a detailed assessment of the Reeves Road Flyover (RRF). Mention is made throughout the report as follows:

In considering visual effects, the greatest visual effects are anticipated to be on those residential viewing audiences adjacent to the construction of EB2, in addition to those in the open grass area to the north of the Pakuranga Community Centre. The effects on these viewing audiences would be up to moderate-high. Such effects may remain for some residents (particularly those along William Roberts Road), which are proximate to the RRF following construction¹.

There would be a visual intrusion into the view of Maungarei, visible along Ti Rakau Drive as a result of the temporary construction footbridge, and the RRF. It is considered that this sight line is of some local significance. Construction would impact this view towards Maungarei / Mount Wellington and visually bisect the feature. With consideration of the views towards the Maunga, being more or less retained along the route north bound, views under the RRF would frame the Maunga, as it will be visible from the RRF and below it².

¹ NCLVEA, page 29

² NCLVEA page 34

However, it is acknowledged that the works located along Reeves Road (such as RRF), would be some of the most visually disruptive activities and elements during the construction phases. Additionally, the elevated elements along this road corridor would ultimately bring shade effects on these viewing audiences³.

Conversely, although mature vegetation occurs along the southern edge of SEART between the road corridor and residents along Bolina Crescent and Tiraumea Drive, some residents may obtain partial views of works in relation to the RRF, particularly the abutments. With the above considered, there will be up to moderate-high adverse visual effects for residential viewing audiences located adjacent to the construction of EB2⁴.

The northern end of William Roberts Road will experience a change in character from a residential street, albeit one that experiences high volumes of traffic during peak times, to a cul-de-sac fronting a highway onramp. The loss of houses on the western side and presence of the RRF will result in moderate adverse effects⁵.

The greatest change for these viewing audiences will be restricted to those within the commercial area to the south of Reeves Road, as there will be the presence of the RRF within their view. Nevertheless, the degree of the views towards the new structure (within a road corridor), will be partial and largely backdropped by the existing Pakuranga Plaza buildings. With this considered alongside the lower sensitivity to change, it is determined that the adverse visual effects upon these viewing audiences will be very low⁶.

Residential viewing audiences adjacent to the EB2 section of the Project will experience the greatest degree of change due to their proximity to the site. There would remain a large amount of visual change for those residential viewing audiences in close proximity to EB2, particularly the RRF. However, the alignment of this structure sits within the road corridor (zone) and as such the RRF is largely a permitted activity, particularly along SEART and the Reeves Road section. Notwithstanding this, residential viewing audiences near to these areas would experience views of the overhead structure, which would likely form a new element in the skyline. Specifically, these viewing audiences would be those located along the southern portion of Dale Crescent, 17-23 Ti Rakau Drive, 9 Bolina Crescent and 3 to 13 Tiraumea Drive. For those residents along the southern portion of Dale Crescent, the road corridor will also be brought closer to their southern boundary however mitigation planting (i.e., tree and shrub planting), in addition to the fence will assist in screening views of the at grade road corridor. With the above in mind, it is considered that the magnitude of change for these residents would be low-moderate. It is not considered that views of the RRF would occupy their entire outlook and the RRF structure would appear within the context of the road corridor. Given their higher sensitivity to change, it is determined that adverse visual effects on these proximate viewing audiences would be moderate.

Residents along William Roberts Road would also experience adverse effects due to their proximity to the RRF present in a location which was occupied by residential housing. It is also considered that such an element is not anticipated within a Town Centre Zone. With the above in mind it is considered any residual effects during operation would be moderate-high for these residential viewing audiences.

³ NCLVEA page 37

⁴ NCLVEA page 38

⁵ NCLVEA page 47

⁶ NCLVEA page 49

Change for those other residents adjacent to the site would be restricted to one aspect of their outlook, and the change would remain associated with those anticipated within a road environment. Furthermore, the Project would facilitate a range of streetscape enhancements. For those viewing audiences with these views, it is considered that the magnitude of change would be low. It is therefore considered that low adverse visual effects would be anticipated for those residential viewing audiences located adjacent to the EB2 section of the Project⁷.

The key adverse effects will be due to the RRF and overall widening / prominence of the road corridor. However overall, works will broadly remain aligned to the road corridor environment⁸.

7.2. I note that Design and Implementation Measures are proposed for the RRF to minimise adverse landscape and visual effects including:

- *Ensure height of structures is as low as practicable*
- *Consider visually aesthetic designs or graphics and/or vegetation to make abutments less visually intrusive*
- *Design the edges and undersides of structures visible at close range to be visually interesting, contribute to a safe walking environment and assist (rather than obscure) wayfinding*
- *Achieve design consistency between the designs proposed for the RRF using similar treatments for elements such as abutment walls, barriers, under bridge areas, signage and lighting*
- *Consider Project users experience and perception of its structures, from shared paths, adjacent public spaces, local roads and private properties. Particularly from existing residential areas around both ends of the RRF and from the space under the RRF*
- *Integrate abstract cultural heritage design and themes able to be appreciated by pedestrians, cyclists and drivers while minimising embellishment and ensure the level of design detail is in accordance with user's distance and speed*
- *Ensure retaining walls are consistent and reinforce the overall aesthetic of structures of the Project*
- *Ensure that the overall profile of the RRF is consistent with the specimen design with an integrated shape of structural elements (i.e. piers, crossheads and side barriers) with a simple continuous form and seamless connections between elements*
- *Preserve Ti Rakau Drive outward views to Mount Wellington with a slender profile and minimal visual prominence of the RRF's elements, particularly piers, crossheads, and beams*
- *Minimise visual clutter ensuring all structures and associated elements (i.e. barriers, signage, light poles and services) are integrated within the RRF design rather than being an addition*
- *Use light under the RRF to enhance the quality, safety and night patronage of the space underneath*
- *Ensure all structure surfaces, associated elements (i.e. signage, light poles, etc) and their surroundings discourage graffiti, are easy to maintain and will not trap litter.*

⁷ NCLVEA page 40

⁸ NCLVEA page 54

7.3. Visual simulations have been provided in Appendix 2 – Graphic Supplement, illustrating the proposed RRF in the landscape context with proposed mitigation planting. VS1 is taken from Te Rakau Drive looking south, VS2 from Ti Rakau Drive looking north, VS3 from Reeves Road looking west and VS4 from William Roberts Road looking south. No commentary is provided for the visual simulations however.



7.4. I concur that the RRF works are largely in the vicinity of the road corridor and within the context of an established transport orientated environment which reduces their impact. Construction of the RRF is within the road corridor and is a permitted activity. The Design and Implementation Measures would also assist to integrate the structure into the landscape.

7.5. I consider it would be useful to have more commentary regarding the landscape and visual effects of the RRF presented at the hearing.



Existing View (Panorama)



Proposed View (with landscape mitigation)

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Viewpoint Details
NZTM Easting : 1 760 711.5 mE
NZTM Northing : 5 912 896.8 mN
Elev. 50m/5g Height : 9.0m / 1.5m
Date of Photography : 24 Apr 12 Dec 2021 NZDT

Horizontal Field of View
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

DRAFT

AMETI - EASTERN BUSWAY 2 (EB2)
View from Ti Rak u Drive looking North
Date: June 2022 Revision: 1
Plan prepared by Boffa Miskell Limited
Project Manager: chris.bentley@boffamiskell.co.nz | Drawn: P/Mo/My | Checked: RGO

VS
2



Existing View (Panorama)



Proposed View (with landscape mitigation)

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Viewpoint Details
NZTM Easting : 1 760 951.6 mE
NZTM Northing : 5 913 122.9 mN
Elev. 50m/5g Height : 10.0m / 1.5m
Date of Photography : 12 Apr 17 Dec 2021 NZDT

Horizontal Field of View
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

DRAFT

AMETI - EASTERN BUSWAY 2 (EB2)
View from Rees Road looking West
Date: June 2022 Revision: 1
Plan prepared by Boffa Miskell Limited
Project Manager: chris.bentley@boffamiskell.co.nz | Drawn: P/Mo/My | Checked: RGO

VS
3



<p>www.boffamiskell.co.nz</p>	<p>This plan has been prepared by Boffa Miskell Limited on the specific instructions of our Client. It is issued for our Client's use in accordance with the agreed scope of work. This plan or portions of it may appear in other publicly available documents. Boffa Miskell Limited does not accept any liability for information from other external sources. It has been assumed that it is accurate. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions for the content that may arise from information provided by the Client or any external sources.</p>	<p>Vertical Details</p> <p>NZTM Easting : 1 706 976.2 mE NZTM Northing : 5 913 237.2 mN Date of Photography : 11 Oct 2021 NZDT Data Sources : EB234-F-RO-MD-FZ-ROAD_DESIGN_EB2.dwg EB-2-D-2-ST-MD-003100-0 & EB-2-D-2-ST-MD-003110-0</p>	<p>Horizontal Field of View : 90° Projection : Rectilinear Image Reading Distance @ A3 is 29 cm</p>	<p>DRAFT</p>	<p>AMET1 - EASTERN BUSWAY 2 (EB2) View from William Roberts Rd looking South</p>	<p>vs 4</p>

8. STATUTORY CONSIDERATIONS

AUCKLAND UNITARY PLAN (OPERATIVE IN PART)

- 8.1. Objective B2.2.1(1) of the AUP-OP Regional Policy Statement (**RPS**) seeks to achieve a quality compact urban form that enables, amongst other things, a high-quality urban environment, efficient provision of new infrastructure, improved and more effective public transport, greater social and cultural vitality and reduced environmental effects.
- 8.2. In terms of Objective B2.3.1(1) relating to creating a quality built environment and the suite of supporting policies, I consider the requirements of the UDLP will be important to ensure the design of the bus stations and associated access infrastructure and walking and cycling facilities, creates a quality built environment that responds to the intrinsic qualities of the sites and the area.
- 8.3. In terms of the RPS policy framework relating to natural heritage, I note that the busway and stations and surrounding environs do not include any Outstanding Natural Features (**ONF**) or Landscapes (**ONL**). The stormwater outfalls (new and altered) associated with EB3R will discharge into the Tamaki River and its tributaries, some of which are Significant Ecological Areas, and involve ecological restoration planting.

9. SUBMISSIONS RELEVANT TO LANDSCAPE AND VISUAL AMENITY CONSIDERATIONS

- 9.1. I have reviewed the submissions in relation to the EB2 NoR and the EB2 and EB3R resource consents. No submissions raise landscape or visual effects issues.

10. RECOMMENDATION AND CONDITIONS

ADEQUACY OF INFORMATION

- 10.1. The above assessment is based on the information submitted by the Applicant as part of the applications for NoR EB2 and the EB2 and EB3R resource consents. I consider that the information submitted is sufficiently comprehensive to enable the consideration of natural character, landscape and visual effects considerations and the associated effects on amenity:
- a. I consider that the level of information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the AUP-OP.
 - b. The extent and scale of any adverse effects on the environment in terms of natural character, landscape and visual effects are able to be assessed.
 - c. Persons who may be adversely affected are able to be identified.

EB2 NOR AND RESOURCE CONSENTS RECOMMENDATIONS

- 10.2. Having considered the NoR EB2 and the resource consent applications for EB2 in their natural character, landscape and visual effects considerations, and the associated set of conditions, I consider that the NoR EB2 should be **recommended confirmed with amended Conditions 39 and 40** UDLP and the EB2 resource consents should be **granted**.

EB3R RESOURCE CONSENT RECOMMENDATIONS

- 10.3. Having considered the EB3R resource consent applications for EB3R in their natural character, landscape and visual effects considerations, and the associated suite of conditions, I consider that the EB3R resource consents should be **granted with amended Condition 40**.

AMENDMENTS TO CONDITIONS

- 10.4. The amendments to Conditions 39 and 40 EB2 NoR and 40 and EB3R resource consents should seek the following outcomes:
- a. The UDLP is required to focus design and landscaping on the future more intensively developed environment under the NPS:UD.
 - b. Additional trees should be provided on the west side of Ti Rakau Drive between Pakuranga Road and Pakuranga Highway (SEART) in EB2; the northern side of Pakuranga Highway (SEART) prior to the intersection of Ti Rakau Drive in EB2; the Reeves Road Flyover in the vicinity of William Roberts Road north; the northern side of Ti Rakau Drive between Reeves Road and William Roberts Road South in EB3R; Ti Rakau Park frontage to Ti Rakau Drive; the northern side of Ti Rakau Drive from the Ti Rakau Park frontage along to Pakuranga Creek; Ti Rakau Drive frontage to Riverhills Park; and busway station platforms at Edgewater and Gossamer Stations.



Rob J Pryor

Registered NZILA Landscape Architect

15 March 2023



Specialist Unit

To:	Celia Wong, Senior Planner; Warwick Pascoe, Principal Project Lead
CC:	Alan Moore, Principal Specialist
From:	Kala Sivaguru, Senior Specialist-Coastal
Date:	14 March 2023

1.0 APPLICATION DESCRIPTION

Application and Property Details

Applicant's name:	Auckland Transport (AT) & Eastern Busway Alliance (EBA)
Activity type:	Coastal structure (Stormwater infrastructure)
Purpose description:	<ul style="list-style-type: none">- Construction and upgrade of existing stormwater infrastructure in the CMA, occupation of the CMCA with the stormwater infrastructure and to use the stormwater infrastructure to discharge stormwater into the CMA.- Mangrove removal associated with the construction and occupation of the infrastructure in the CMA.
SAP number	BUN60407133 & BUN60407121
Site address:	Tamaki River

2.0 PROPOSAL, RULES, SITE AND LOCALITY DESCRIPTION

2.1 Proposal and Rules

A description of the proposal is contained in the following Application Reports titled:

- "Eastern Busway 2, Assessment of effects on the environment", prepared by Tim Hegarty, dated 11/08/22.
- "Eastern Busway 3 Residential, Assessment of effects on the environment" prepared by Nathan Keyte, 10/08/22.

Overview of the Project:

The Eastern Busway Project (the 'Project') forms part of the Auckland Manukau Eastern Transport Initiative (AMETI) which includes a dedicated busway and bus stations between Panmure, Pakuranga and Botany town centres.

The Eastern Busway Project (the 'Project') includes:

- 5km of two-lane busway
- A new bridge for buses across Pakuranga Creek
- Improved active mode infrastructure (walking and cycling) along the length of the busway
- Three intermediate bus stations
- Two major interchange bus stations.

The programme includes the following works which do not form part of the Project:

- Panmure Bus and Rail Station and construction of Te Horeta Road (completed)
- Eastern Busway 1 (EB1) – Panmure to Pakuranga (completed).

The Project consists of a number of consenting packages.

Auckland Transport (AT) & Eastern Busway Alliance (EBA), the applicants, are seeking resource consent for the Eastern Busway Stage 2 (EB2) and Stage 3 Residential (EB3R).

Eastern Busway Stage 2 (EB2)

EB2 forms part of the wider Eastern Busway Project (the Project), a multi-stage transport project being undertaken between Panmure and Botany to improve the transport networks across southeast Tāmaki Makaurau Auckland.

EB2 is located at Pakuranga Town Centre and encompasses works on Ti Rakau Drive, Pakuranga Road, Reeves Road, Cortina Place and the South-Eastern Highway (SEART).

EB2 commences from the intersection of William Roberts Road and Pakuranga Road (connecting with EB1) and traverses west to the Ti Rakau Drive / Reeves Road / SEART intersection (EB3R).

A range of works are proposed in support of the EB2 package. This includes the relocation of network utility services, new street lighting, earthworks, removal of vegetation, landscaping, stormwater upgrades, environmental restoration and mitigation and temporary construction sites.

The Application Report states that EB2 works will involve new and upgraded stormwater infrastructure that will be built and operated in accordance with Council's Healthy Water's (Healthy Waters) network discharge consent (the NDC).

The EB2 footprint will rely on three existing stormwater outfalls and two new stormwater outfalls (Figure 1 below). These outfalls all discharge stormwater directly to several small branches of the Tāmaki River.

The Application Report mentions that the two new stormwater outfalls will be constructed immediately south of SEART, with their location dictated in part by the need to avoid the Transpower underground electricity transmission cables running along the SEART corridor.

Eastern Busway Stage 2 (EB2)

Outfall 7 (P98086C)

- Two new outfalls will be constructed, with energy dissipation and erosion control structures as per typical detail. Works in the CMA for both pipes are required. Approximately 800m² for outfall 7 and 370m² vegetation removal for outfall 8/11 are proposed.

8/11 (New outlets 06-05 and 89-18).

- Construction involves 2,087m² of temporary occupation of the CMA. Permanent occupation of the CMA for the outlet involves 1,375m².
- 370m² of vegetation will need to be removed outside/adjacent to the CMA. 3,462 m² of vegetation will need to be removed within the CMA.

Eastern Busway 3 Residential (EB3R)

EB3R forms part of the wider Eastern Busway Project (the Project). The EB3R section of the Project comprises a dedicated urban busway from Pakuranga Town Centre in the west to Pakuranga Creek in the east. This includes the provision of two new intermediate bus stations at Edgewater Drive and Gossamer Drive, new cycle lanes, improved footpaths, and stormwater improvements.

EB3R commences at the intersection of Reeves Road, SEART, and Ti Rakau Drive in the west (where the proposed EB2 package of works finishes) and proceeds for 1.8km along Ti Rakau Drive before terminating at the western shore of Pakuranga Creek.

EB3R works will involve new and upgraded stormwater infrastructure that will be built and operated in accordance with Council's Healthy Water's (Healthy Waters) network discharge consent (the NDC).

The Application Report states that stormwater to be discharged from within the EB3R footprint will rely on existing outfalls and one new outfall. These outfalls all discharge directly into several small branches of the Tāmaki River. Outfall 2 (MC_108719) will be upgraded and require approximately 16m² of permanent occupation of the CMA by the vegetated side embankment (Figure 1). This upgrade is required to avoid other underground infrastructure and to provide suitable discharge flow gradients.

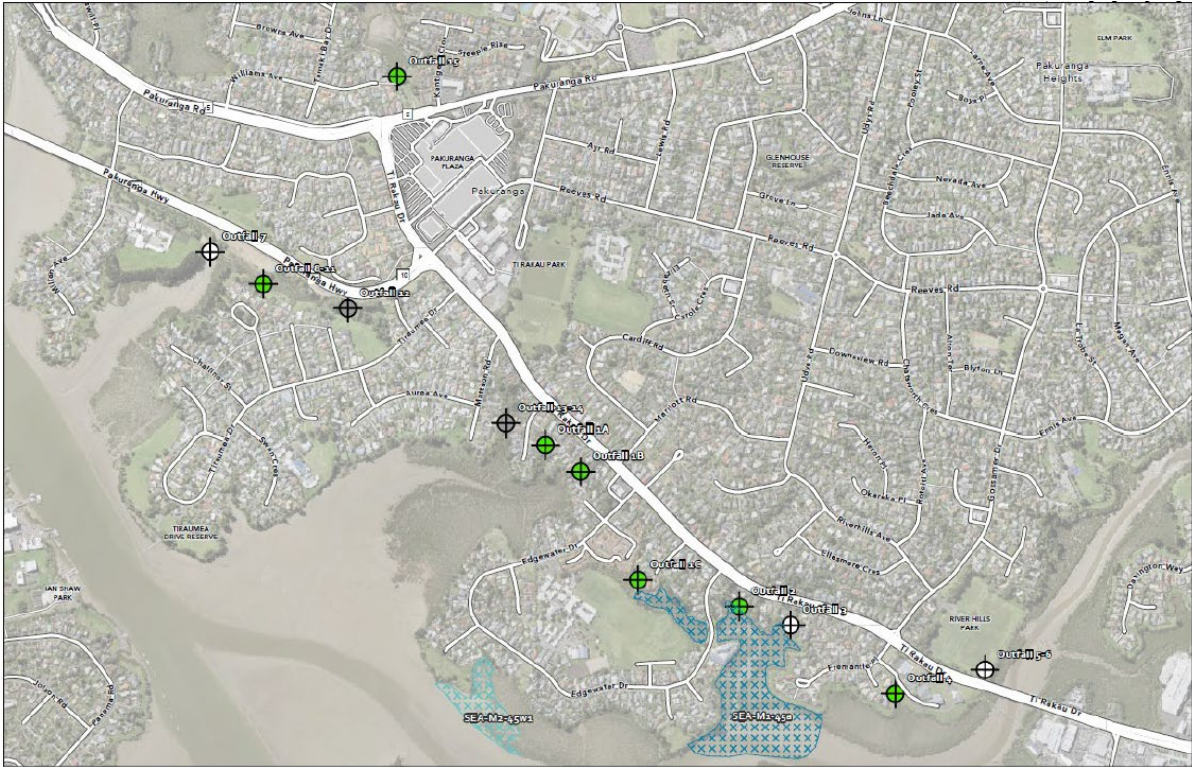


Figure 1: Proposed and existing EB2 and EB3R stormwater outfall sites (Marine Ecological Report, Appendix 28 & 20)

The outfalls proposed will feature a culvert discharging via a wingwall. Discharged stormwater will flow downwards across rip rap (or similar), before passing into the CMA.

The proposed works in the CMA which are relevant to my assessment are summarised below:

Eastern Busway 3 Residential (EB3R)

2 (MCC-108718 and 108719)

- There will be a new connection to MCC-108718 and outfall upgrade. Vegetation outside/adjacent to the CMA over 400m² will be removed.
- MCC-108719 will also be upgraded to the typical detail, with works within CMA
- Construction involves temporary occupation of the CMA of approximately 42.5m²
- Permanent occupation of the CMA for the outfall involves 16m².
- Vegetation removal within the CMA involves 58.5m².

5-6 (Riverhills Waterway Outfall)

- Construction involves temporary occupation of the CMA, and vegetation removal over approximately 90m².
- Vegetation removal outside of the CMA will occur over 250m².

It is noted that no works are proposed within the CMA in relation to a new bridge in this application. The Application Report states that construction of the western abutment is proposed for a future bridge across Pakuranga Creek, adjacent to the existing Ti Rakau Drive bridge.

This memo covers assessment of effects only from the structures (outfall & rip rap), and vegetation removal proposed in the CMA, the memo does not address the effects from the discharge associated with the infrastructure as it is covered under the Network Discharge Consent (NDC) held by Healthy Waters.

Auckland Unitary Plan Rules

Activity	AUP (OIP) Rules relevant to the activities
Construction, occupation of the CMCA with the stormwater infrastructure and to use the infrastructure to discharge stormwater into the CMA.	Table F2.19.10, Rule (A133): Infrastructure CMA structures not otherwise provided for, as a Discretionary Activity.
Mangrove removal within the CMA for the construction of infrastructure and their associated occupation and use.	Table F2.19.10, Rule (A50): Mangrove removal, not otherwise provided for, as a Discretionary Activity.
Construction related temporary structures in the CMA, occupation of the CMCA with, and use the structure for construction for more than 40 working days	Table F2.19.10, Rule (A121): Construction of CMA structures and buildings unless provided for, as a Discretionary Activity.

Whilst the Application Reports did not include the consent trigger, Rule A121, this rule is included to cover the consent for construction related structures/coffer dam for the proposed infrastructure construction in the CMA.

2.2 Existing consent

No consent information was provided for the existing outfalls.

2.3 Site description

AUP (OIP)

The subject site is:

- GCM zone
- A Coastal Inundation 1% AEP plus 1m Control

EB2

EB2 is located within Pakuranga, a suburb in the southeast of Tāmaki Makaurau Auckland. Pakuranga is a residential suburb, which is connected to the wider region by the South-Eastern Highway (SEART), Pakuranga Road and Ti Rakau Drive

To the west and south of Pakuranga is the Tāmaki River, a large tidal waterbody which runs from Waitemata Harbour southwards to Ōtāhuhu /Papatoetoe. The Tāmaki River has experienced degradation from historic land clearance and urban development, but is still an important waterbody for mana whenua, native species, and recreational users.

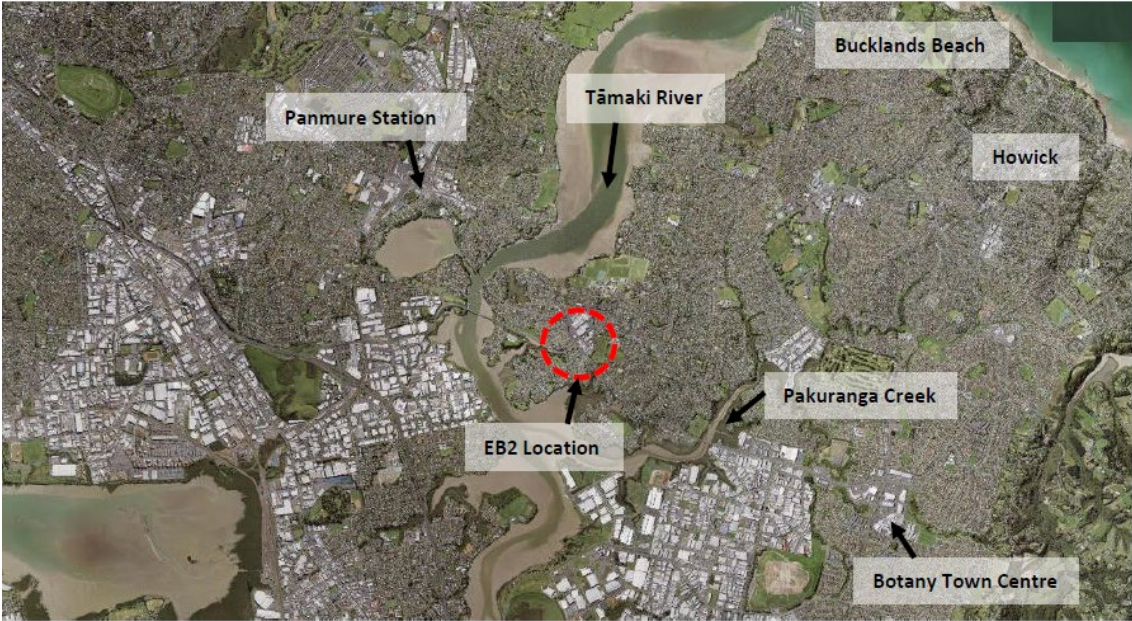


Figure 2. General location of EB2

EB3R

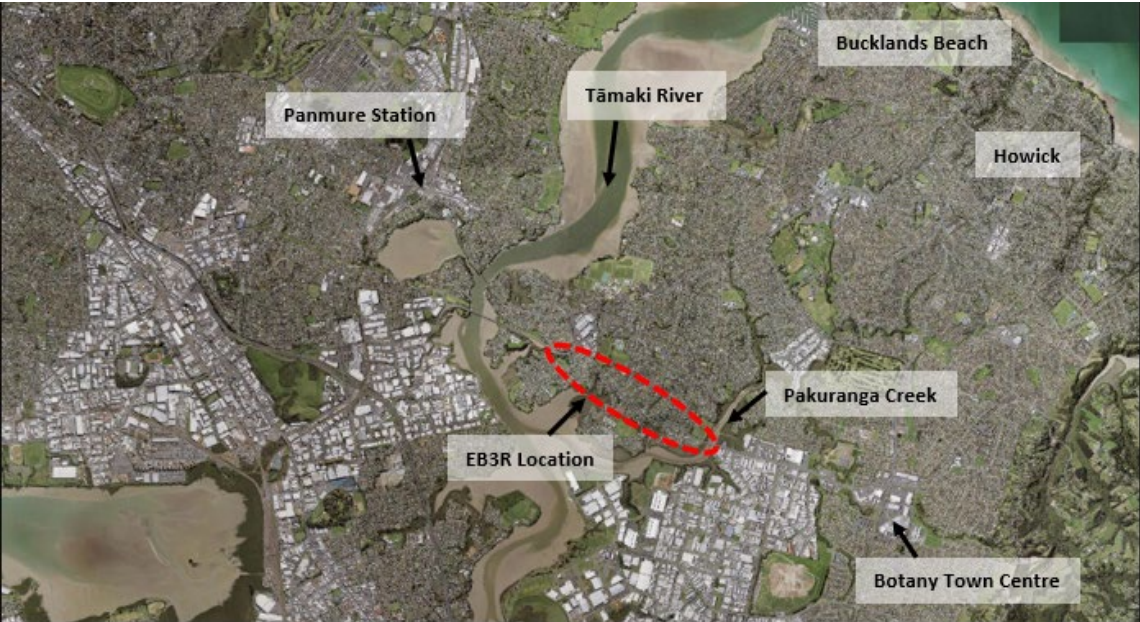


Figure 3: General location of EB3R

The EB3R area encompasses Ti Rakau Drive from Pakuranga Town Centre to Pakuranga Creek and includes the residential properties beside Ti Rakau Drive's westbound traffic lanes.

Summary of ecological values provided in the Applicant's assessment:

- All marine environments associated with the stormwater outfalls within EB2 and EB3R had an overall ecological value of low-moderate to low.

EB2

- Stormwater outfall 7 is mangrove habitat with native shrubs on margins, moderate benthic invertebrate abundance (dominated by oligochaetes), low species richness (4) and Shannon-Wiener diversity (0.2), sediments comprising >80% silt and clay, the concentration of zinc above GV (600 mg/kg), habitat modified. Overall, low ecological values.
- Stormwater outfall 8/11 is a mangrove habitat with no other vegetation, benthic invertebrate abundance low (dominated by gastropods and polychaetes), species richness approximately 12, Shannon-Wiener moderate at 1.1, silt and clay approximately 80%, zinc above DGV, less modified site compared to other outfalls. Overall, low -moderate ecological values.

EB3R

- Outfall 2 – mangrove habitat with weedy margins, abundant discarded rubbish and debris, no avifauna breeding habitat but some foraging habitat present, gastropods dominant in the benthic invertebrate infaunal community, species richness moderate (7), Shannon-Wiener Diversity low (0.2), sediment contains greater than 50% silt and clay, zinc concentration in sediment above DGV, habitat modified. Overall, low ecological values.
- Outfall 5/6 comprises mangrove habitat with predominantly exotic vegetation on the margins, low benthic invertebrate abundance (20), species richness (<4) and Shannon-Wiener diversity (0.7), sediments comprising >80% silt and clay, concentration of zinc in surface sediment above DGV threshold, habitat modified. Overall, low ecological values.

Avifauna

- While the Project (EB2 and EB3R) lies within a small part of a SEA identified for wading bird values (and is in close proximity to another), no such species were observed foraging or roosting in that area during site visits at low tide. However, *Threatened* and *At Risk* coastal species have been recorded in the wider marine environment.
- No banded rail footprints were observed.
- The Project provides potential foraging habitat for native coastal avifauna species with species ecological values ranging from low (*Not Threatened*) to high (*At Risk – Declining*), noting that banded rail were not observed during surveys, but given their cryptic nature, still could be occasionally present in the zone of influence (ZOI).

3.0 TECHNICAL ASSESSMENT OF EFFECTS

3.1 Applicant's assessment of effects on the CMA

Coastal processes

The applicant states that given the sheltered location and low energy environment of the Tamaki River and Pakuranga Creek, these tidal creeks are not subject to any coastal processes.

Effects on Marine ecology including avifauna

The applicant's assessment prepared by Boffa Miskell (Dr. De Luca), dated 11.07.2022 has provided the following:

The potential effects on marine and coastal avifauna values in EB2 and EB3R relate to the construction of stormwater outfall and discharge dissipation structures, vegetation removal, permanent occupation of CMA, loss or and disturbance to breeding and foraging habitat for coastal avifauna.

Construction effects summary:

- Remobilisation of contaminants in EB2 and EB3R currently bound in sediment during earthworks or vegetation removal is an environmental risk that can be managed through using best practice erosion and sediment control devices including coffer dams or bunds.
- Loss of coastal avifauna foraging habitat (mangroves) as a result of vegetation removal for some outfalls and occupation of CMA for some outfalls / dissipation structures, is considered to have a very low overall level of effect on avifauna values given the small quantities of vegetation being removed relative to the vast amount of mangrove habitat present, and that will remain, in the wider area (EB2 and EB3R).
- Potential avifauna habitat disturbance and displacement during construction works is considered to have a very low overall level of effect on avifauna given the small and temporary nature of the works, as well as the abundance of alternative, nearby habitat available for avifauna to utilise if disturbed or displaced during works for EB2 and EB3R.
- CLM (Catchment Load model) indicates overall a reduction in EB2 for copper, zinc and TPH.
- CLM indicates overall reduction in copper, zinc and TPH in EB3R but an increase at outfall MCC-108077.

3.2 Technical review (Auckland Council)

I generally agree with the applicant's assessment, and add the following:

3.2.1 Effects on Natural character

The subject site is not within any natural character overlays in the AUP (OIP).

The proposed works upgrade and construction of new infrastructure will improve the stormwater flow at the sites. The proposed infrastructure structures may create some additional scour than the existing scour channel. However, scour channels are common features in foreshore areas, and its effects would be acceptable. Given the wider context of the environment, I consider the effects of the proposed stormwater infrastructure works on natural character to be less than minor.

3.2.2 Effects on Coastal processes

The proposed works are within the upper section of an estuary and adjacent to the shoreline. This area generally has weak coastal processes.

The culvert design proposed for the outfalls in the CMA will allow a greater volume of water to flow, but it is unlikely to change the flow in a way that will have an adverse effect on the sediment processes in the channel or wider embayment. The riprap apron should dissipate flow before entering the sedimentary channel. This is expected to prevent significant scour and bed level changes beyond what occur in the existing environment. In addition, proposed stormwater treatment of sediment removal will reduce this effect.

With regards to construction of the western bridge abutment, no works are proposed in the CMA.

Overall, the change in the coastal processes from the proposed infrastructure works will not be discernible and will be less than minor.

3.2.3 Effects on coastal ecology

The proposed subject sites for the outfalls in the CMA are not within any SEA-M identified with the exception of a site adjacent to, and / or, within a wading bird area in the AUP (OIP).

Benthic ecology

The proposed outfalls, dissipation structures and construction related structures would temporarily (maximum of 2,087m²) and permanently (maximum of 1375 m²) occupy some areas of intertidal habitat. This habitat loss for the proposed structures is considered relatively small compared to similar habitats available in the wider context.

Benthic fauna recorded by the Applicant indicates that the subject sites have benthic invertebrates that are typical for muddy sediment substrate. As such, benthic fauna at the sites would recolonise within a short period as they have a tendency to recover quickly. Accordingly, the effects on benthic ecology and loss of habitat would not be significant in the wider context as the footprint is not significant in comparison to the remaining similar habitats at the sites.

Effects from mangrove removal

The proposed total area of mangrove removal within the CMA and the vegetation/mangrove removal proposed adjacent to the CMA for the construction and occupation of the infrastructure with outfalls and dissipation structures is close to 5000m². It is agreed with the applicant's assessment that the scale of mangrove removal is relatively small compared to the mangrove habitats available in the wider Tamaki River area. However, minimising the mangrove removal area within the CMA as far as possible is recommended for the occupation area proposed for temporary construction related structures. Overall, total area of mangrove removal proposed within the CMA for the scale of the Project is acceptable.

Effects on avifauna

I note that a number of SEA-M1 and SEA-M2 adjacent to the outfall sites have been identified in the AUP (OIP). The ecological values attributed to these significant ecological areas are related to avifauna values. The Applicant's assessment states that no birds were observed foraging or roosting during their site visit at low tide. In addition, no banded rail footprints were observed at the proposed outfall locations. There would be some disturbance to the birds using the sites for roosting and/or foraging during construction. This would likely be short term. However, birds would continue to use the areas once the proposed construction works are complete. Accordingly, any adverse effects from mangrove habitat loss from the proposed works would be less than minor on coastal avifauna.

Effects from contaminants in the sediment and benthic ecology

The Applicant has undertaken a contaminant assessment of the sediment quality within the subject sites mainly for stormwater contaminants. Except the site adjacent to outfall 3 (site 1), zinc concentrations were above the DGV in all sites. Whilst there may be remobilisation and redistribution of contaminated sediments during construction works, benthic fauna at the site would have been tolerant to the level of contamination. In addition, this effect would be localised and would be confined to the construction footprint. As such, effects on benthic ecology from the contaminants are likely to be less than minor.

Construction effects

There would be sediment disturbance during construction of the proposed infrastructure and during mangrove removal in the CMA. The Applicant's Erosion and Sediment Control effects assessment report is proposing to undertake the CMA works when the tide is below the works area and using silt fences to minimise the discharge into the CMA.

There may be an increase in the TSS and contaminant levels of zinc in particular in the water column during the construction. However, the Applicant is proposing to use silt fences during construction to minimise this effect. Accordingly, any adverse effects on sediment and water quality from the proposed works would likely be less than minor.

I agree with the applicant's cumulative ecological effects assessment from the construction of the proposed infrastructure works due to the potential reduction in contaminant levels in the sediment quality by the proposed stormwater treatment.

Overall, any adverse effects on marine ecology including avifauna, sediment and water quality would likely be less than minor.

3.2.4 Summary

Overall, any potential adverse effects from the proposed works are likely to be less than minor, subject to adherence with good practice and the recommended conditions of consent.

4.0 Duration of consent: Section 123

The applicant has sought a 35-year term of consent for the occupation and use of stormwater infrastructure. From the effects point of view, any adverse effects as a result of the occupation and use of the infrastructure will be less than minor. An expiry date of 35 years is recommended.

The applicant has sought a 10-year lapsing term for the construction of the proposed infrastructures which is considered to be reasonable given the scale and complexity of the Project.

5. CONDITIONS

I recommend that if consent is granted it be subject to the following conditions:

Activity in accordance with plans

1. The construction of outfalls, and associated dissipated structures, occupation of the CMCA with the stormwater infrastructure, and use of the structures to discharge stormwater must be carried out in accordance with the information submitted with the application, detailed below:

Report:

- "Eastern Busway 2, Assessment of effects on the environment", prepared by Tim Hegarty, dated 11/08/22.
- "Eastern Busway 3 Residential, Assessment of effects on the environment" prepared by Nethan Keyte, 10/08/22.

General

2. For the duration of the construction activities, including the reinstatement/rehabilitation of the site post construction activities, the consent holder must maintain the site in good order.
3. The consent holder must notify the Council in writing of the date of the proposed commencement of works, at least 10 working days prior to the proposed start date.

Construction Management Plan

4. A minimum of 20 working days prior to the proposed commencement of works within the CMA, a finalised Construction Management Plan (CMP) must be submitted for certification by the Council.

The CMP must specify the following:

- a. a construction timetable including mangrove removal.
 - b. The final construction methodology including details of:
 - i. installation of temporary structures in the CMA;
 - ii. the route to be used for accessing the site for construction purposes and any mitigation measures to avoid more than minor adverse effects on the environment.
 - iii. A removal methodology for the temporary platform/staging and piles extraction, mangrove removal, and disposal for cleared mangrove plants, and spoil from drilling for piles.
 - iv. Methods to maintain a safe navigation channel past the works site, detailing periods during when there maybe restrictions on navigation past the site.
 - c. a construction methodology that minimises mangrove removal/pruning as far as reasonably practicable.
 - d. Identification of all access points to the CMA, and the intended location of stockpiles of cleared vegetation.
 - e. general site management, including details of:
 - i) site access, including methods to clearly identify and delineate all entry and exit points to the coastal marine area.
 - ii) the bunding or containment of fuels and lubricants to prevent the discharge of contaminants.
 - iii) a spill contingency plan in the event that there is any discharge of contaminants to the coastal marine area.
 - iv) restrictions and methods necessary to maintain public health and safety, including means for restricting and notifying the public of any restrictions on public access to and along the coastal marine area.
 - v) management of public access to and along the coastal marine area while the activities are being carried out.
 - vi) removal of all spoils from the CMA.
 - f. site reinstatement upon completion of the construction activities.
5. The consent holder must undertake works in accordance with the approved Construction Management Plan required under condition 4.

Occupation

6. The occupation of the common marine and coastal area by the authorised pathway is not an exclusive right of occupancy. The general public or any person(s) must not be excluded from the area(s) or any part of the area(s) to which this consent applies, unless necessary for the primary purpose of the structure(s), and only to the extent necessary to enable the primary purpose of the structure(s).

Post construction

7. All mangroves removed under this permit must be disposed of outside the coastal marine area (CMA) at the completion of each week of work, or as agreed by the Council.
8. Within one month of the completion of the consented construction activities a complete set of "as built" plans must be supplied to the Council.
9. A copy of the "as built" plans must be provided to the Hydrographic Office (Chief Hydrographer, National Topo/Hydro Authority, Land Information New Zealand, Private Box 5501, Wellington) within one month of the completion of the construction activities.

Maintenance Requirements

10. The stormwater infrastructure structures must be maintained in a good and sound condition, and any repairs that are necessary shall be made, subject to obtaining any necessary resource consents.

Duration

11. The duration to occupy the CMCA with the stormwater infrastructure structures and use the outfalls, expires on [day/month/2058] (35 years) unless it has lapsed, surrendered or been cancelled at an earlier date pursuant to the Resource Management Act 1991.
12. The construction of stormwater infrastructure structures expires on [day/month/2033] (10 years) unless it has lapsed, surrendered or been cancelled at an earlier date pursuant to the Resource Management Act 1991.

Review Condition

13. Under section 128 of the RMA the conditions of this consent may be reviewed by the Manager Resource Consents at the consent holder's cost on a five (5) yearly basis to deal with any adverse effect on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage, in particular adverse effects on coastal environment or surrounding structures.

7.0 REVIEW

Memo prepared by:

Dr. Kala Sivaguru



Senior Specialist - Coastal

Specialist Unit, Resource Consents

Date:

15 March 2023

Memo approved by:

Alan Moore



Principal Specialist

Date:

15 March 2023



REVIEW OF OPERATIONAL NOISE EFFECTS

EASTERN BUSWAY STAGE 2
PAKURANGA

PREPARED FOR
Auckland Council

DATE
10 April 2023

Technical review prepared by Styles Group for Auckland Council.

REVISION HISTORY

Rev:	Date:	Comment:	Version:	Prepared by:
1	10/04/23		Final	Jon Styles, MASNZ Director and Principal Styles Group

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1.0 Introduction

Auckland Council has engaged Styles Group to review the noise effects from Auckland Transport's Notice of Requirement to construct and operate Stage 2 of the Eastern Busway (EB2 NoR) and associated resource consents for the construction and operation of Stage 2 of the Eastern Busway (EB2) and Eastern Busway Stage 3 Residential (EB3R).

This review has been prepared following extensive pre-lodgement and post-lodgement engagement with the Eastern Busway (EB) team. The engagement has included a site visit, a number of meetings and extensive feedback on draft reports and the review of the finalised reports lodged with the applications and the various responses to the Council's further information request.

The pre-lodgement engagement was productive and assisted in resolving a number of questions and issues that had arisen in the early stages of the assessments.

The objective of this review is to provide general commentary on the reports and responses provided by the EB team, to synthesise and summarise the EB assessments and to provide any additional commentary and analysis to ensure that the effects and mitigation measures are clear and understandable.

This review is focussed primarily on the assessments of noise and vibration for the construction and operation of the various EB projects. The reports that were included in the lodgement packages are referred to collectively in this review as the Original Assessments.

2.0 Experience and qualifications

My full name is Jon Robert Styles. I am an acoustic consultant, director and the principal of Styles Group Acoustics and Vibration Consultants. I have approximately 22 years of experience in the industry, the first four years as the Auckland City Council's Environmental Health Specialist – Noise, and the latter 18 years as the Director and Principal of Styles Group.

I hold a Bachelor of Applied Science majoring in Environmental Health and I have completed the Ministry for the Environment's Making Good Decisions programme. I recently concluded my second term as the President of the Acoustical Society of New Zealand. I am currently a Council member and professional member of the ASNZ.

I am on the executive of the Association of Australasian Acoustical Consultants (**AAAC**). My role on the executive is to develop guidelines for the assessment of noise and vibration in New Zealand and Australia.

Throughout my career, I have been involved in the development and administration of numerous District Plan rules, plan changes and general policy development. I have assisted a large number of councils to process a significant number of resource consents and Notices of Requirement subject to noise and vibration standards. I have extensive experience advising

on the management of noise and vibration effects, including the construction, maintenance and operational noise effects of major and strategic transport infrastructure (including port, road, air and rail) and the protection of strategic industry and transport infrastructure through the effective management of reverse sensitivity effects.

Specific assignments relevant to this evidence include:

- The Auckland Council's witness through the development of the High Land Transport Noise Overlay in the AUP.
- Advice on several recent District Plan reviews, including Whangarei Urban and Services Plan Change and whole of plan reviews for Taupō, Napier and Kaipara.
- Providing advice on numerous public and private plan changes involving land exposed to road and rail noise, including recommendations for appropriate acoustic mitigation response.
- Noise and vibration measurements for a significant number of resource consent applications involving the establishment of activities sensitive to noise adjacent to various forms of transport infrastructure
- A large number of projects around New Zealand involving road traffic noise and the application of New Zealand Standard NZS6806:2010 *Acoustics – Road Traffic Noise – New and Altered Roads (NZS6806)*. A number of these projects have been Roads of National Significance (RoNS) and include the Southern Corridor Improvements, Te Atatu Road widening, Lincoln Road Corridor Improvements, Ellerslie and Takanini Noise Walls, Mill / Redoubt Road, SH1 Whangarei Improvements, SH12 Matakohē Bridges, CSM2 & MSFRL (Christchurch Southern Motorway Stage 2 & Main South Road Four Laning), Mackays to Pekapeka, Waikato Expressway (numerous sections), Southern Links Hamilton, Central Motorway Junction, AMETI, Victoria Park Tunnel, Waterview Connection, St Lukes Interchange, SH16 Causeway, Puhoi to Warkworth, the East West Link, Penlink and the Northern Corridor Improvements, Warkworth to Wellsford and many others.
- I have given evidence before several Boards of Inquiry on road traffic noise effects including being the Boards' expert on several occasions.

I have read the Environment Court Code of Conduct for Expert Witnesses. My advice complies with the Code in all respects and the opinions herein are within my area of expertise.

3.0 Background

3.1 RFI and Response

The Council requested further information relating to construction and operational noise effects from EB2 and EB3R based on our input. The requests are set out in the [Request for Further Information \(RFI\)](#).

The applicant's [response](#) for EB2 NoR is accompanied by:

- Updated noise [tables](#)
- Updated noise [maps](#)
- Updated EB2 NoR [conditions](#)

The applicant's [response](#) for EB3R is accompanied by:

- Updated noise [maps](#) (Attachment 4)
- Updated [conditions](#) (Attachment 7)

Our advice to the Council was that the information and changes sought in the RFI process were likely to affect numerous parts of the Original Assessments, including throughout the body of the reports and in the conclusions and summaries. We suggested that the requests were addressed in an updated report, rather than in a separate document. The Council supported this. Revising the original reports to incorporate the responses to the requests would have yielded a clear and readily understandable set of reports.

However, the responses have been provided as supplements to the Original Assessments. The responses address the specific questions from the Council. The responses do not include a variety of consequential updates to the Original Assessments that are necessary for a clear understanding. In my view, this has led to a situation where the assessment of noise and vibration effects is confusing and difficult to follow.

One example is the response to the Council's request number 51 in relation to operational noise. The Original Assessments included speed limit reductions that are already planned on parts of the network as part of the "Do Minimum" scenario. The speed limit reductions will reduce the operational noise levels and will be delivered whether the EB projects go ahead or not. They should not be considered as a noise mitigation measure delivered by the projects.

The Original Assessments inflated the apparent noise reduction benefit of the projects by incorporating the already-planned speed limit reductions as a component and benefit of the projects.

The Request sought that the speed limit changes were incorporated into the noise level predictions for the "Do Nothing" noise modelling predictions on the basis that they are part of the existing environment and will be delivered whether the projects proceed or not. This would

make it clear that the noise level reductions arising from speed limit reductions were not a feature of the projects.

The responses include revised noise level prediction tables that shift the speed limit reductions into the “Do Nothing” scenario. This satisfies the request (in-part) and provides noise level predictions for each PPF that properly removes the speed limit reductions from being a benefit of the projects.

However, there are a number of sections in the Original Assessments that make assertions about the noise level changes arising from the project that are no longer correct, and that have not been updated. For example, the following analysis is provided in section 6.1 of the original EB3R Operational Assessment:

“The modelling results show a decrease in the number of PPFs in Category C of 36 between the Do- Nothing and Do Minimum scenarios, with some of these becoming Category B and some becoming Category A. This decrease is due to several factors.

The main factor causing this change is the reduction of speed limits along three key stretches of road around EB2 and EB3R: Pakuranga Highway (80 to 60 km/h), Pakuranga Road (60 to 50 km/h), and Ti Rakau Drive (60 to 50 km/h).”

Section 6.3 of the same assessment goes on to state:

“While adverse noise effects are predicted at 98 out of 552 PPFs as outlined above the majority of PPFs will experience either negligible or positive noise effects.

Predictions indicate that noise levels will decrease by 3- 4dB at 34 PPFs, resulting in slight positive effects. This change in noise level would be just perceptible.

Predictions indicate that noise levels will decrease by 5- 11 dB at 8 PPFs, resulting in moderate to significant positive effects. This change in noise level would be noticeable, and in some cases will be perceived as a halving in loudness.”

The conclusion states:

“Although 97 PPFs are predicted to experience noise level increases of more than 2 dB as a result of EB2/EB3R, almost all of these PPFs will remain in Category A with noise levels below 64 dB $L_{Aeq(24h)}$.”

These statements are based on the noise modelling results that incorporate the speed limit reductions as a benefit of the project, when they should not.

The responses do not provide updated statements to supersede those in the Original Assessments. In my view, they should have.

The only way to assess what the various sections of the reports and conclusions should now say is to convert the Updated Noise Tables into a spreadsheet and calculate the various statistical analyses manually.

There are a number of other examples where the Original Assessments should have been updated, but they have not been. This includes the responses to the requests for a more

detailed assessment of the adverse noise effects arising from the operational and construction phases.

I consider that this has led to a confusing and very onerous process for making any reasonable determination of the overall level of noise effects.

4.0 General comment on NZS6806:2010

The Original Assessments of operational road traffic noise are heavily focussed on addressing only the provisions of NZS6806:2010.

It is well recognised in New Zealand that this standard has a number of limitations. These have been well-documented by various decision makers including several Boards of Inquiry¹.

In my view, the limitations of the standard in this case are (in general terms):

- 1) The noise level thresholds that trigger the need to consider mitigation are very high. NZS6806:2010 adopts a noise level of 64dB $L_{Aeq(24hr)}$ as a threshold for the investigation of mitigation. NZS6806:2010 does not require any mitigation effort where the noise level from an altered road is less than this level. This level is significantly above the World Health Organisations' (**WHO**) interim targets for managing road traffic noise. The implication is that NZS6806:2010 does not require or encourage any effort to mitigate the road traffic noise levels even where they are easily high enough to be generating considerable adverse health effects on people living in close proximity to the roads.
- 2) NZS6806:2010 does not require any assessment of the noise effects that will arise on the receiving environment. The standard sets out a process for determining what it states will be the BPO for mitigating road traffic noise. However, it is well recognised that the BPO can in fact involve the consideration of a number of factors that are not included in NZS6806:2010. The determination of the BPO by following NZS6806:2010 is further complicated because the lowest thresholds for mitigation effort are very high (see above) and the effects of the noise are not described or properly incorporated. Accordingly, the full assessment of road traffic noise effects can use many of the processes set out in NZS6806:2010, but that must be supplemented with an assessment of the actual noise effects that will be likely to arise. This can help the decision-maker to evaluate whether the BPO has in fact been adopted.
- 3) NZS6806:2010 requires assessment of the noise levels at a point 1m away from the façade of buildings and at a height of 1.2m to 1.5m above the floor level of interest. Roadside barriers designed for reducing noise levels can have a significant effect on reducing the noise levels at ground level (or 1.2m – 1.5m above it) but would be unlikely

¹ For example, in the Final Report and Decision of the Board of Inquiry into the New Zealand Transport Agency Waterview Connection Proposal. Many paragraphs, but mainly at paragraph 925. Available at <https://www.epa.govt.nz/assets/FileAPI/proposal/NSP000012/Boards-decision/ec6f94077d/Waterview-Final-decision-volume-1-Report-and-decision.pdf>

to deliver any reduction in noise level at the first or second floors of a multi-storey building. An assessment that follows NZS6806:2010 will conclude that a roadside barrier would not be a part of the BPO if it does not provide a noise level reduction at the most exposed part of the building. In my view, this is a clear limitation of the standard because roadside barriers can reduce the noise at ground level significantly and they can deliver significant improvements to the quality of ground floor living spaces and yards.

- 4) NZS6806:2010 can only look as far into the future as the physically existing environment and any granted but unimplemented building consents. NZS6806:2010 does not have any capability of looking 'forwards' to ensure that the mitigation measures are appropriate for the receiving environment that the District Plan provides for. This complicates the assessment for sites in the receiving environment that are currently vacant, or that have not been developed to the height or proximity to the roads that the District Plan provides for. This can be a major flaw in the standard in some cases, especially where a road is planned through an area that is currently vacant but zoned for intensive residential development. In this case the shortcoming of the standard is relevant to consider, but ultimately it is likely to be of little or no consequence as it is unlikely that the Requiring Authority could practicably implement any further mitigation that could do a better job of mitigating the effects for buildings that are taller and / or closer to the roads than the physically existing environment.

The limitations set out in (1) and (2) above are the most relevant and significant for these projects. The Council's s92 request sought further information on the extent of the adverse effects above the WHO guidance. This matter is dealt with in more detail further on in this review.

I consider it critical that the limitations of NZS6806:2010 are clearly understood, along with the additional assessment that is necessary to ensure that the limitations are addressed for these projects.

5.0 Adverse effects of exposure to road traffic noise

The most important effects arising from exposure to high levels of road traffic noise are those that are chronic and not always readily apparent. Many people that are affected by exposure to high levels of road traffic noise may not be aware of the extent of the effect it is having on them.

It is well accepted and globally recognised that exposure to noise from road, rail and air transport infrastructure, industry, ports commercial activities and a variety of other sources has the potential to generate high levels of annoyance and adverse health effects if it is not managed carefully. The adverse effects can be significant where the noise exposure is high.

Minimising these effects by adopting the best practicable option to minimise noise from inside the road corridor and in the receiving environment is critical to avoid the worst of the adverse health and amenity effects that could otherwise arise.

The WHO has published many policies and studies documenting extensive investigations into the effects of noise exposure on people², estimating the burden of disease from environmental noise and quantification of healthy life years lost as a result of exposure to environmental noise³.

In 2011, WHO published the “Burden of Disease from Environmental Noise”⁴ that quantified the healthy years of life lost in western European countries as a result of exposure to environmental noise⁵. The study identified that at least 1 million healthy life years⁶ are lost every year from exposure to transport noise in the western European countries⁷. The study provided sufficient evidence from large-scale epidemiological studies to link the exposure to environmental noise with adverse health effects, including annoyance⁸, tinnitus, sleep disturbance, cognitive impairment in children and cardiovascular disease. The 2011 study identifies road-traffic noise as the most prevalent source of environmental noise, with the largest contribution to the burden of disease due to noise.

The 2011 study found that sleep disturbance and annoyance, mostly related to road traffic noise, constitute the bulk of the burden of disease. Available assessments place the burden of disease from environmental noise as the second highest after air pollution.

In 2018, WHO published the Environmental Noise Guidelines for the European Region (the **2018 Guidelines**)⁹. The purpose of the 2018 Guidelines is to provide robust public health advice to drive policy action to protect communities from the adverse effects of noise.

The 2018 WHO Guidelines discuss the importance of interventions to reduce road traffic noise exposure. They conclude that:

“The GDG also considered the evidence for the effectiveness of interventions. The results showed that:

- *addressing the source by improving the choice of appropriate tyres, road surface, truck restrictions or by lowering traffic flow can reduce noise exposure;*

² WHO Regional Office for Europe (2012). Methodological guidance for estimating the burden of disease from environmental noise. Copenhagen,

³ WHO Regional Office for Europe (2011). Burden of disease from environmental noise: quantification of healthy life years lost in Europe. Copenhagen,

⁴ https://www.euro.who.int/__data/assets/pdf_file/0008/136466/e94888.pdf

⁵ WHO Regional Office for Europe (2011). Burden of disease from environmental noise: quantification of healthy life years lost in Europe. Copenhagen

⁶ This is measured in ‘DALYs’. DALYs are the sum of the potential years of life lost due to premature death and the equivalent years of “healthy” life lost by virtue of being in states of poor health or disability - WHO Burden of disease from environmental noise

⁷ Comprised of 61 000 years for ischaemic heart disease, 45 000 years for cognitive impairment of children, 903 000 years for sleep disturbance, 22 000 years for tinnitus and 654 000 years for annoyance.

⁸ High annoyance is not classified as a disease in the International Classification of Disease (ICD-9; ICD-10), it does affect the well-being of many people and therefore may be considered to be a health effect falling within the WHO definition of health as being a “state of complete physical, mental and social well-being”.

⁹ https://www.euro.who.int/__data/assets/pdf_file/0008/383921/noise-guidelines-eng.pdf

- *path interventions such as insulation and barrier construction reduce noise exposure, annoyance and sleep disturbance;*
- *changes in infrastructure such as construction of road tunnels lower noise exposure, annoyance and sleep disturbance;*
- *other physical interventions such as the availability of a quiet side of the residence reduce noise exposure, annoyance and sleep disturbance.”*

The overall recommendation for road traffic noise from the 2018 Guidelines is:

“For average noise exposure, the GDG strongly recommends reducing noise levels produced by road traffic below 53 dB L_{den} , as road traffic noise above this level is associated with adverse health effects.

For night noise exposure, the GDG strongly recommends reducing noise levels produced by road traffic during night time below 45 dB L_{night} , as road traffic noise above this level is associated with adverse effects on sleep.

To reduce health effects, the GDG strongly recommends that policy-makers implement suitable measures to reduce noise exposure from road traffic in the population exposed to levels above the guideline values for average and night noise exposure. For specific interventions, the GDG recommends reducing noise both at the source and on the route between the source and the affected population by changes in infrastructure.”

Response 53 from the RA (for EB2 and EB3) sets out that a total of **501** PPFs (91%) will be exposed to noise levels above the WHO target of 53dB L_{DEN} (approximately 50dB $L_{Aeq24hr}$) out of the total **553** PPFs within 100m of the extent of the projects.

The noise level predictions make it clear that the road traffic noise levels in the area are generally well above the WHO target noise levels.

This demonstrates that there is a significant incentive to ensure that the Requiring Authority is adopting the BPO to minimise the noise generated by the operational phase of the project.

5.1 A shared responsibility

It is often impracticable for the road controlling authority to contain the noise effects within the road corridor to the extent that the noise levels that ‘spill’ into the receiving environment are no greater than the WHO target levels. To do so would likely require quite significant measures such as high and continuous noise barriers, very low speed limits, vehicle flow reductions or similar. Many of these would defeat the purpose of the projects or at-best would severely adversely affect the efficient design, the urban amenity and access to properties and businesses.

The management of exposure to road traffic noise is a responsibility that is traditionally shared between the noise-maker (in this case the Requiring Authority) and the occupants and developers of the receiving environment. The common arrangement is that the road controlling authority would adopt the BPO to minimise the noise exposure in the receiving environment as the priority. This often includes a low-noise pavement, barriers where they are practicable,

lower speed limits and designs that shift the heaviest traffic flows away from the PPFs as far as practicable.

The receiving environment is then left to contend with the noise effects that 'spill' outside of the road corridor. This can be achieved in many ways, such as requiring a no-build setback, the use of spatial planning to create larger separation distances between major roads and residential areas, or most commonly to require activities sensitive to noise to be acoustically treated so that the occupants can have a cool and quiet internal environment where good quality sleep and a moderate-to-high level of amenity is available.

Unfortunately, the AUP does not currently include any standards that would require an activity sensitive to noise / PPF near to a major road to be acoustically treated to reduce road traffic noise indoors. The AUP does not include any standards that would contribute towards the receiving environment managing the road traffic noise effects that cannot be contained inside the road corridor.

However, the NoR and resource consent processes do not have the ability to change the planning provisions in the AUP through the current process to require such treatment. Although beyond the expertise of an acoustic expert, it would be novel to expect the Requiring Authority to acoustically treat all existing activities sensitive to noise / PPFs that will remain exposed to noise levels above the WHO targets, especially when the level of exposure has likely been present for some considerable time already. The Requiring Authority are not proposing to acoustically treat any existing PPFs unless the procedures in NZS6806:2010 would require them to. We consider that this is a typical approach in a case such as this one. We consider that the lack of standards in the AUP to require acoustic treatment of existing, new or altered activities sensitive to noise near to major roads is the biggest issue here and that introducing new standards in the AUP for this purpose is beyond the scope of these projects and this process.

Such standards are common in other District Plans around New Zealand¹⁰. They typically require that any new or altered activity sensitive to noise / PPF that 'comes to the noise' would have to be acoustically treated at the developers' cost.

Accordingly, I have reviewed the proposed noise mitigation measures to determine whether they represent the BPO for minimising noise inside the road corridor, and in the receiving environment to the extent that NZS6806:2010 would require it. I have completed my assessment on the basis that the scope is limited to adopting the BPO inside the road corridor and acoustically treating PPFs in accordance with the procedures set out in NZS6806:2010.

This forms the background and reasoning for the assessment of noise effects and the scope of this review.

¹⁰ Precinct I410 of the AUP

<https://unitaryplan.aucklandcouncil.govt.nz/Images/Auckland%20Unitary%20Plan%20Operative/Chapter%20I%20Precincts/4.%20South/I410%20Drury%20South%20Precinct.pdf> and the NAV Chapter of the Whangarei District Plan
<https://www.wdc.govt.nz/files/assets/public/documents/services/property/planning/district-plan/operative/pt2/noise-and-vibration.pdf>

6.0 Scope of EB2

EB2 NoR proposes to designate 6.21 ha of land for the construction, operation, and maintenance of the Eastern Busway. The Site subject to EB2 NoR and EB2 resource consents includes land between the intersection of Ti Rakau Drive/ South-Eastern Highway (SEART) and Pakuranga Road/ William Reeves Road.

The key aspects of EB2 relevant to construction and operational noise effects include:

- *“Road widening of Ti Rakau Drive to provide for a new road layout, including dedicated bus lanes, walking, and cycling infrastructure and a new bus station at Pakuranga Town Centre*
- *The construction and operation of the Reeves Road flyover*
- *Modification of the South-Eastern Highway offramp onto Ti Rakau Drive*
- *Modifications to the intersections of Ti Rakau Drive with Reeves Road, Tiraumea Drive, Reeves Road, Palm Avenue and Aylesbury Street*
- *An extension of Cortina Place*
- *The creation of a cul-de-sac, with turning head, at the northern end of William Roberts Road¹¹”*

The scope of the projects, receiving environment and the nature and extent of construction works are described in the application material and various responses. They are not repeated here.

7.0 Scope of EB3R

EB3R includes works along a 1.8km section of Ti Rakau Drive, commencing at the intersection of Reeves Road, SEART and Ti Rakau Drive (tying into works for EB2) and concluding at the western shore of Pakuranga Creek.

The key elements of EB3R are described in the AEE as follows:

- *A separated busway through the centre of Ti Rakau Drive*
- *The construction of two new westbound lanes for general traffic*
- *Two intermediate bus stations, being Edgewater Station and Gossamer Station*
- *The western abutment for a future bridge across Pakuranga Creek, adjacent to the existing Ti Rakau Drive Bridge*

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- *Intersection upgrades along Ti Rakau Drive, including William Roberts Road and Gossamer Drive.*

The scope of the projects, receiving environment and the nature and extent of construction works are described in the application material and various responses. They are not repeated here.

8.0 Review of the Operational Noise Assessments

This section sets out a review of the operational noise assessments. The review includes the content of the various responses on operational effects for EB2 and EB3R. I refer to the content of the Original Assessments and the responses together as the Operational Noise Assessments.

As set out above, the Operational Noise Assessments are focussed primarily on the application of the procedures in NZS6806:2010. The responses provide a very brief assessment of the effects.

8.1 Technical aspects of the noise modelling

My comments in this section of the review are relatively brief, on the basis that I consider the technical acoustics aspects of the Operational Noise Assessments are generally robust.

I agree with the noise modelling methods and calculation procedures. I consider that the identification and representation of the receiving environment is sufficiently accurate for the purpose of the noise modelling.

I consider that the modelling process itself, including the calculation methods, input assumptions and the outputs are technically appropriate and sufficiently robust.

The only issues I have identified that are fundamental to the veracity of the outputs are set out in the Council's request for further information. The inclusion of the already-planned speed limit reduction as part of the Do Minimum and Mitigation Options was the primary issue, along with the exclusion of any diesel buses from the bus noise assessment. These have been addressed in the Responses.

I am generally satisfied with the methodology for assessing the noise of buses on the busway as set out in the responses.

8.2 Presentation of outputs

The Original Assessments present the outputs of the noise modelling process using:

- Tables showing the predicted noise levels for the various scenarios
- Maps that identify the PPFs and their respective 'Category' in terms of NZS6806:2010

- Charts in the Original Assessment that depict the change in noise level between the 'Do Nothing' scenario and the preferred mitigation option
- A selection of paragraphs that briefly characterise the overall noise levels and the general magnitude of the changes in noise level.

The responses include completely revised noise level predictions for all scenarios. The primary change is shifting the already-planned speed limit reductions out of the Do Minimum and Mitigation Option modelling into the Do Nothing scenario. This change has the effect of accurately characterising the change in noise level arising from the project by itself. The Original Assessments suggested that the noise-reducing benefit of the already-planned speed limit reduction was a benefit of the project.

Removing the already-planned speed limit reductions from the benefits of the projects results in a small change in noise level at each receiver (+1 to +2dB). However, the characterisation of the change in noise level arising from the wider project changes significantly when assessed across the extent of the projects. For example, Figure 7 of the Original Assessment shows the noise level changes across the project in 'bins'. The chart shows that by far the majority of PPFs will experience a change in noise level between -2dB and +2dB. The responses do not present a revised version of this Figure, but if they did, the distribution across the bins would shift generally to the right of the chart. This would likely demonstrate that the project will result in increase in noise level at a greater number of PPFs.

For the avoidance of doubt, the figures and statements in the Original Assessments that describe the overall change in noise level arising from the projects must not be relied on.

I suggest that the Requiring Authority produce updated versions of Figures 7 and 8 of the Original Assessments to show the overall changes arising from the projects.

8.3 Selection of the Preferred Mitigation Option (4)

I have reviewed the process for adopting the selection of the preferred mitigation option 4.

Many of the selection criteria involve considerations beyond the scope of an acoustics expert. The main non-acoustical factors are:

- 1) The Requiring Authority's assertion that a low-noise Open-Graded Porous Asphalt (OGPA) pavement is "unsuitable" for the project, as advised by the EBA Pavements team¹²; and
- 2) The practicability of more extensive and / or higher road-side noise barriers.

These assertions will need to be tested by the decision-maker or relevant expert(s) to determine their veracity. The determination of whether OGPA or another low-noise pavement would be practicable (or not) is a particularly important determination given the considerable

¹² Section 6.2.5 of the Operational Noise Assessment

noise reduction benefits it would deliver (as demonstrated in section 6.2.1 of the Original Assessment).

I note that the Requiring Authority has focussed on OGPA as the only option for a low-noise pavement. However, I understand that there are a number of different grades and thicknesses for OGPA and there are pavement choices other than OGPA which are quieter than the DG10 that is proposed.

I consider that the Requiring Authority should demonstrate that there are no practicable options for a pavement that would be quieter than DG10.

If the Requiring Authority's assertions regarding the pavement type and barriers are reasonable and correct, I consider that mitigation option 4 has been selected appropriately.

8.4 Has the BPO been adopted?

The Original Assessment states that Mitigation Option 4 is the preferred mitigation option for EB2 and EB3R. This involves the construction of a small number of noise barriers and the provision of acoustic treatment to three PPFs in EB2 and one in EB3R¹³.

The responses do not provide any summary statement that updates the status of barriers or acoustic treatment to PPFs arising from change in the way that the speed limit reductions have been modelled. I recommend that the Requiring Authority confirm the number of PPFs where acoustic treatment (Building Modification) would be required with the updated noise level predictions provided in the responses. I expect that if there is any change, it may be a small increase in the number of Category C PPFs where acoustic treatment (Building Modification) would be required. Such an outcome would not be likely to change my view that Mitigation Option 4 is likely to remain the preferred option.

As set out above, the determination of whether the BPO has been adopted relies on the veracity of the Requiring Authority's assertions that an OPGA or other low-noise pavement is unsuitable and that the height and extent of noise barriers beyond mitigation option 4 is limited by practical constraints.

If these assertions are reasonable and correct, I consider that the BPO for minimising noise inside the road corridor and the implementation of Structural Mitigation and Building Modification is appropriate.

In my view, this would lead to the determination that the Requiring Authority is adopting the BPO to minimise the noise emissions from the project as far as it can, given the practical constraints it faces.

¹³ Tables 6-10 and 6-11 of the Original Assessment

8.5 Assessment of road traffic noise effects

I consider that the assessment of the effects of the road traffic noise in the Operational Noise Assessments is very brief. I consider that the responses (and in particular response 51) provides a brief but useful insight into the nature and degree of the adverse noise effects that are expected to arise.

The Operational Noise Assessments demonstrate that a significant number of PPFs will be exposed to noise levels above the WHO targets even if the BPO to minimise noise inside the road corridor is adopted. As I have already set out, the responses provide updated noise level predictions that include the already-planned speed limit reductions into the “Do Nothing” scenario. This affects the change in noise level arising from the implementation of the proposed Mitigation Option 4.

I expect that a summary of the detailed revised modelling outputs contained in the responses will show that the implementation of Mitigation Option 4 will result in an overall small increase in noise level for most PPFs. An updated version of Figures 7 and 8 of the Original Assessment would clarify this. Some receivers will experience a larger increase, especially where the houses between them and the road will be removed, (and therefore remove the screening that has been in place for some time). Some receivers will still see a reduction in noise level.

However, the Operational Noise Assessments also demonstrate that the BPO has been adopted to minimise the noise effects as far as practicable. I agree with the mitigation options that are proposed.

The Assessments conclude that:

“We consider that, following construction of EB2 and EB3R, the resulting noise levels from road traffic will be reasonable as they are typical for an urban environment.”

I fundamentally disagree with this reasoning. The determination of whether the noise levels will be reasonable must be based on an assessment of far more factors than simply whether the noise is typical in an urban environment. It is well recognised that the determination of whether the noise levels are reasonable must take into account a variety of factors such as including the level of noise likely to be received, the degree and effectiveness of mitigation proposed, the sensitivity of the surrounding environment and the adverse effects arising from the noise, balanced against the need for and benefits of the project. Many of these factors will require weighing by the decision-makers before a determination can be made on whether the noise levels are reasonable or otherwise.

9.0 Submissions on operational effects

The only submissions that deal with operational noise and vibration effects are the submissions from The Warehouse Group and Kainga Ora – both for EB2 NoR.

9.1 Kainga Ora

The main points of the Kainga Ora submission are set out below, along with my responses under each point:

34. Kāinga Ora consider that the anticipated noise and vibration emissions need to be managed in a manner that recognises both the existing and the anticipated surrounding built environment. In that regard, Kāinga Ora consider that the NoR fails to account for the reasonably anticipated surrounding environment as anticipated by the NPS-UD.

35. Auckland Council's PPC78 anticipates that the residential sites surrounding the location of the proposed designation are proposed to be Residential – Mixed Housing Urban Zone and Residential – Terraced Housing and Apartment Building Zone, as expanded, with a number of Business Mixed use Zone, Town Centre Zone and various Open Space zones also located within the vicinity.

36. In addition, Policy 3I(i) of the NPS-UD requires Tier 1 local authorities to enable building heights of at least six storeys within at least a walkable catchment of existing and planned rapid transit stops.

I agree that the Operational Noise Assessments fail to properly address the future planned receiving environment. However, I consider that the outcome of the assessments would be unlikely to change if the planned future environment was addressed specifically. Accordingly, I consider that no further work is required of the Requiring Authority to address this point.

Although outside the scope of this process, I do encourage the adoption of standards in the AUP to require acoustic treatment of activities sensitive to noise close to major roads through either the full review of the AUP or PPC78 – whichever is earlier.

37. It is also noted that existing land owners and occupiers (including the tenants of Kāinga Ora) live in close proximity to the proposed designation works area. Kāinga Ora is of the opinion that any noise and vibration effects associated with this NoR on these existing owners and occupiers are not as a result of reverse sensitivity effects.

I agree with this point generally. I consider that the focus of any designation conditions or AUP provisions should be to manage the effects of road traffic noise to ensure that the noise levels are controlled to a reasonable level for the activities sensitive to noise nearby. If this outcome is delivered, there should be no reverse sensitivity effects arising.

38. It is understood that transport infrastructure is critical to enabling a well-functioning urban environment and that a degree of noise and vibration emissions are expected. However, it must be recognised that significant noise emissions have potential adverse effects on surrounding residential environments and the health and well-being of people living nearby. Therefore, they require careful consideration to ensure that the effects are appropriately avoided, remediated or mitigated in accordance with Section 16 and 17 of the RMA.

I agree. I consider that the Operational Noise Assessments and this review provide that careful consideration. I consider that the designation conditions are a critical component of ensuring that the effects that are authorised are generally no greater than what has been assessed in this process.

39. Kāinga Ora are concerned that the noise and vibration assessment contained within the application documents does not assess the vibration effects arising from the operation of the EB2 Project on the assumption of the new and upgraded roads being finished with a smooth and even surface (thus avoiding vibration effects), without then proposing conditions which require this treatment to be implemented.

I agree. I have recommended a condition that requires the vibration from the operational phase to meet recognised standards for acceptability. This is consistent with the approach taken on many other major roading projects. Operational vibration effects are very unlikely if the roads and pavement are constructed and maintained in a smooth condition and without defects.

40. Kāinga Ora considers that it is appropriate that the Requiring Authority is incentivised to ensure that such measures are undertaken to reduce noise and vibration at source, while at the same time utilising the AUP(OIP) to manage those effects that cannot be controlled at source, if required.

I agree. My review has determined that the BPO has been identified for the minimisation of road noise. I have also determined that the 'residual' noise effects in the receiving environment will still be greater than what is normally desirable and above the target noise levels suggested by the WHO. My assessment is that the residual noise effects are best managed by provisions in the AUP that would require acoustic treatment of activities sensitive to noise in close proximity to major roads. I understand that the Requiring Authority is not seeking any changes to the AUP in this process that could deliver such an outcome.

41. Kāinga Ora submits that there would be a number of advantages with minimising noise and vibration at source that should provide benefits to future residents in surrounding urban areas, namely the ability for existing and future occupants to enjoy greater amenity outside their dwellings. While acoustic attenuation could be an appropriate response to address a health or amenity issue, any reduction of noise (or vibration) at source would enable future residents to enjoy their outdoor living areas, rather than being 'locked-up' in their homes.

I agree. I consider that minimising the noise levels at the source (i.e. in the road corridor) is the most important place to provide the mitigation, and for the reasons set out in the Kainga Ora submission.

42. Kāinga Ora supports the application of structural mitigation measures (low noise and vibration road surfaces, acoustic barriers, insulation and heat pumps, where appropriate) in NZS6806 to all roads within the NoR and nearby dwellings, respectively.

I consider that the adoption of Mitigation Option 4 will deliver this outcome.

43. Kāinga Ora request that a new condition is placed on the designation for the Requiring Authority to restrict noise emissions to adjacent receivers, in line with the predicted road-traffic noise levels submitted with the NoR application material.

I agree with this. I consider that it is important that the conditions ensure that the level of effect that is assessed and deemed reasonable in this process is not exceeded. Accordingly, the conditions will need to limit the noise emissions to approximately the degree that has been predicted. The conditions must reflect the challenge that the Requiring Authority do not have control over the noise generated by the vehicle fleet. The operational noise conditions can only therefore control the noise-generating features of the design of the project.

44. Kāinga Ora request that a new condition is placed on the designation for the Requiring Authority to specifically require the construction of low noise and vibration road surfaces, such as an Asphaltic mix surface, for all road surfaces within this designation.

Ordinarily I would agree with this submission point. OGPA is very commonly used as a low noise pavement on a significant number of roads throughout New Zealand. However, as already mentioned, the Requiring Authority has asserted that an OGPA surface is not practicable. I recommend that the veracity of this assertion is tested.

Overall, I agree with the submission made by Kainga Ora.

9.2 The Warehouse Group

The Warehouse Group state that the main operational noise effect on them will be “*an unacceptable level of noise generated by the operation of the flyover.*”

The relief sought in respect of this issue is “*Require noise attenuation to be provided to the upper level of The Warehouse building to ensure that noise from the operation of the RRF does not exceed the noise limits for the Town Centre Zone.*”

The noise limits applying to activities in the Town Centre Zone are essentially 65dB L_{Aeq} during the daytime (7am to 11pm) and 55dB L_{Aeq} at night-time (11pm to 7am).

I consider that it is reasonable for the Requiring Authority to demonstrate that the operational noise will be controlled to a degree that does not unreasonably affect or disrupt the activities inside The Warehouse building.

However, I do not see this as being as simple as ensuring the noise levels do not exceed the noise standards for the zone. The main reasons for this are:

- 1) Noise from road traffic is not controlled by the zone noise standards;
- 2) It is likely that the road traffic noise levels outside the building are already at or above the relevant zone standards;
- 3) The acoustic insulation of The Warehouse façade is unknown and the current level of road traffic noise being experienced inside the building is also unknown;
- 4) The level of road traffic noise that could be reached before activities inside the building are unreasonably affected or disrupted is unknown.
- 5) Visual Effects Simulation 3¹⁴ appears to show that the top edge of the roadside barrier along the RRF will be approximately at the roof-height of The Warehouse building. The solid roadside barrier proposed will significantly attenuate the noise from traffic on the RRF that could otherwise affect The Warehouse building. A snip of this visual assessment is set out in Figure 1 below.

¹⁴ Page 80 of the Landscape and Visual Effects Assessment

Overall, I consider that it is likely that the internal noise environment of The Warehouse building is likely to remain acceptable when considering the effects of road traffic noise from the RRF.

I suggest that the best way for the issue to be resolved completely would be for the Requiring Authority to provide noise level predictions along the façade and roof of the Warehouse Building, and for The Warehouse Group to provide construction details or transmission loss data for the walls and roof. This will enable a calculation of the internal noise level that could be expected.

In any event, I consider that the solid roadside barrier as shown in the Visual Simulations will be a critical component of the noise mitigation measures for The Warehouse and for the wider area. I suggest that a condition is imposed that requires them to be constructed and maintained as effective acoustic barriers.



Figure 1 – Snip from VS3 showing height of RRF relative to The Warehouse building

10.0 Operational noise conditions

As a preface to this section, I consider that the conditions must be carefully drafted to ensure that the effects they authorise are no greater than the effects that have been considered in this process and deemed reasonable and appropriate.

I consider that if there is any proposal to provide flexibility in the conditions to allow for changes to the design in a way that would create more noise at any PPF, the assessment of noise effects should have assessed the potential for changes and included these in the assessment of effects.

As I have read the Operational Noise Assessments, the Requiring Authority has not provided an assessment of noise effects that includes levels of noise that are higher than those predicted in the responses. Accordingly, I consider that the conditions should ensure that the

effects authorised by the conditions are approximately no greater than what has been assessed by the Requiring Authority and this review.

The Requiring Authority only proposes one designation condition for EB2. Proposed condition 51 requires the construction of 1.8m high operational noise barriers at 2 and 23B Dale Crescent at the locations shown in the approved designation plans.

The Requiring Authority proposes the same singular operational noise condition for EB3, except that the addresses are 2 Wheatley Avenue and 4 and 148 Edgewater Drive.

I consider that the conditions should be more comprehensive than these singular conditions. The objective of the extra conditions is to ensure that the level of effect is approximately no greater than the level of effect that has been considered in this process, and to ensure that the noise mitigation measures that either inherent or specifically proposed in the Operational Noise Assessments and applications generally are delivered and maintained.

Additionally, the Requiring Authority has not proposed any conditions that set out the process for acoustically treating (Building Modification as defined in NZS6806:2010) any Category C PPFs that may arise in the Update Noise level predictions (that have not been summarised or incorporated into the conclusions of the Assessments). I have proposed a set of conditions that set out the process that the Requiring Authority would adopt to deliver the treatment packages.

I propose the following additional conditions. These are adapted (and abbreviated) from the conditions developed in the Board of Inquiry process and attached to the Northern Corridor Improvements Designation:

Operational Noise and Verification

- 1) Subject to condition XX, the Requiring Authority must design and construct the Project to ensure that the predicted noise levels for the Proposed Design in the design year of 2048 are not exceeded by more than 2dB at any PPF.

Advice Note: The predicted noise levels for the Proposed Design are contained in the Section 92 response package and are shown as "Mitigation 4".

- 2) The Requiring Authority must ensure that the solid barriers proposed along both sides of the Reeves Road Flyover are maintained at the height and extent as shown in the <<insert plan reference>> and are maintained as acoustically effective barriers.
- 3) The Requiring Authority must ensure that all roads are paved with Dense-Graded 10mm asphalt (or other low-noise road surface(s) with equal or better noise reduction performance) on all sections of the Project except where a higher friction (for safety) or stronger surface is required.

In the event that the Requiring Authority proposes a different pavement at any time, it must provide documentation from a suitably qualified and experienced acoustics specialist to the Council demonstrating that condition 1 will continue to be complied with.

- 4) Within twelve months of completion of construction of the Project, the Requiring Authority must prepare and submit a report to the Council which demonstrates compliance with condition 1. The report must be prepared by a suitably qualified and experienced acoustics specialist and must contain a description of, and the results from, a computer noise model of the Project as constructed.

The report must include the results of field measurements at a minimum of four representative PPFs within the Project. The results of the noise level monitoring must be used to verify the computer noise model.

Field measurements shall be in accordance with NZS 6806.

- 5) The noise barriers required by these conditions must be maintained so that they retain their designed noise reduction performance.
- 6) The road surfaces must be maintained so that they retain their noise reduction performance as far as practicable.

Building-Modification Mitigation

- 7) Prior to construction of each stage of the Project, a suitably qualified acoustics specialist must identify those PPFs where, following implementation of the Structural Mitigation measures, either:

- a. Both of the following occur:

- i. A noise level increase of more than 2dB will occur due to road-traffic noise from the Project (determined by comparing the predicted noise levels for the as-built design (determined in Condition 4) with the predicted noise levels for the Do-nothing option (as set out in the S92 response package); and

- ii. Habitable spaces are expected to receive in excess of 45dB $L_{Aeq(24hr)}$ from road traffic noise with windows closed, in the Design Year;

or

- b. Noise levels are greater than 67dB $L_{Aeq(24hr)}$ (assessed in accordance with NZS6806).

For those PPFs that (a) or (b) apply to, the Requiring Authority must set out options as to what Building Modification Mitigation are available to achieve 40 dB $L_{Aeq(24hr)}$ for habitable spaces using the process set out in Conditions 8 to 11.

- 8) Prior to Major Construction Activity in the relevant Work Area, the Requiring Authority must write to the owner of that PPF requesting entry to assess the noise reduction performance of the existing building envelope. If the owner agrees to entry within 3 months of the date of the Requiring Authority's letter, the Requiring Authority must instruct a suitably qualified acoustics specialist to visit the building and assess the noise reduction performance of the existing building envelope, and determine what Building-Modification measures are required to achieve an operational noise level of 40 dB $L_{Aeq(24h)}$ for habitable spaces.

- 9) For each PPF identified under condition 7, the Requiring Authority is deemed to have complied with condition 8 if:
- a. The Requiring Authority's acoustics specialist has visited and assessed the PPF; or
 - b. The 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 owner did not agree to entry within three months of the date of a Requiring Authority letter seeking entry for assessment purposes (including where the owner did not respond within that period); or
 - d. The owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project or after reasonable time has not responded.

If any of (b) to (d) above applies to a PPF identified under condition ON.7, the Requiring Authority is not required to implement Building-Modification Mitigation to that PPF.

- 10) Subject to condition 9, within three months of the assessment required by condition 8, the Requiring Authority must write to the owner of each PPF identified under condition 7 advising:
- a. If Building-Modification Mitigation is required to achieve 40 dB $L_{Aeq(24h)}$ inside habitable spaces; and
 - b. The options for Building-Modification Mitigation to the building, if required; and
 - c. That the owner has twelve 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.
- 11) Once an owner has confirmed which Building-Modification Mitigation option is preferred, the mitigation must be implemented by the Requiring Authority, including obtaining any Council consents, within a mutually agreeable and reasonable timeframe, and where practicable, prior to a Major Construction Activity commencing in the relevant Work Area.
- 12) Where Building-Modification Mitigation is required, the Requiring Authority is deemed to have complied with condition 11 if:
- a) The Requiring Authority has completed Building-Modification Mitigation to the PPF; or
 - b) An alternative agreement for mitigation is reached between the Requiring Authority and the owner, and that mitigation option has been completed; or
 - c) The 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 8 (including where the owner did not respond within that period).

Definitions

For the purposes of conditions 1 to 12:

- a. BPO – means the Best Practicable Option in accordance with s16 of the RMA;
- b. NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads (“NZS 6806”);
- c. Building-Modification Mitigation – has the same meaning as in NZS 6806
- d. Habitable Space – has the same meaning as in NZS 6806;
- e. Major Construction Activity - means any construction activity that would result in an exceedance of the Construction Noise Standards
- f. PPFs – means Protected Premises and Facilities as in NZS 6806.
- g. Structural Mitigation – has the same meaning as in NZS 6806. For the purpose of these conditions the structural mitigation measures are low noise road surface materials and noise barriers;
- h. Work Area - means any area where construction works associated with the Project are undertaken (e.g. all active works areas and construction support areas); and

11.0 Conclusion

The Original Assessments of operational road traffic noise are heavily focussed on addressing only the provisions of NZS6806:2010. It is well recognised in New Zealand that this standard has a number of limitations. These have been well-documented by various decision makers including several Boards of Inquiry. I consider it critical that the limitations of NZS6806:2010 are clearly understood, along with the additional assessment that is necessary to ensure that the limitations are addressed for these projects.

It is well accepted and globally recognised that exposure to noise from road, rail and air transport infrastructure, industry, ports commercial activities and a variety of other sources has the potential to generate high levels of annoyance and adverse health effects if it is not managed carefully. The adverse effects can be significant where the noise exposure is high.

Minimising these effects by adopting the best practicable option to minimise noise from inside the road and in the receiving environment is critical to avoid the worst of the adverse health and amenity effects that could otherwise arise.

The noise level predictions make it clear that the road traffic noise levels in the area are generally well above the WHO target noise levels. This demonstrates that there is a significant

incentive to ensure that the Requiring Authority is adopting the BPO to minimise the noise generated by the operational phase of the project.

The management of exposure to road traffic noise is a responsibility that is traditionally shared between the noise-maker (in this case the Requiring Authority) and the occupants and developers of the receiving environment. The common arrangement is that the road controlling authority would adopt the BPO to minimise the noise exposure in the receiving environment as the priority.

The receiving environment is then left to contend with the noise effects that 'spill' outside of the road corridor. The AUP does not include any standards that would contribute towards the receiving environment managing the road traffic noise effects that cannot be contained inside the road corridor. I have completed my assessment on the basis that the scope is limited to adopting the BPO inside the road corridor and acoustically treating PPFs in accordance with the procedures set out in NZS6806:2010. This forms the background and reasoning for the assessment of noise effects and the scope of this review.

I agree with the noise modelling methods and calculation procedures. I consider that the identification and representation of the receiving environment is sufficiently accurate for the purpose of the noise modelling.

The only issues I have identified that are fundamental to the veracity of the outputs are set out in the Council's request for further information. The inclusion of the already-planned speed limit reduction as part of the Do Minimum and Mitigation Options was the primary issue, along with the exclusion of any diesel buses from the bus noise assessment. These have been addressed in the Responses.

Removing the already-planned speed limit reductions from the benefits of the projects results in a small change in noise level at each receiver (+1 to +2dB). However, the characterisation of the change in noise level arising from the wider project changes significantly when assessed across the extent of the projects. The figures and statements in the Original Assessments that describe the overall change in noise level arising from the projects must not be relied on.

I recommend that the Requiring Authority produce updated versions of Figures 7 and 8 of the Original Assessments to show the overall changes arising from the projects.

I have reviewed the process for adopting the selection of the preferred mitigation option 4.

Many of the selection criteria involve considerations beyond the scope of an acoustics expert. The main non-acoustical factors are:

- 1) The Requiring Authority's assertion that a low-noise Open-Graded Porous Asphalt (OGPA) pavement is "unsuitable" for the project, as advised by the EBA Pavements team¹⁵; and
- 2) The practicability of more extensive and / or higher road-side noise barriers.

¹⁵ Section 6.2.5 of the Operational Noise Assessment

I consider that the Requiring Authority should demonstrate that there are no practicable options for a pavement that would be quieter than DG10.

If the Requiring Authority's assertions regarding the pavement type and barriers are reasonable and correct, I consider that mitigation option 4 has been selected appropriately, and that it is likely to represent the BPO.

The only submissions that deal with operational noise and vibration effects are the submissions from The Warehouse Group and Kainga Ora, both on EB2 NoR.

I agree with the points made in the Kainga Ora submission. I agree with the concerns raised in The Warehouse Group submission but I anticipate that no change to the design will be required to address it. I have suggested a brief process for the Requiring Authority and The Warehouse Group to follow to determine whether any further action is required to address the submission.

The Requiring Authority proposes the same singular operational noise condition for EB3, except that the addresses are 2 Wheatley Avenue and 4 and 148 Edgewater Drive.

I consider that the conditions should be more comprehensive than these singular conditions. The objective of the extra conditions I have recommended is to ensure that the level of effect is approximately no greater than the level of effect that has been considered in this process, and to ensure that the noise mitigation measures that either inherent or specifically proposed in the Operational Noise Assessments and applications generally are delivered and maintained.

Additionally, the Requiring Authority has not proposed any conditions that set out the process for acoustically treating any Category C PPFs that may arise in the Update Noise level predictions (that have not been summarised or incorporated into the conclusions of the Assessments). I have proposed a set of conditions that set out the process if the Requiring Authority

The Assessments conclude that:

"We consider that, following construction of EB2 and EB3R, the resulting noise levels from road traffic will be reasonable as they are typical for an urban environment."

I fundamentally disagree with this reasoning. The determination of whether the noise levels will be reasonable must be based on an assessment of far more factors than simply whether the noise is typical in an urban environment. It is well recognised that the determination of whether the noise levels are reasonable must take into account a variety of factors such as including the level of noise likely to be received, the degree and effectiveness of mitigation proposed, the sensitivity of the surrounding environment and the adverse effects arising from the noise, balanced against the need for and benefits of the project. Many of these factors will require weighing by the decision-makers before a determination can be made on whether the noise levels are reasonable or otherwise.

MEMO

20 March 2023

To: Warwick Pascoe – Premium project manager
David Wong – Senior Policy Planner
Celia Wong – Senior Planner
David Wren - Consultant Planner

cc: Roja Tafaraji – Senior Parks Planner

From: Andrew Miller – Consultant parks planner

Subject: **Eastern Busway – EB2 and EB3R RC and NoR - BUN60407133 and BUN60407121**

1. BACKGROUND

1.1. Auckland Transport has lodged several applications to Auckland Council for the Eastern Busway ('EB'). The project includes:

- EB Stage 2 ('EB2') – Joint Notice of Requirement ('NoR') / Resource Consent ('RC') for land take and extension of the existing EB from the corner of Pakuranga Road and Ti Rakau Drive through to William Roberts Road. The works involve realignment of existing roads, construction of bus stops, bus lanes, and walking and cycling facilities. Moreover, construction of the 'Reeves Road Flyover' from Pakuranga Road to the South Eastern Arterial (SEART) road. Figure 1 depicts the spatial layout of the works and designation.
- EB Stage 3 ('EB3R') – RC for extension of EB along Ti Rakau Drive Pakuranga Town Centre to Riverhills Park. This involves realignment of existing roads, construction of bus lanes, bus stops, and walking and cycling facilities. Figure 2 depicts the spatial layout of the works.

1.2. These applications were publicly notified in late 2022 and several submissions have been received, including submission 14 on EB2, and 5 submissions on EB3R.

1.3. William Roberts Road is presently being extended to Pakuranga Road via a separate resource consent (LUC60401706) – see **Figure 1**.

1.4. Demolition and removal of existing dwellings and features along the future alignment has commenced separately by the applicant.

1.5. A works depot has also been created at the existing corner of William Roberts Road and Pakuranga Road (LUC60403744).

1.6. I performed a site visit and walkover on 15 March 2023. This visit has been used to inform the findings of this memo.

1.7. In terms qualifications and experience, I hold a Bachelor of Planning (honours) from the University of Auckland and have 8 years of experience in resource management planning split between public and private sector work.



Figure 1 – (Above) Extent of EB2 Shown in Blue outline. Works despot in pink and red shows the William Roberts extension works. Source: Application AEE by AT.

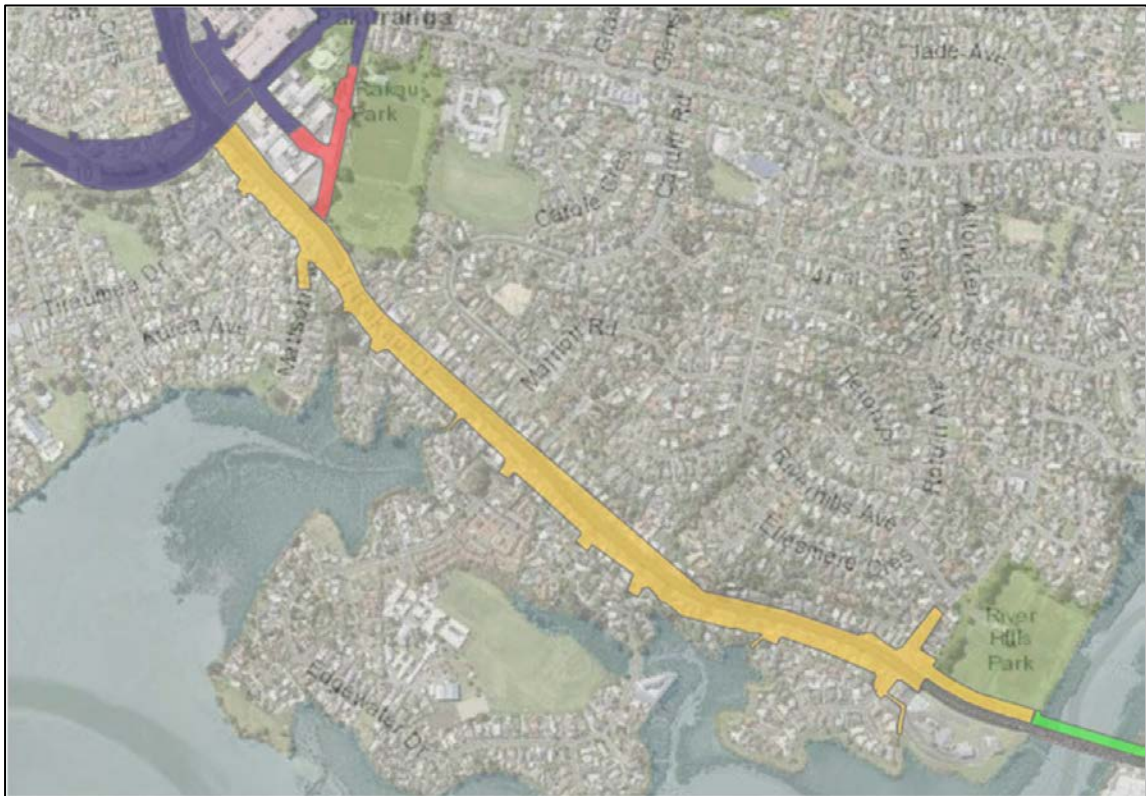


Figure 2 – (Above) Extent of EB3R works shown in yellow. Source: Application AEE by AT.

1.8. Parks Planning have been requested to review the impacts of EB2 and EB3R in terms of the existing parks, reserves and open spaces along the project's alignments. Based on the submitted material, the following Council-owned facilities would be affected (**Table 1 and 2**):

Table 1: EB2 works in parks

Reserve Name	Address	Zoning	Area of acquisition	Works to be undertaken
Paul Place Reserve	6R Paul Place, Pakuranga	Open Space - Informal Recreation Zone	Temporary: 1229m ² Permanent: 312m ²	Excavation and vegetation removal relating to the construction of the busway and stormwater infrastructure across EB2. Restriction of public access to areas of open space where occupation is required for construction purposes.
Bus Stop Reserve	96R Pakuranga Road, Pakuranga	Open Space - Conservation Zone	Temporary: 1135m ² Permanent: None	Excavation and vegetation removal relating to the construction of the busway and stormwater infrastructure across EB2. Restriction of public access to areas of open space where occupation is required for construction purposes.
Pakuranga Community Centre	13R Reeves Road, Pakuranga Heights	Open Space - Community Zone		Removal of existing pull-in bay and excavations for construction purposes. Restriction of public access to areas of open space where occupation is required for construction purposes. Reinstatement of pull-in bay following construction.
Ti Rakau Park	27R William Roberts Road, Pakuranga	Open Space - Sport and Active Recreation Zone	-	Covered by LUC60401706. Works for William Roberts Road extension.
Pandora Place Esplanade Reserve	35R Pandora Place, Pakuranga	Open Space - Informal Recreation Zone	Temporary: 268m ² Permanent: None	Excavation and vegetation removal relating to the construction of the busway and stormwater infrastructure across EB2. Restriction of public access to areas of open space where occupation is required for construction purposes.
Tiraumea Reserve	25 Tiraumea Drive Pakuranga	Open Space - Informal	Temporary: 87m ²	Excavation and vegetation removal relating to the construction of the busway and

		Recreation Zone	Permanent: None	stormwater infrastructure across EB2. Restriction of public access to areas of open space where occupation is required for construction purposes.
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Table 2: EB3R works in parks

Reserve Name	Address	Zoning	Area of acquisition	Works to be undertaken
Edgewater Drive Esplanade Reserve	33R Edgewater Drive	Open Space – Informal Recreation	Temporary: 1030m ² Permanent: 195m ²	Excavation and vegetation removal relating to the construction of the busway and stormwater infrastructure across EB3R. Restriction of public access to areas of open space where occupation is required for construction purposes.
Fremantle Place Esplanade Reserve	159R Edgewater Drive	Open Space – Informal Recreation	Temporary: 1171m ² Permanent: 51m ²	Excavation and vegetation removal relating to the construction of the busway and stormwater infrastructure across EB3R Restriction of public access to areas of open space where occupation is required for construction purposes.
Riverhills Park	168R Gossamer Drive Pakuranga	Open Space – Sport and Active Recreation	Temporary: 2355m ² Permanent: 3318m ²	Clearing of the work area Modification of existing sports field platforms Removal and reconstruction of existing walkway and footpaths Earthworks, being removal of topsoil Tree removal Construction of stormwater treatment and associated swale/ naturalised watercourse Construction of Gossamer Station and the western bridge abutment.

2. TECHNICAL INPUT

2.1. As part of my technical review, I have consulted with, or reviewed input from, the following technical specialists:

- Emily Wagon - Parks and Places specialist
- Trevor Mackie – Urban design specialist
- Gavin Donaldson - Arborist

3. SUBMISSIONS

3.1. All submissions have been reviewed, none of which expressed concerns in terms of the impacts on public open spaces.

4. DOCUMENTATION

4.1. The following documents within the applications have been reviewed:

- **EB2**
 - *AEE by Auckland Transport*
 - *App 2 Land requirement plan*
 - *App 3 Proposed conditions*
 - *App 4 Proposed plans*
 - *App 5 Landscape ecological and arboricultural mitigation plans*
 - *App 15 Construction environmental management plan*
 - *App 16 Arboricultural report*
 - *App 17 Tree protection management plan*
 - *App 23 Titles*
 - *App 31 Social impact assessment*
 - *App 32 Open space assessment*
 - *S92 response*
- **EB3R**
 - *AEE by Auckland Transport*
 - *App 1 Land requirement plan*
 - *App 2 Proposed plans*
 - *App 3 Landscape ecological and arboricultural mitigation plans*
 - *App 4 Proposed conditions*
 - *App 5 Titles*
 - *App 8 Open space assessment*
 - *App 10 Construction environmental management plan*
 - *App 16 Arboricultural report*
 - *App 25 AC parks agreement*
 - *App 30 Social impact assessment*
 - *App 31 Tree protection management plan*
 - *S92 response*

5. EXISTING PLANNING DOCUMENTS

Howick Local Board Plan 2020 (HLBP)

5.1. The HLBP was adopted in 2020 and outlines the Howick Local Board's policies, priorities, and aspirations for the local board area. This includes Pakuranga and the project areas. 'Outcome 2' and 'Outcome 6' of the HLBP are relevant for

consideration and set out a raft of objects and initiatives that the board is seeking to meet.

- 5.2. The maintenance and enhancement of high-quality community facilities and parks is highlighted within Outcome 2. The projects interface with several parks and open spaces along the alignments.
- 5.3. Outcome 6 is *'Effective and accessible transport choices'*. The Eastern Busway is referenced by its former name 'AMETI Busway' in the HLBP and is noted as a priority project for the local board area. The local board recognises the busway as an opportunity and outlines that connections for walking and cycling to it are provided.

Howick Walking and Cycling Network 2018 (HWCN)

- 5.4. The HWCN was adopted in 2018 by the Howick Local Board and sets out the Board's aspirations and aims for walking and cycling within the local board area. The Eastern Busway is noted as a significant future project and is recognised within the HWCN. **Figure 3** includes an excerpt of the project area within the HWCN. The HWCN is recognised in the HLBP as an important plan for developing recreational and commuter links.
- 5.5. Future walking and cycling connections are identified along the various esplanades along the Pakuranga Creek and two 'priority routes' are identified adjacent to the existing SEART Road. These are highlighted in red on **Figure 1**. The walkways, noted in green, along the esplanade reserves are identified as being 'aspirational' by the HWCN.

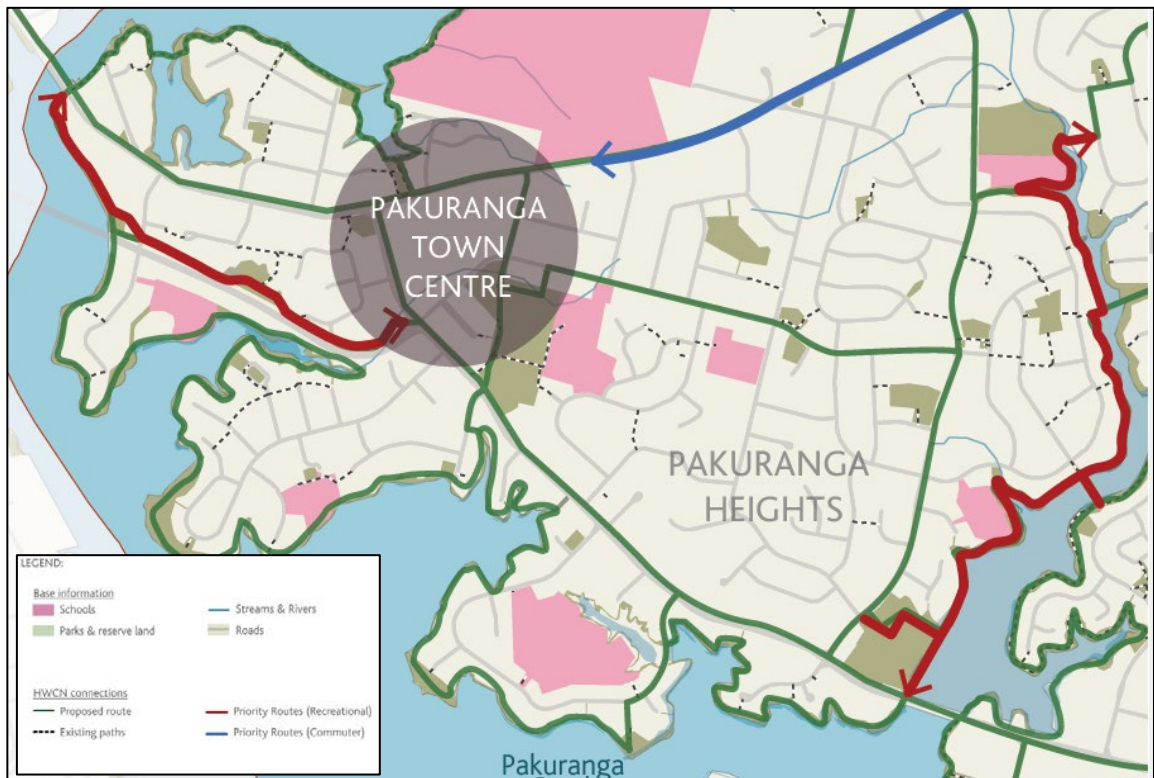


Figure 3: Excerpts from HWCN. Source: HWCN 2018 by Howick Local Board.

Auckland Unitary Plan (Operative in Part) (AUP(OP))

- 5.6. The Auckland Unitary Plan (Operative in Part) is the overarching land use and resource management and planning document for the Auckland Region. In terms of the relevance to parks and open spaces, the AUP(OP) has highlighted that residential intensification within existing urban areas is required to accommodate the projected growth of the city. The Howick local board area is expected to grow from 140,000 to 180,000¹ people by 2051.
- 5.7. The areas around the EB project routes features a number of land use zones, but notably includes the 'Residential – Terraced Housing and Apartment Buildings Zone' and the 'Residential – Mixed Housing Urban Zone' which facilitate intensive residential land uses. Plan changes are proposed to the AUP(OP) via Plan Change 78-80 which will likely see a further application of intensive residential zonings in this area in response to the National Policy on Urban Development and recent amendments to the Resource Management Act.²
- 5.8. The EB projects will, in part, respond to current and future transportation needs of the area, but the projected increase in population highlights that existing parks and open spaces in this locale will need to cater for additional recreational and open-space demand.
- 5.9. The AUP(OP) sets out objectives and policies for open-space zones within 'Chapter H7 Open Space zones'. The EB2 and EB3R projects interface or affect land zoned 'Open Space – Conservation Zone', 'Open Space - Informal Recreation Zone' and 'Open Space – Sports and Active Recreation Zone'. Chapter H7 generally sets out that a range of quality open spaces should be provided within Auckland and that adverse effects on open spaces arising from use and development (which includes this project) are avoided, remedied or mitigated.

6. ASSESSMENT

- 6.1. In this section of this memorandum, a discussion on the effects on each open space is provided. For ease of review, I have provided an analysis of each park/open space that is impacted. The 'general' comment applies across the project area, unless otherwise covered in the individual assessment of a space.

EB2 parks/Open spaces – RC and NoR

General

- 6.2. Aside from the works areas and land designated for temporary use, access to the respective parks for the public would be maintained for the duration of the project. This is supported due to the temporary nature of the use.
- 6.3. I agree that the proposed Urban Design and Landscaping Plan (UDLP) and Construction Environment Management Plan (CEMP) conditions are an appropriate means of ensuring that public safety of the various reserves can be maintained during works and the parks reinstated appropriately following works. Since areas of vegetation would be removed from some open spaces, the UDLP must ensure that adequate replacement planting is provided to mitigate visual

¹ Source: Howick Local Board Plan 2020.

² RMA (Enabling Housing Supply and Other Matters) Amendment Act 2021

impacts. The applicant has adopted a 3:1 replacement scheme in liaison with Community Facilities which I consider to be a positive effect in terms of the amenity and recreational enjoyment of the various parks/open spaces. It is appropriate to leave this to a condition in this case.

- 6.4. There are areas where the proposal will interface with existing vegetation within parks and reserves. Where trees are proposed to be retained, the applicant has proposed to protect them in accordance with best practice arboricultural methods. Council's arboricultural advisor agreed³ with the arboricultural measures provided by *Arborlab*, and based on the advice of the technical experts, I am supportive of the measures offered to protect park and reserve trees/vegetation.
- 6.5. I agree with the conclusions of the applicant at 2.1.1 of the submitted 'Eastern Busway EB2 and EB3 Residential Open Spaces Effects Assessment' (OSEA⁴) that there would be minimal impact on the future recreational use and enjoyment of the various spaces at the completion works – unless elsewhere stated. This is due to the proposed land-takes and works impacting only peripheral sections of the various parks.

Paul Place Reserve

- 6.6. This reserve is located on the northern side of the existing SEART road and is used as a passive open space. The HWCN plan shows that a priority route for walking and cycling would run through this area. An existing concrete path traverses the path. Based on the submitted plans for the NoR and RC, the proposed works would not prejudice the future upgrading of this walking and cycling connection. Aside from the works area, access to the park for the public would be maintained for the duration of the project which is supported. There is presently no formal or organised sport occurring in the park and as such there would be no impacts in that regard.
- 6.7. Any noise walls constructed here should not sever or remove public access through the park currently or in the future to ensure the objectives of the HLBP and HWCN can be achieved. This can be managed in the UDPL condition.

Bus Stop Reserve

- 6.8. This reserve is located on the northern side of Pakuranga Road opposite the existing shopping mall. There are presently several phoenix palm trees located there, a concrete access path for network utility service access and a concrete path connecting the Rotary Walkway.
- 6.9. Whilst several existing phoenix palms would be lost, their loss would be mitigated by the proposed 3:1 replacement planting noted earlier. The space is not used for any formal sport or activities and its temporary use is acceptable. The proposed plans show that the project would maintain existing pedestrian connections during the works, which is supported.

³ Arboricultural memorandum for a notice of requirement for Eastern Busway Stage EB2 (NoR EB2) and resource consent applications for Eastern Busway Stage EB2 (BUN60407133) and Eastern Busway Stage EB3R (BUN60407121)

⁴ 'Eastern Busway EB2 and EB3 Residential Open Space Effects Assessment Document number: EB234-1-PL-RP-Z2-000028'

- 6.10. The reserve would be returned to its present state at the conclusion of the works. Therefore, apart from the tree works, there would be no enduring adverse effects on function and quality of the open space.

Pakuranga Community Centre

- 6.11. This reserve is located at the corner of Reeves Road and William Roberts Road. There are existing buildings located at this site, including the community/leisure centre and a childcare facility. Land would be taken temporary during construction along the Reeves Road frontage.
- 6.12. There would be temporary disruption from the works to these existing tenants from construction noise/vibration and construction traffic, but this can be managed with the proposed CEMP and CCP management plan conditions offered by the applicant. These plans include provision for on-going management of effects and consultation with impacted parties are a reasonable means to manage effects.
- 6.13. The HWCN identifies a future walking and cycling connection down William Roberts Road. The proposal ties into the approved William Roberts Extension works area, which maintains a pedestrian connection from William Roberts Road to Ti Rakau Drive. Therefore, the proposal and would not prejudice the future provision of improved walking and cycling connections in this area.

Pandora Place Esplanade Reserve and Tiraumea Reserve

- 6.14. These reserves are located to the south of the existing SEART road. The HWCN identifies an aspirational walking and cycling route within these reserves/parks, though these are not priority routes. Based on the submitted plans for the NoR and RC, the proposed works would not prejudice the future upgrading of this walking and cycling connection. Again, the proposed mitigation planting of 3:1 would be sufficient to mitigate the loss of any vegetation in this area.

EB3R parks/Open spaces – RC

General

- 6.15. To avoid undue repetition, the same conclusions under the 'general' assessment for EB2 apply here in the resource consent context.

Edgewater Derive Esplanade Reserve

- 6.16. This reserve is located along a tributary of Pakuranga Creek to south of Ti Rakau Drive. The project interfaces with the reserve at several locations along the alignment, particularly near 8 Mattson Road and 101 Ti Rakau Drive. The HWCN identified an aspirational walking and cycling route within these reserves/parks, though these are not priority routes. Based on site visits, there are also some technical challenges in terms of the gradient of the land and space available in these areas for a future connection.
- 6.17. The southern side of the proposed transport corridor requires a retaining wall (RW211) to be constructed along the park interface. Due to topography, the wall would be a fill retaining wall – with a maximum retained height of 2.6m along a

length of 20m⁵. Whilst there is limited public access to this part of the reserve now, the introduction of the wall has the potential to constrain the delivery of a recreational walking and cycling connection in accordance with the HWCN plans. This is not supported and has the potential to diminish the potential future public use and enjoyment of the esplanade reserve - being presently unmitigated. A cross-section of this area might have assisting in understanding this further. **Figure 4** shows the location of the wall. The UDPL condition could be updated to include a review of this wall but there is presently insufficient information available to understand how the wall would maintain future public access.

- 6.18. A large tree would be removed from the northern part (adjacent to the existing bus-stop) of the esplanade area to complete the works, but its loss would be mitigated over time by the proposed 3:1 replacement planting offered by the applicant.

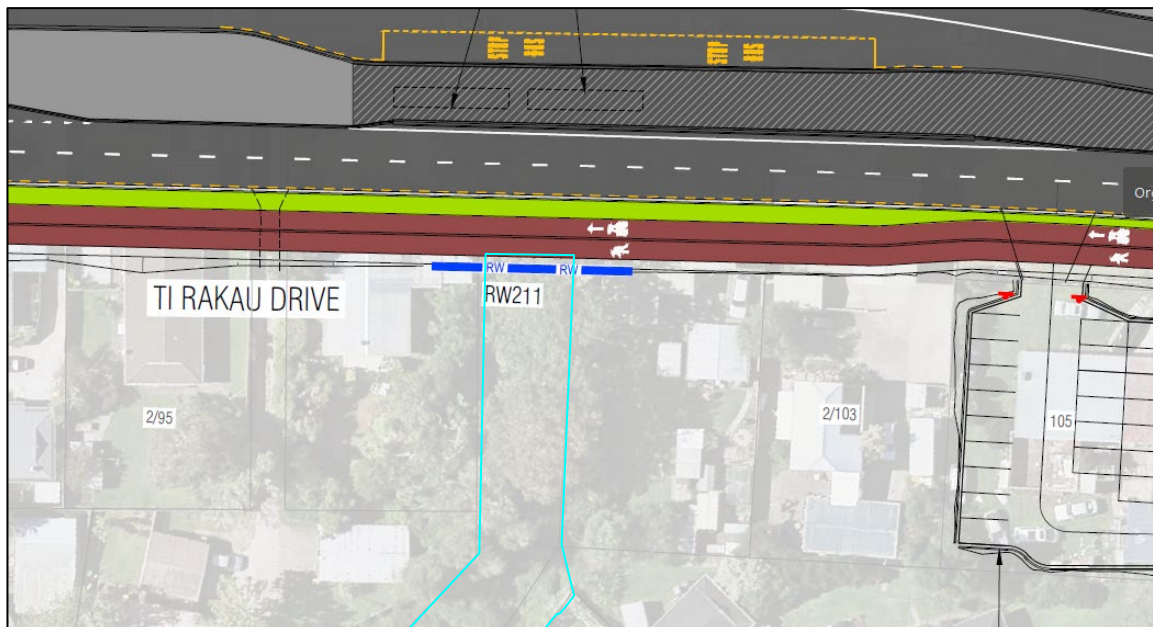


Figure 4: Retaining wall RW211 located adjacent to 101 Ti Rakau Drive. Esplanade reserve highted in light blue.

Fremantle Place Esplanade Reserve

- 6.19. This reserve is located along a tributary of the Pakuranga Creek to south of Ti Rakau Drive. The HWCN identified an aspirational walking and cycling route within these reserves/parks, though these are not priority routes. Based on the submitted plans, the proposed works would not prejudice the future upgrading of this walking and cycling connection. A tree would be lost adjacent to 175A Ti Rakau Drive but its loss would be mitigated over time by the proposed 3:1 replacement planting offered by the applicant.

Riverhills Park

- 6.20. This reserve is located on the eastern end of the EB3R alignment. I agree with the descriptions of the park and its location within the OSEA report - being a large open space with four football fields (three full-size and one smaller field to the north of

⁵ Section 3.2.9 of the EB3R AEE

the park), car parking area, and an existing clubhouse for the 'Fencibles United AFC'.

6.21. The OSEA provided with the application states that 'Riverhills Park is most affected by the project'. The works within the reserve include:

- Clearing of the work area
- Modification of existing sports field platforms
- Removal and reconstruction of existing walkway and footpaths
- Earthworks, being removal of topsoil
- Tree removal
- Construction of a cantilever platform in the park
- Construction of the western Ti Rakau Bridge abutment
- Construction of stormwater treatment and associated swale

6.22. The OSEA considers that the values of the Riverhills Park are:

- **Recreational** - Refers to the function the park provides to park users groups and the local community.
- **Connectivity** - Refers to how the park connects to the local community and wider park networks.
- **Facilities** - Refers to the value existing facilities the park provides, such as clubrooms and other buildings.
- **Amenity** - Refers to how the park aesthetic serves the local community in making it a desirable place to live.
- **Community** - Refers to how the community values the park as a place to recreate and provide quiet enjoyment.
- **Natural** - Refers to how the park provides a more natural transition between urban and natural environments.
- **Ecological** - Refers to flora and fauna found within the park or next to or if the Park serves as a wildlife corridor.
- **Social** - Refers to how the park enhances a community, enables people to meet up, have access to nature and recreational activities.

I agree with this assessment.

6.23. The main formalised use of the park is for football – The Fencibles United AFC has around 6000 members, with membership of all ages and including 'associated' members such as parents/guardians. I agree with the OSEA that the park is of significant recreational value for the wider area and the proposed works have the potential to result in significant impacts on the values of the park.

6.24. I agree with the range of adverse impacts outlined at Section 3.6 of the OSEA report and have nothing further to add in that regard. Figure 5 sets out the proposed mitigation offered by the applicant. Figure 6 shows a concept plan for the proposed park layout with mitigation incorporated.

Item	Description / clarification
Rotate the No1. pitch to an east-west configuration to ensure no reduction of the playing platform.	Earth works, extension of artificial turf and drainage/ irrigation as required for new re-oriented platform
Tree removal	Removal of 72 trees (as per arborist report) to facilitate the Gossamer station and rotation of the No.1 field
Tree replacement at 3:1 ratio	Planting of 216 native trees (planting plan as per landscape report)
Remove and re-install / replace dug outs x 2	Current dug outs are on the east side of Pitch #1 along touch line, by halfway line. They would need to be moved with the new pitch orientation, and reinstalled / upgraded
Remove and re-install spectator railings and advertising panels around No1. Pitch (yellow line figure 18)	Metal spectator railings to allow viewing and advertising signage on three sides of pitch #1
Access path	Re-connect/align pathway connecting the Gossamer Station to the park- shown as a 'zigzag' path in plan. Alignment and design to be confirmed
Updated field line markings and reinstated advertising hoardings	New field marking for new #1 pitch orientation Move pitch #2 to the east – just new markings, no earthworks and upgraded drainage No change to pitches #3 or #4
Misc. – soil removal / landfill treatment / design / earthworks	As required, for re-orientated pitch #1

Figure 5: Proposed mitigation extracted from 'Table 1. Minimum mitigation requirements' from OSEA report.



Figure 6: Proposed Riverhills Park layout.

6.25. Additional mitigation has also been agreed⁶ between the applicant and Community Facilities as part of a side agreement, and is incorporated as part of the application, which includes:

- Replacement planting of vegetation removed at the agreed 3:1 planting ratio
- Inclusion of additional carparks to service the park and surrounding facilities at Ti Rakau Park,
- Re-alignment and provision of improved pedestrian and cycle footpaths through the Ti Rakau Park,
- Provision of a new playground in a new location in the Ti Rakau Park (scope and location to be confirmed),
- Inclusion of new artificial pitch with lights at Riverhills Park
- Fitness path (scope to be confirmed) at Riverhills Park
- Concept plans for Riverhills and Ti Rakau Park

6.26. It is noted that the works within Ti Rakau Park noted above have been incorporated separately into the consent conditions of the William Roberts Road Extension under consent LUC60401706.

6.27. The proposed mitigation within Riverhills Park is reasonable and I agree with the OSEA that the mitigation package, if implemented, would maintain the agreed values of the park.

6.28. Notwithstanding, there would be a substantial loss of large specimen trees on the Ti Rakau Drive interface of Riverhills Park. The trees presently contribute positively to the amenity of the park and the surrounding area. It is recommended that the applicant include replacement planting of large-growing trees along the frontage as

⁶ Email titled 'Approval in principle "EB2 and EB3R" package/portion of the EBA development' dated 11 August 2022 from Marcel Morgan

part of the finalised landscape design in addition to the ecological planting proposed on the southern side of Riverhills Park (as shown in the proposed landscape plans). The trees should be contained within land that will be controlled by the consent holder/requiring authority (i.e. not taking up further park land). Trevor Mackie, Urban designer for council reached this same conclusion regarding the need for large-growing trees along this frontage, and generally along the alignment, as part of his peer review⁷ of urban design and landscape effects of the proposal. He highlights that Riverhills Park must maintain a strong presence and amenity as the area intensifies under the Auckland Unitary Plan, and the changes that will arise from the National Policy Statement on Urban Development. This can be managed via a condition but should first be agreed with the applicant as it is not presently part of the application.

- 6.29. Of critical importance is that the final mitigation plans for the park are concept only, and it is possible that additional resource consents will be required to implement the proposed works. This carries a degree of risk that consents may not be obtained, and the resulting effects would remain unmitigated. The applicant also requires landowner approval from Land Advisory before proceeding.
- 6.30. Whilst the physical effects on the park and its amenity can likely be mitigated by the applicant's concept designs, there would be medium-term disruption for the Fencibles United AFC and other users of the park. In my opinion, the proposed field layouts should be completed prior to the main construction works and land take/occupation for EB3R. Alternative playing areas may also be required for the club during construction or the new field layouts should be arranged in consultation with Fencibles United AFR. The applicant has proposed on-going consultation with the club as part of the Communication and Consultation Plan (CCP) as a means of managing this.
- 6.31. In terms of the HWCN, a priority route is shown as a desired connection along the eastern side of Riverhills Park. Given it is a priority route, the proposed works within the park must not compromise this connection. A condition of consent is recommended in this regard.

7. CONCLUSIONS

- 7.1. Overall, the proposal can be mainly supported from a Parks Planning point of view. The proposed retaining wall RW211 has the potential to compromise the delivery of a recreational walking and cycling connection along Edgewater Esplanade Reserve which would adversely impact the future recreational value of the reserve that could be enjoyed by nearby residents. I agree that Riverhills Park has the greatest potential to be impacted by the works, but the applicant has proposed a reasonable suite of mitigation measures to manage this. However there remains a degree of risk for delivery and success of the mitigation as additional resource consents may still be required for the works. Mitigation planting should be within the road corridor wherever possible as opposed to parks land. The applicants proposed UDLP, CEMP and CCP conditions are supported. Additional conditions are recommended below to avoid and mitigate adverse effects on the environment.

⁷ Technical memorandum for a notice of requirement for Eastern Busway Stage EB2 (NoR EB2) and resource consent applications for Eastern Busway Stage EB2 (BUN60407133) and Eastern Busway Stage EB3R (BUN60407121): urban design

8. RECOMMENDED CONDITIONS

- 8.1. Below are the recommended conditions of consent for both EB2 and EB3R stages. I recommend that the ULDP, CCP and CEMP conditions offered by the applicant are included in any decision to grant consent. I support the recommendations of Gavin Donaldson and Trevor Mackie that the UDPL condition should be amended to include the provision of additional large-growing trees along the alignment, but in particular along the road frontage of Riverhills Park. Inclusion of a condition regarding a walking and cycling connection along the eastern side of Riverhills Park. The UDPL condition could also be updated to include measures to address RW211 and future access to the esplanade areas.

Recommended notice of requirement EB2

Streetscape landscaping

1. At least 90 working days prior to implementation of permanent street landscaping works occurring, the requiring authority must submit a detailed streetscape landscaping plan(s) for all swales, street trees and street gardens for approval by the Parks Planning Team Leader. In particular, the plans must:
 - a) Be prepared by a suitably qualified landscape architect.
 - b) Be in general accordance with the **[PLANNER TO INSERT]**
 - c) Show all planting including details of intended species, location, plant sizes at time of planting and likely heights on maturity, tree pit specifications, the overall material palette, location of street lights and other service access points.
 - d) Ensure that selected species can maintain appropriate separation distances from paths, roads, street lights and vehicle crossings in accordance with the Auckland Transport Code of Practice.
 - e) Include planting methodology.
 - f) Comply with the [Auckland Code of Practice for Land Development and Subdivision: Chapter 7: Landscaping](#).

Recommended resource consent conditions for EB2

Streetscape landscaping

1. At Engineering Plan Approval stage, the consent holder must submit a detailed streetscape landscaping plan(s) for all swales, street trees and street gardens for approval by the Parks Planning Team Leader. In particular, the plans must:
 - a) Be prepared by a suitably qualified landscape architect.
 - b) Be in general accordance with the **[PLANNER TO INSERT]**
 - c) Show all planting including details of intended species, location, plant sizes at time of planting and likely heights on maturity, tree pit specifications, the overall material palette, location of street lights and other service access points.
 - d) Ensure that selected species can maintain appropriate separation distances from paths, roads, street lights and vehicle crossings in accordance with the Auckland Transport Code of Practice.
 - e) Include planting methodology.
 - f) Comply with the [Auckland Code of Practice for Land Development and Subdivision: Chapter 7: Landscaping](#).

Advice note:

Plans approved under Resource Consent do not constitute an Engineering Plan Approval and should not be used for the purposes of constructing public works in the absence of that approval.

Recommended resource consent conditions for EB3R

Streetscape landscaping

1. At Engineering Plan Approval stage, the consent holder must submit a detailed streetscape landscaping plan(s) for all swales, street trees and street gardens for approval by the Parks Planning Team Leader. In particular, the plans must:
 - a) Be prepared by a suitably qualified landscape architect.
 - b) Be in general accordance with the [PLANNER TO INSERT]
 - c) Show all planting including details of intended species, location, plant sizes at time of planting and likely heights on maturity, tree pit specifications, the overall material palette, location of street lights and other service access points.
 - d) Provision of large-growing specimen trees long the Ti Rakau Drive frontage of Riverhills Park.
 - e) Ensure that selected species can maintain appropriate separation distances from paths, roads, street lights and vehicle crossings in accordance with the Auckland Transport Code of Practice.
 - f) Include planting methodology.
 - g) Comply with the [Auckland Code of Practice for Land Development and Subdivision: Chapter 7: Landscaping](#).

Advice note:

Plans approved under Resource Consent do not constitute an Engineering Plan Approval and should not be used for the purposes of constructing public works in the absence of that approval.

Should you have any questions relating to this memo feel free to contact me.

Regards,



Andrew Miller
Consultant Parks Planner
02102319245
andrew@colabplanning.co.nz

Technical memorandum for a request for resource consents of the Eastern Busway 3 Residential project (EB3R): Social

To: Celia Wong, Senior Planner, Resource Consents – South, Plans and Places, Auckland Council

And to: Warwick Pascoe, Principal Project Lead, Premium Resource Consents, Auckland Council
David Wren, Consultant planner

From: Robert Quigley, Director, Quigley and Watts Ltd

Date: 17 March 2023

1. Application details

1.1. I am writing with respect to the Eastern Busway 3 Residential (EB3R) resource consents:

BUN60407121 LUC60407123
DIS60407122, DIS60407493, DIS60412893
WAT60412894
LUS60412895
CST60408460, CST60408461

2. Introduction

Qualifications and relevant experience

2.1. My name is Robert Quigley and I am a Director at Quigley and Watts Ltd. My qualifications and experience are presented in Appendix 1.

3. Overview and scope of technical memorandum

3.1. The Applicant has applied for resource consents for the construction, operation and maintenance of the EB3R. This memorandum deals with the resource consents only, though at times I mention the Eastern Busway 2 (EB2) project as there have been several situations where work and reports for EB2 and EB3R have been carried out together.

3.2. My technical memorandum considers the potential social effects of the EB3R project and covers the following:

- a. Outstanding issues regarding adequacy of the Applicant's SIA
- b. Comment on submissions received
- c. Suggested mitigations
- d. Overall conclusions.

My involvement in this matter

- 3.3. I was contracted by Auckland Council in December 2021 to provide social impact assessment services relevant to this project.
- 3.4. I reviewed the Applicant's draft EB2 and EB3R SIA (dated 16 May 2022) and provided feedback on 20 June 2022.
- 3.5. I undertook a visit of the EB2 and EB3R sites on 3rd August 2022, and walked around the Pakuranga Plaza area with Jarrod Snowsill and Sonja Lister from the Eastern Busway Alliance. I drove myself around the EB2 and EB3R sites and stopped at several locations.
- 3.6. The EB2 NoR was lodged on 12 August 2022 and I gained access to all lodged documents. I mention this in relation to EB3R as the EB2 NoR provided access to Eastern Busway Alliance's *Eastern Busway EB2 and EB3R Residential Social Impact Assessment* dated 20 July 2022 (SIA).
- 3.7. Based on the SIA, Auckland Council requested further information from the Applicant regarding social effects on 9 September 2022, in accordance with s 92 of the RMA. My request asked for information about 17 issues.
- 3.8. I participated in a one hour video call with the Applicant on 18 October 2022 to discuss my s92 questions.
- 3.9. Regarding social effects, on 3 November 2022 the Applicant answered one minor s92 question and provided no immediate response to other questions in the s92 response, instead with the promise of addressing certain issues at a later date via the production of a separate document.
- 3.10. The resource consents were publicly notified on 13 December 2022 and submissions closed on 1 February 2023.
- 3.11. The Applicant further responded to the s92 request for information on 7 February 2023 via *EB2 and EB3 Residential Social Impact Assessment Addendum* dated 1 February 2023. The addendum included some useful information, but in my opinion most questions remain unanswered.
- 3.12. Auckland Council provided me with five EB3R submissions.
- 3.13. To inform this technical memorandum I have reviewed the following documents in relation to potential social effects:
 - a. the draft EB2 and EB3R SIA (16 May 2022), lodged EB2 and EB3R SIA (20 July 2022) and SIA addendum (1 February 2023).
 - b. Plans (EB3R)
 - c. Communication and consultation plan – Design and Construction (EB2 and EB3R)
 - d. Assessment of effects on the environment (EB2)
 - e. Construction noise and vibration effects assessment (EB2 and EB3R)
 - f. Construction noise and vibration management plan (EB2 and EB3R)

- g. Noise and vibration operational effects assessment (EB2 and EB3R)
 - h. Landscape and Visual effects assessment (EB2 and EB3R)
 - i. Integrated transport assessment (EB2 and EB3R)
 - j. Construction traffic management plan (EB2 and EB3R)
 - k. Open space effects assessment (EB2 and EB3R)
 - l. Air quality effects assessment (EB2 and EB3R)
 - m. Designation conditions (EB2)
 - n. the s 92 response from Auckland Transport *EB2 and EB3 Residential Social Impact Assessment Addendum* (dated 1 February 2023).
 - o. Eastern Busway Pakuranga to Botany. Community information days July and August 2022. Feedback Summary.
 - p. Five EB3R submissions.
- 3.14. I am also contracted to provide social impact assessment services regarding preparation and attendance at a hearing, if required.

4. Adequacy of the Applicant's SIA

- 4.1. My review of the draft SIA concluded that *"Overall, the SIA is poor. All sections have serious flaws and therefore I have little faith in the findings, conclusions or proposed mitigations."* Modest additions were made between the draft and lodged SIA, though in my opinion, most issues were not resolved. Following my s92 questions, the SIA Addendum now includes a summary assessment of several potential social effects, but the transparency behind each summary assessment is very low and the broad nature of assessment across many diverse populations remains. The proposed conditions have remained the same since the draft SIA.
- 4.2. Potential social effects arising from EB3R construction effects identified in the SIA addendum can be summarised as follows:
- a. One moderate to high adverse and eleven moderate adverse social effects
 - b. Stakeholders affected included:
 - i. *"diverse communities in the project area including local Asian and Pasifika communities"*
 - ii. *Those who travel along Ti Rakau Road'*
 - iii. *Thos who travel along Ti Rakau Drive, students at Edgewater College and their parents; Vulnerable groups such as children, the elderly and those with disabilities who find navigating barriers more challenging"*

- iv. *“Edgewater College, Pakuranga Baptist Church, Pakuranga Chinese Baptist Church, Congregational Church of Samoa, Pakuranga Baptist kindergarten; Diverse communities in the project area including local Asian and Pasifika community, children and low income groups”*
- v. *“Patients of Pakuranga Counselling Centre”*
- vi. *“Users of Riverhills Park”*
- vii. *“Residents and businesses being displaced, including lower income groups. Residents and businesses who remain in the EB3 area and experience construction works”*
- viii. *“Owners and occupiers of businesses in the town centre; Customers and those who use/supply the businesses in the town centre; Residents of the impacted properties”*
- ix. *“Owners, occupiers and tenants of properties required for construction”*
- x. *“Residents, businesses and community facilities. Particularly children and older people who may be more susceptible to impacts”*

c. All effects are mitigated to *low adverse* via management plans (Stakeholder communication; Traffic; Environment; Noise and vibration), except for *displacement of owners, occupiers and tenants*, which was mitigated to *low to moderate adverse*.

d. I note the use of the term ‘businesses being displaced’ and ‘businesses in the town centre’ in the stakeholders affected within the EB3R assessment sections, despite no businesses being acquired on the EB3R route, and the town centre is in EB2. This further demonstrates the lack of consideration to which stakeholders may potentially be affected.

4.3. Within each of the ‘stakeholders affected’ (see 4.2b), extremely broad sections of society are assessed to have the same potential social effects. Some exceptions exist, such as *‘Patients of Pakuranga Counselling Service’* which shows the Applicant has sometimes undertaken an assessment at an appropriate level of detail regarding stakeholders potentially affected, but usually does not. As such, the effects for those directly affected are minimised as they are wrapped into larger population groups. This is highly unlikely to be the case. It is not uncommon for different types of people to experience different effects, even though the project/intervention is the same. It is also not uncommon for different mitigations to be required for different groups of people as well, as not everyone responds to one mitigation in the same way.

4.4. Take for example the *“Owners and occupiers of businesses in the town centre; Customers and those who use/supply the businesses in the town centre; Residents of the impacted properties.”* These diverse stakeholders are all assessed as moderate adverse for *‘Inability to access private property including businesses’*, which is a transport effect, not a social effect. Social assessment should describe what social effects arise from inability to access, not stop at a transport effect. I also note ‘inability to access’ is the wrong effect to be assessing. It should be assessed as *reduced access*. In the SIA Addendum, with mitigation, *inability to access* is assessed as low adverse (probably because it is relatively easy to provide some form of access). In comparison, EB3R submitters suggest high potential effects on their businesses because of the greatly *reduced access*. Private residential households have been grouped into this as well, along with the customers of the businesses. We are told that these diverse groups all have the same type

of impact, level of impact and require the same mitigations. This is highly unlikely to be accurate.

- 4.5. Unusually, we also have a direct comparison of SIAs available. The recently lodged Airport to Botany SIA considers the social effects of the continuation of the busway and I am also working with Auckland Council to review that SIA. It is a nearly identical project, in the same city, just several kilometres down the road. Unlike the EB2 and EB3R SIA, the Airport to Botany SIA demonstrates best practice in nearly all areas, starting with a sound understanding of SIA method, literature review, community profile, solid and ongoing engagement by the SIA team with many sections of the community, clear assessment of potential social effects at a detailed level, and corresponding mitigations. The Airport to Botany SIA carried out assessments for different groups. For example, recognising that commercial road users may experience different social effects than people parking to access shops. In stark contrast to the EB2 and EB3R SIA, the Airport to Botany identified five extreme, 20 high, 13 moderate and three low potential negative social effects, in just one of the four zones it was considering (Puhinui to Papatoetoe). Such negative effects arose from project features which are very similar to those experienced in EB3R: Changes to access; Impacts on pedestrians and cyclists; Changes to parking; Changes to daily living routines for local businesses, services, residents and users; Acquisition of residential properties affecting landowners and tenants; Loss of autonomy in decision making. The Airport to Botany draws on the SIA writers experience and the high quality literature review to suggest numerous mitigations to the potential social effects arising from construction.
- 4.6. I could make similar comparison between the two SIA regarding potential social effects arising from operation but won't for the sake of brevity.
- 4.7. Often, an Applicant will argue 'a difference of professional opinion' when the expert reviewer says a piece of work is low quality and the Applicant says it's not. But in this case, there is also a contrasting SIA to confirm the lack of depth/detail of the EB2 and EB3R SIA. More concerning, that lack of depth/detail has flowed into an under-assessment of potential social effects and consequent mitigations.

Other quality issues with the SIA

- 4.8. The SIA suffers from several issues despite my feedback to the Applicant on 20 June 2022, my request for information (9 September 2022) and consequent responses from the Applicant (3 November 2022; 7 February 2023). I will not repeat the issues identified in my feedback to the applicant on 20 June 2022, but note some additional points related to the SIA Addendum:
 - a. Following my s92 questions and providing an example of how SIA data is usually presented (summary tables with explanatory text), the SIA addendum has only provided summary tables of potential effects. There is no explanatory text explaining why each assessment score is given. In effect, the SIA addendum provides a 'black box' set of summary tables, with no description backing up the summary scores. This is a continuation of the lack of detail in the SIA addendum following on from the lack of detail in the SIA.
 - b. When considering community organisations, the SIA and SIA addendum have little to say about the potential social effects arising from '*Reduced access to community and cultural facilities*', again stopping the assessment at a transport effect. The SIA Addendum does not confirm what the potential social effects might be, and again groups many diverse stakeholders together. Does Edgewater College really experience the same social effects

as a low income person in the community, and if so what are those social effects? The same argument can be made for nearly all of the 'social effects' assessed.

- c. The SIA team attended three community information days¹ out of a possible 11 (held between 23 July and 18 August 2022²), all of which were after the lodged SIA was written (20 July 2022). Community information days are a fine way to collect some information for a SIA e.g., the range of potential issues, who should be included in follow up discussions, but usually the assessor would attend the information days before the assessment is completed. Such days also rely on the community coming to the assessor rather than social assessors specifically seeking out in-depth discussions with particular organisations, or groups e.g., low income residents, on social assessment topics. Relying on planners to conduct specific face to face meetings is a high risk approach for an SIA, as planners usually have a wide range of priorities and rarely collect the depth of information required for an SIA. The low level of specific social engagement by the SIA team shows through in the low level of detail in the SIA and consequent SIA Addendum regarding which specific groups/organisations might be affected and how, and what mitigations might be suitable for those specific organisations or groups.

Conclusion regarding adequacy of the SIA

- 4.9. Overall, the Applicant's SIA is of a low quality and while the SIA Addendum adds 'summaries', it adds little explanation. The method employed does not align with usual impact assessment practice, nor social impact assessment guidelines. The SIA has generated negative findings but broadly applied them to disparate groups, and hence the mitigations proposed are also generic. This is likely insufficient given potential negative social effects have not been assessed in adequate detail.

5. Summary of submissions received from a social perspective.

- 5.1. Five submissions were received regarding the resource consents for EB3R:
 - a. Two support the proposal and one is neutral
 - b. Two oppose the proposal (Gyp Properties; Metlifecare).
- 5.2. The key theme from the submitters who support the proposal is:
 - a. The project will reduce greenhouse gas emissions via modal shift (Equal Justice Project, Grant Hewison).
- 5.3. The key themes from the submitter who is neutral to the proposal is
 - a. Requests a condition where heavy vehicles must avoid school roads in the area between 8.00 to 9.00AM, and 2.55 to 3.30PM. And at this point prefers the remote bus stop on Ti Rakau Drive option for Edgewater College as it is considered more workable than the U-turn in the school. The submitter requests further engagement with the school to better

¹ SIA Addendum

² Eastern Busway Pakuranga to Botany, Community information days July and August 2022, Feedback Summary.

understand the options available regarding student safety, before a final decision is made (Ministry of Education).

- 5.4. Key themes of the two submitters who oppose the resource consent applications are:
- a. Adverse effects on access to Pakuranga Plaza for many years during construction, with consequent adverse effects on tenants. The submitter notes concerns regarding safe and efficient access to the Plaza before the closure of the Ti Rakau Drive end of Reeves Road; Full access to The Warehouse loading dock at all times; Full access to all other loading docks in the Plaza at all times; a range of other construction effects including noise, vibration, dust, traffic management, wayfinding and communication (Pakuranga Plaza Limited).
 - b. Concerns with the intersection reconfiguration of Edgewater Drive (West) and Ti Rakau Road, an intersection near to Metlifecare's 150-person retirement village at 14 Edgewater Drive. The submitter says the SIA has not adequately mitigated the stress and anxiety arising from removing the right hand turn from the intersection. The submitter contends the objectives of EB3R can be met with the existing intersection configuration or realigning Edgewater Drive to meet Marriott Street (as per an earlier option), where right hand turns could be accommodated. The submitter also says the intersection re-design would have economic effects on the company as resale values will be lower due to poorer access to Edgewater Drive (Metlifecare).

6. My assessment of potential social effects

- 6.1. To fill what I perceive are the biggest issues with the Applicant's SIA, I would normally undertake my own rapid assessment of potential social effects. However, we have the Airport to Botany SIA (also done by the applicant but using a different provider) which has followed best practice SIA guidelines. Therefore, I have reviewed the Airport to Botany SIA findings and mitigations and considered their relevance to the EB3R project.
- 6.2. The Airport to Botany project is very similar to EB3R, being a rapid transit busway using the middle or side of existing major thoroughfares; the consequent removal of many houses, organisations and carparks where required; large new bus stop facilities; and changed accessways for some remaining houses, businesses and organisations. Simply, the Botany to Airport project is a continuation of the EB3R route.
- 6.3. The Airport to Botany SIA assesses four distinct geographical sections. One section of the Airport to Botany route traverses an area (towards the airport) where few people live and work (called SH20 interchange to Orrs Road in the Airport to Botany SIA) and another section traverses through a town centre (Manukau Central), both of which have little relevance to the EB3R project. However, the other two sections traverse residential areas with small business hubs (Botany to Clover Park; and Puhinui to Papatoetoe); together providing a range of environments like EB3R.
- 6.4. Across these two sections, the Airport to Botany SIA (which has not yet gone to hearing) identifies five extreme, 40 high, 28 moderate and 6 low, potential negative social effects. Drawing on the detailed assessment from Airport to Botany (and not repeating that here), I have identified the following as the most relevant potential negative effects for EB3R and presented a summary in Table 1. I have used the Airport to Botany SIA as it has been undertaken on a near identical project in the same city, and the SIA is of high quality. I have reviewed each Airport to Botany SIA finding, and considered whether there are similar project

features in EB3R, and whether there are similar stakeholders potentially affected. In several cases this did not occur, so the relevant finding from Airport to Botany have not been included here. I also drew on the relevant EB3R noise and transport reports to inform the social findings arising from those potential effects. In contrast, I could have undertaken my own SIA, but that would have been a substantial undertaking and the timeframe/resources precluded such work. For brevity I have not considered the potential positive effects from the Airport to Botany SIA.

Table 1. Potential social effects arising from EB3R

Phase	Project feature	Potential adverse social effect	Overall rating ³
Planning	Future loss of carparking across multiple sites e.g., residential houses on Ti Rakau Drive (75A to 103A, 129, 145, 175A to 191 and the Edgewater Shops (107 and 109 Ti Rakau Road)	Increase in anxiety and uncertainty of directly affected landowners, leaseholders, businesses, and residential owners/tenants who will lose carparks and/or experience a change in access.	High (p134)
Planning and construction	Future full property acquisition (EB3R: 107 residential properties partial (24) or fully (83) acquired. For most, the move and social effect has already occurred. No commercial businesses are acquired in EB3R.	Increase in anxiety and uncertainty about the future, of directly affected landowners, leaseholders and residential owners/tenants who will be expected to move.	Extreme (p147)
		Loss of social ties and community relationships; of residential owners/tenants who leave the area. For residents, the locality has a high deprivation score and the housing in this area is fairly affordable compared to other areas of Auckland, especially those in proximity to the project area. Loss of private housing in this area could displace residents who may not be able to easily secure alternative housing.	High (p116) to Extreme (p145, 147)
		Increase in stress and anxiety of community members from people, and organisations moving out of the local area due to a loss of social networks and social support.	High (p117)
		Reduced commercial activity in an area as businesses relocate/close/do not renew leases as a result of effects on the viability of business such as reduced visibility, change in access or change in parking.	High (p132)
Construction and operation	Temporary loss (and permanent) loss of carparking ⁴ at Edgewater shops	Loss of customers and consequent effect on revenue and/or viability of business; of directly affected landowners, leaseholders, and businesses.	High (p157, 160).
		Customers/service users go without, delay or must access services in a different area and consequent cost in time, money and/or wellbeing; of people who live in the area or visit.	High (p121)

³ Including page references from Airport to Botany SIA which has assessed a similar project feature

⁴ An Edgewater Shops parking survey showed average utilisation on one day was 60% of the available 30 carparks i.e., 18 car parks. All 30 will be removed during construction and 18 made available at the neighbouring property which has been acquired by Auckland Transport. That means parking utilisation is at 100% on a winter's morning, not at peak trading. The proposed replacement parking is also not easily visible from the street as per the existing car park, which is likely important for people deciding to 'pop in' to the shops as they drive past. The replacement carpark is also the entrance/exit for a separate haul road and a separate access way to properties cut-off by construction, meaning the replacement car park entrance and exit will at times have more traffic than just for Edgewater Shops parking.

Construction	Increased delays, changed access of properties not acquired, increased heavy vehicle movements, reduced visibility of remaining destinations, removal of right hand turns, altered wayfinding, altered bus routes/stops and temporary road closures	People no longer cycle, walk, bus or drive to their destinations, of people who live in the area or visit, and consequent effects on way of life, access to social services such as schools, daily living routines and wellbeing. e.g., residential properties Ti Rakau Drive (75A to 103A, 129, 145, 175A to 191), Edgewater College, Pakuranga Counselling Centre, Pakuranga Chinese Baptist Church, Pakuranga Baptist Kindergarten, Congregational Church of Samoa	High (p121, 122, 134, 140, 167).
		Reduced business activity and/or customers/clients because of disruption from construction activity and altered access. For example, Edgewater Shops	High (p126, 167)
		Reduced perception and potential reduced actual safety of people, particularly at night from changed sightlines, hoardings, loss of residential housing, altered wayfinding and reduced accessibility, of people who live near or visit the area. Visitors to some sites are children e.g., Edgewater College.	High (p136).
Construction	Noise and vibration. The construction noise (with mitigation) that some properties will experience is extremely high, described by the applicant as <i>'Concentration would start to be affected'</i> ; <i>'Phone conversations would become difficult'</i> ; <i>'Continuing office work would be extremely difficult'</i> ; <i>'Untenable for both office and residential environments. Unlikely to be tolerated for any extent of time'</i> ⁵	People can no longer sleep during the day at home, communicate or work at home/office due to construction noise and vibration. In particular, aged residential care facilities, other organisations and homes in close proximity to construction. Seventy-two EB3R properties are likely to experience these effects for 1 to 4 weeks over the course of the build, including residential receivers.	High (p123).
Operation	Widening of existing thoroughfares and additional bus lanes	Potential increased community severance with fewer, but formal (and safer), pedestrian crossing points, of people who walk and cycle locally across the thoroughfare.	High (p159)
Operation	Property acquisition of Riverhills Park and consequent effect on Fencibles United Football Club.	Unable to determine due to lack of data	
Operation	Noise	243 premises in EB3R are predicted to have operational noise levels above 50 dB LAeq (24h). WHO evidence identifies potential effects of daytime road noise include annoyance, communication interference, daily living activities and heart disease.	High

⁵ Applicant's s92 response of 3 November 2022, number 45

7. My assessment of required mitigations and conditions

- 7.1. A number of mitigations are proposed in the EB2 and EB3R SIA. These mitigations culminate in four management plans (Communication and Consultation; Construction Environmental; Construction Noise and Vibration; Construction Traffic) which are required in the conditions. These are a good start but do not go far enough to mitigate the potential high and extreme negative social effects identified. There is also a gulf between the more fulsome conditions proposed the Airport to Botany SIA compared with EB2 and EB3R. It would seem unusual that in one part of Auckland, certain social effects are acknowledged and mitigated, but just a few kilometres away, the potential social effects of a near identical project are not detailed or dealt with in a similar manner.
- 7.2. The Community and Stakeholder Engagement Plan recommended by the Airport to Botany SIA is in Appendix 2. The main difference in the Airport to Botany plan compared with EB2 and EB3R, are words such as 'responding to issues and concerns' and 'addressing specific concerns.' Whereas in EB2 and EB3R, the words relate to information provision and 'responding to complaints' rather than the issues causing the complaint. Also, in Airport to Botany, the language of engagement is active, seeking out communities and stakeholders, wanting their direct input, and is about relationships. Whereas for EB2 and EB3R the language is about 'outlining opportunities' and 'providing key contact points', which is a passive approach.
- 7.3. A Development Response Plan recommended by the Airport to Botany SIA is in Appendix 3. No such plan is recommended in EB2 and EB3R. A Development Response Plan is a good way to manage the impacts of large scale projects and are used when effects are diverse and the potential impacts are on businesses and other organisations which rely on customers for income. However, Development Response Plans are only as good as the plans themselves, rely on co-governance with affected stakeholders overseeing the implementation of the plan and also need Applicant-neutral teams to monitor and report. While past focus for these types of plans have typically focussed on businesses, community groups and residents should not be left out of Development Response Plans.
- 7.4. The diverse social effects projected from EB3R are difficult to appropriately mitigate via management plans, (e.g., noise, delay, altered access, removal of parking, etc.), but it is clear that the people/organisations/businesses which will experience the majority of these effects are those that live/work/operate in the area beside the project. As such, a hardship package should be available via the Development Response Plan to these potentially affected households/organisations/businesses. Setting up the fund is only helpful if access is relatively simple and quick. Being overseen by a co-governance committee or the like will increase the likelihood of the fund working for both the community and Applicant.
- 7.5. A Community Health and Wellbeing Strategy recommended by the Airport to Botany SIA is in Appendix 3. No such plan is recommended in EB2 and EB3R. Such a strategy has a broader focus than just businesses, and ideally should be about developing partnerships with community development organisations that can provide no-cost support to potentially affected stakeholders.
- 7.6. Specific to EB3R, a greater understanding of potential severance is required. This could be achieved via a connectivity assessment, which would consider the effect of EB3R on severance caused by arterial routes which bisect active routes between and around different areas; and suggest appropriate mitigations.

7.7. I have not written these into conditions as that is a role for the Applicant. It will be important for any proposed conditions to follow the purpose/intent and language of the plans in the Appendices, so that the processes implemented do not become transactional. Instead, the goal is for the plans to be open, and support community development and relationships. As such, independent review by Auckland Council of the Auckland Transport plans and monitoring reports is required.

8. Conclusion

8.1. I consider the SIA has several flaws:

- a. the SIA Addendum now includes a summary assessment of several potential social effects, but the transparency behind each summary assessment is very low and the broad nature of assessment across many diverse populations remains. The proposed conditions have remained the same since the draft SIA.
- b. Broad sections of society are assessed to have the same potential social effects, despite this being extremely unlikely. Specific groups that require assessment have therefore not had the focus required.
- c. Access to the high quality Airport to Botany SIA shows that the continuation of the busway, in a part of Auckland just several kilometres away, shows a greater number of potential social effects, many assessed at a higher level of potential effect, and at a much greater level of detail. Consequent mitigations in the Airport to Botany are fulsome in comparison to the EB2 and EB3R SIA.
- d. Using the Airport to Botany SIA as a base, I have identified one potential extreme and 12 potential high social effects from EB3R. Using Airport to Botany as a comparator, I have also suggested suitable mitigations alongside some mitigations bespoke to EB3R.

Appendix 1.

9. Qualifications and experience of Robert Quigley

- 9.1. I have the following qualifications:
- a. Bachelor of Science (University of Otago);
 - b. Bachelor of Consumer and Applied Science (University of Otago); and
 - c. Post Graduate Diploma in Dietetics (University of Otago).
- 9.2. For the past 19 years my work has been as Director of Quigley and Watts Ltd, a social and health research consulting company. My career has focused on bringing research evidence into decision making processes. As a social and health researcher I have undertaken over 65 social and health impact assessments, largely in New Zealand and Australia. These include:
- a. a social impact assessment for the 3000-place Waikeria Prison expansion (2017);
 - b. the monitoring of social effects arising from the Auckland South Corrections Facility (2015 to 2018) (a Board of Inquiry condition);
 - c. the monitoring of social effects arising from the Waikeria Prison expansion on nearby townships (2018 onwards) (an Environment Court condition);
 - d. the effects of the Melbourne Airport runway development programme (2019) (Public Exhibition of Master Plan);
 - e. the social effects of a new township in Ohinewai (2019/20) (Evidence to Proposed Waikato District Plan planning process);
 - f. the social and health effects of Anglo American mining operations on nearby townships in Queensland Australia (2021 ongoing).
- 9.3. I also regularly act for Council's and Government reviewing applicant social impact assessments including for direct referrals and resource consents. Most recently for:
- a. a new Care and Protection facility in Auckland (direct referral to Environment Court);
 - b. a new mine near Waihi (resource consents under the RMA); and
 - c. over 20 social impact assessments for Waka Kotahi.
- 9.4. Following my reviews of social impact assessments prepared for Waka Kotahi, Waka Kotahi wished to improve social impact assessment practice and I led the authorship of Waka Kotahi's SIA Guideline. Alongside Waka Kotahi's social impact assessment Guidelines, I am also the lead author on the Ministry of Health, and the International Association of Impact Assessment's guidelines on Health Impact Assessment (utilising the social determinants of health). I deliver an annual lecture to post-graduate students at the University of Otago on the topic of impact assessment, including social impact assessment.
- 9.5. I am a member of the Environment Institute of Australia and New Zealand.

Appendix 2.

10. Airport to Botany's Community and Stakeholder Engagement Strategy

- 10.1. Engagement with stakeholders and community is an important component to managing and monitoring the potential social impacts and opportunities of the Project. During times of change, effective communication and engagement with communities enhances their understanding and builds resilience. Awareness of changes that might arise as a result of the Project can also reduce fear and uncertainty.
- 10.2. A Communication and Engagement plan is also essential to understand the different groups that will interact with the Project and to establish how and when they will be engaged, and by whom.
- 10.3. Ongoing engagement should continue during the planning stage of the Project to continue to maintain and build relationships with the community and provide an opportunity for those new to the area to find out about the project. Access to information for directly affected landowners about how they can continue to use their properties prior to active acquisition might help reassure and reduce anxiety for some.
- 10.4. It is recommended a Community and Stakeholder Engagement Strategy be developed for the project and include strategies that focus on:
 - a. Maintaining the current good relationships between Auckland Transport and Waka Kotahi and the community, particularly directly affected landowners;
 - b. Establishing contact with community members and landowners and community stakeholders as new issues arise;
 - c. Disseminating information to, and having discussions with, the community and stakeholders on issues raised;
 - d. Identifying and responding to issues and concerns of directly affected landowners, the community and all stakeholders;
 - e. Addressing specific concerns of the community and various stakeholders on an ongoing basis;
 - f. Preparing relevant documents for review by government agencies and other stakeholders;
 - g. How the business community is going to be engaged during the active acquisition phase to understand businesses and help get them ready for construction.
- 10.5. The Strategy should be developed in consultation with stakeholders and community groups and organisations and identify appropriate methods to ensure people are informed about the Project, it's timeframes, potential impacts and where they can find more information. It should also include methods to facilitate the ongoing involvement of stakeholders and community groups and organisations in the development of potential mitigation strategies.
- 10.6. During the ongoing planning phase of the Project it is recommended information about the Project should be available for the community, in particular affected landowners. The existing Project webpage on the Auckland Transport website could be an appropriate means for this. It is recommended it is regularly updated and include information for landowners as well as business owners and operators.

Appendix 3.

11. Development Response Plan

- 11.1. Development Response Planning is the coordinated planning and implementation of tools to mitigate the impacts of large-scale development and cumulative impact of construction activity on people, in particular businesses. The Development Response Plan is prepared during the planning stage prior to construction and implemented just prior to and during construction. It is agile and evolves during implementation to respond to what is happening at the time.
- 11.2. Development Response Frameworks have been applied in several projects in Auckland and in Queenstown. While applied within urban commercial environments, many of the strategies can be applied in residential areas as well, especially those related to communications, site management, and way finding.
- 11.3. The frameworks start with great communications and engagement and operations planning, and bring together in a coordinated way specific strategies such as business advisory services, wayfinding, cleanliness, noise monitoring, placemaking, pedestrian access and improvements to building frontages. This can also include partnerships with local businesses, schools and community groups in the design of public art and use of space during construction.
- 11.4. Auckland Council has a Development Response Framework and Auckland Transport is developing their own approach at present. It is expected that by the time the Project proceeds to detailed design and active property acquisition a few years prior to construction, that Auckland Transport will have a well developed and tested approach to Development Response the Project can build upon.
- 11.5. Based on research undertaken there are key features of successful strategies for the management impacts of infrastructure construction on businesses. As part of preparing a Development Response Plan for the Project in accordance with Auckland Transport's Development Response Framework (in the period 18 months to two years prior to construction, i.e. in the pre-implementation phase), the following should be taken into consideration:
 - a. Appropriate assistance package. An assistance package is important to support businesses affected by projects both to help them manage impacts of construction and to help them maximise the opportunities the projects present. The more successful packages are administered by a committee/steering group comprised of members of the business community as well as the Project Team.
 - b. Outreach in advance / early planning. Early engagement is required, 18 months – 2 years before construction activity starts. Planning well in advance can help ensure the right support can be provided at the right time in the project lifecycle. Early planning would include analysis of businesses to establish a baseline, early business engagement and early landlord engagement in order to work collaboratively in preparing the Development Response Plan. Business Associations are key to this activity and the Project should also work collaboratively with them and other stakeholders including community groups and organisations in both development and implementation of the Development Response Plan to ensure appropriate mitigation measures relevant to the community. A co-design approach to this could be considered.
 - c. Easy access / constant communications / agility. Provide early information and make it easy to access. Businesses will then know what to expect and when and have easy seamless access to information. Consistent and timely information is also important. Businesses can also advise which forms of communication are preferred. The business support programme, including the assistance package needs to be agile and able to make

changes quickly to improve the experience for businesses. Easy access to information and constant communications can assist with this.

- d. Business technical assistance. Provide proactive assistance to businesses to help them take advantage of other assistance programmes that are put in place, as well as strengthen the business overall to prepare them for long-term changes ahead.
- e. Strong advocacy. Advocacy from the business community and other community-based organisations and community development organisations on behalf of the business community who look to them for support enables the Project to work with a range of organisations to provide consistent information and support to businesses. Those organisations can also then develop information for businesses.
- f. Leadership and commitment. Auckland Transport as the Requiring Authority will support the development of appropriate strategies and commit to resourcing the development and implementation, including funding. Suitably qualified and experienced engagement and stakeholder management personnel will be engaged 18 months to two years prior to construction to develop, implement and monitor the Development Response Plan.
- g. Coordination. In some areas of the Project there could be other construction activity underway, especially within the Manukau Central associated with development plans of Eke Panuku and Westfield, and Kainga Ora development in the Clover Park area. A coordinated response, joined with other projects in the same area or nearby will provide single points of contact and consistent and coordinated information about all projects to businesses.
- h. Health and wellbeing. Recognise the impacts on the health and wellbeing of business owners and operators and establish appropriate support, including access to confidential and independent support services.

Appendix 4.

12. Community Health and Wellbeing Strategy

- 12.1. A community health and wellbeing strategy can increase resilience and reduce anxiety and frustration during the period between designations being in place and construction starting. It can include a specific focus for landowners and occupiers and business owners and operators of land which is designated.
- 12.2. The strategy can include initiatives that ensure those directly affected by the Project know where and how to access information about the Project and who to go to in order to get the information they need. It can also include partnerships with support agencies, potentially local, to provide confidential and independent support to those that need it.

Technical combined regional diversion and discharge of stormwater and industrial or trade activity memorandum for resource consent applications for Eastern Busway 2 (BUN60407133) and Eastern Busway 3R (BUN60407121) for works on Ti Rakau Drive.

To: Celia Wong, Senior Planner, Resource Consents South

And to: Warwick Pascoe, Principal Project Lead, Premium Resource Consents

From: Arsini Hanna, Senior Specialist - Stormwater Wastewater & Industrial and Trade Activities -Specialist Unit, Resource Consents Department

1. Application details

Applicant's name: Auckland Transport (AT) (**Applicant**)

Application number: BUN60407133 application for Eastern Busway Stage 2 (EB2) and BUN60407121 application for Eastern Busway Stage 3 Residential (EB3R).

Activity type: Diversion and discharge of stormwater and ITA Land use and discharge of contaminants

Site address: 5 Reeves Road, Pakuranga incorporating Pakuranga Town Centre, Reeves Road Flyover (RRF) and Pakuranga Bus station (**the EB2 Project Area**)
207 Ti Rakau Drive, Pakuranga Heights (**the EB3R Project Area**)

Reviewer Qualifications and Experience

My name is Arsini Hanna. I hold a PhD degree in Inorganic Chemistry (with Honours), from Birmingham University, United Kingdom.

I am employed as a Senior Specialist Stormwater, Wastewater and Industrial Trade Activity (ITA) within the Resource Consents Department with 13 years' experience working at Auckland Council.

Before I joined the Auckland Council, I had 31 years' experience as an environmental professional working in the Middle East and New Zealand (as principal environmental consultant). My areas of experience included client liaison, working with industries on environmental management consent processing and compliance, contaminated sites, landfills, environmental audits, green building rating projects, major infrastructure projects and best practices, environmental and health and safety,

emergency response management system, environmental effects assessment, environmental monitoring and management systems and implementing training programs to raise environmental awareness of officials.

My duties at Auckland Council have included reviewing applications for resource consent including major infrastructure projects, shovel ready projects, residential and mixed-use developments, subdivisions and fast track applications, writing resource consent permits for diversion and discharge of stormwater, industrial or trade processes. In summary, I primarily provide technical specialist input into resource consent applications.

On behalf of Auckland Council, I have reviewed the EB2 and EB3R applications and attached reports/plans relating to the diversion and discharge of stormwater and industrial and trade activities assessing the potential environmental effects on the receiving environment.

2. Overview and scope of technical memorandum

2.1. The Applicant, in its capacity as a requiring authority, has given notice to the Council of its requirement for a designation in Stage EB2 to develop, construct, operate and maintain the necessary structures and facilities of a bus transport network to:

- a. Extend William Roberts Road to connect with Cortina Place and Ti Rakau Drive.
- b. Modify the South-eastern Highway (SEART) off-ramp at Ti Rakau Drive.
- c. Extend the existing Panmure to Pakuranga busway including a new bus station at Pakuranga.
- d. Establish local walking, cycling and stormwater infrastructure.
- e. Establish a Construction Yard at 169 – 173 Pakuranga Road.

2.2. The EB2 resource consent applications and the NoR were publicly notified (at the request of the Applicant) on 21 November 2022. The EB3R resource consent applications (for district & regional activities) were publicly notified on 13 December 2022.

The following documents relevant to the applications (EB2 BUN60407133, and EB3R BUN60407121) have been reviewed with reference to the requirements of the diversion and discharge of stormwater and land use and contaminant discharges associated with an industrial or trade activity (Chapter E8 and E33 respectively).

- *Eastern Busway 2, Assessment of Environmental Effects*, prepared by Eastern Busway Alliance (EBA) / Auckland Transport (AT), Rev 3, dated 11 August 2022 ('the EB2 AEE');
- *Eastern Busway 2, EB2 and EB3 Residential, Stormwater Effects Assessment* prepared by Eastern Busway Alliance (EBA) / Auckland Transport (AT), Final, dated 30 05 2022 ('the EB2 AEE'). This is attached to the AEE as Appendix 6.
- *Additional information in response to a request for further information under section 92 of the Resource Management Act (RMA) was received by emails to the Auckland Council between 03 November 2022 and May 2023. This information is hereby referred to as the 'S92 response'.*

EB3R is largely a continuation of the approach in EB2, although mainly within a residential context.

The Project is not seeking to designate EB3R, but to implement it through permitted activities and resource consents.

Auckland Unitary Plan operative in part (AUP-OP)

E8 Diversion and discharge of stormwater

The proposed development area is located within a network consented area (Auckland Council's Regionwide Stormwater Network Discharge Consent (NDC) #DIS60069613 and held by the Council's Healthy Waters Department).

The proposed development will use the existing public stormwater network available in the area and as such will not trigger a stormwater diversion and discharge consent under Chapter E8. Based on the confirmation received from Healthy Water Department the proposed development will be covered by the scope of this NDC and therefore no further consent is necessary.

The philosophy for the design of drainage and treatment system for the entire Project (inclusive of William Roberts Road) has the Best Practicable Option in addition to considering the Auckland Transport's standards and approaches to stormwater, the aspirations of mana whenua, Healthy Waters requirements under the NDC.

E9 High contaminant generating activities (Stormwater management – quality)

Existing Average Annual Daily Traffic (AADT) reported for this section of development is less than the 5000 vehicle movement threshold (excluding cycle lanes, footpaths and ancillary areas that do not receive stormwater runoff from the road carriageway). As such, it will not be considered a high use road by definition under Appendix J of the AUP(O-P).

As best practicable option, the applicant has proposed to provide stormwater quality treatment in Ti Rakau Drive as part of the EB2 works, by means of Stormwater 360 VortCapture device or similar.

At this stage of the development, I can confirm that the proposed developments will not trigger a high contaminant generating consent and will be considered as a Permitted activity under rule E9.4.1(A5).

E10 SMAF (Stormwater management – flow)

A consent is not required under Chapter E10 as the site is not within a SMAF area.

Please note that Auckland Council's Development Engineer / Healthy Waters will assess the hydrology mitigation requirements against the regionwide stormwater NDC and other Auckland Council requirements.

NPS:FM / NES:F

Where the NDC authorises the diversion and discharge of stormwater no other triggers for consent under the NES for discharge of stormwater are required.

The NDC authorises the diversion and discharge of stormwater from the current and future public stormwater network and although it does not identify specific future discharge locations of the public network it has specific processes in place for the assessment of future discharges to ensure those still meet the authorised outcomes.

Further, the NES does not prevail over existing discharge consents, so any activity which is already authorised can continue to occur even if there is now an additional trigger for consent.

The NDC (being a discharge permit) prevails over the NES:FW. Because the NDC allows for future discharges and diversions, these will be covered (provided they meet the terms of the NDC).

For this reason, the stormwater management plan (SMP) must specifically identify and assess the effects on wetlands from the development (and to protect them).

Industrial or trade activity

Under Chapter J of the AUP(OP), the industrial or trade activity area is defined by: ‘all outdoor storage, handling or processing areas of materials and/or products that may contribute to the quality or quantity of environmentally hazardous substance discharges (including occasional or temporary use of areas)’.

EB3R will be supported by the primary construction yard located at 169 – 173 Pakuranga Road, which will act as a central hub for building material logistics. The yard is subject to its own resource consent application (Council LUC60403744).

EB2 will have a primary construction site within the development area. In addition to the primary construction yard, three site offices will be employed within the EB2 area.

- 5 Reeves Road which will act as an office for EBA staff and also be used to house a bentonite/polymer slurry plant, which will produce bentonite/polymer. The plant will include a sediment tank and desander that removes impurities from the bentonite so that material can be recycled and used again. The plant will operate for approximately nine months, commencing July 2023.
- Construction support site will also be established off Pennell Place.
- Construction support site for EB2 will be located at 12 Bolina Crescent, where gantry cranes and aggregates will be stored.

The Eastern Busway Alliance (EBA) has confirmed that these sites in general will be considered as an industrial or trade activity being a contractor’s yard and categorised it as an unlisted activity under Chapter E33.4.3.

Industrial and Trade Activities

Use of land - Unlisted industrial or trade activities

To consider the **Permitted Activity status** under Rule E33.4.1 (A3), the permitted activity discharge standard E33.6.1.1 (1) – (12) must be met.

The Eastern Busway Alliance (EBA) confirmed that the stormwater from these sites will discharge into the stormwater network.

The Eastern Busway Alliance (EBA) has identified in their correspondence of 3 March 2023 that: “In regard to the Bentonite/Polymer plant, we can advise that EBA is currently securing the supplier for this activity. The contract with that supplier will require a hazard assessment, and a clear

methodology for ensuring that potential contaminants cannot and will not be discharged to the stormwater network.”

For progressing the stormwater side of the assessment, I recommend the following condition:

That the Hazard Assessment and Methodology Report associated with the Bentonite/Polymer Plant at 9 Reeves Road is required to be submitted and verified by the council prior to the Bentonite/Polymer Plant commencing operation. Unlisted discharge of contaminants from an industrial or trade activity

To consider the **Permitted Activity status** under Rule E33.4.2 (A11), the permitted activity discharge standard E33.6.1.1 (1) – (12) must be met.

The Eastern Busway Alliance (EBA) has requested the Construction Environmental Management Plan for EB2 & EB3R attached as Appendix 9 (EB2) and Appendix 10 (EB3R) to be considered as an Environmental management plan.

I have reviewed the provided Construction Management Plan. In my professional opinion, the provided information is insufficient to meet the matters set out in Table E33.9.2 (Environmental management plan requirements).

In order to progress the discharge of contaminants from an industrial or trade activity side of the assessment, I recommend the following condition:

X.1 The site shall be operated and managed in accordance with an Environmental Management Plan (prepared as required in Table E33.9.2 of the AUP O-P) to ensure the risks from the site are managed appropriately.

X.2 The EMP shall include, but not be limited to:

- i) identification of the specific activities conducted on the site;
- ii) the identification of potential contaminants associated with these activities;
- iii) methods used to prevent identified contaminants contacting stormwater runoff as far as practicable and methods to manage environmental risks from site activities;
- iv) a Spill Response Plan (which includes the provision that all spills over 20 litres, or any spill of Environmentally Hazardous Substances that has entered the stormwater system, a waterbody or has contacted unsealed ground, shall be reported immediately to the Auckland Council’s 24 Hour Pollution Hotline (09-377-3107));
- v) an up-to-date and accurate site drainage plan showing the location of all site catchpits, treatment devices (if any) and the discharge point(s) of the site stormwater system;
- vi) an appropriate auditing programme to ensure site performance with all components of the site Environmental Management Plan;

X.3 The Environmental Management Plan shall be kept on site and accessible **at all times**.

Conclusion

Stormwater

EB3R and EB2 RESOURCE CONSENT RECOMMENDATIONS

The above assessment is based on the information submitted by the Applicant as part of the applications for the EB2 and EB3R resource consents. I consider that the information submitted is sufficient to enable the consideration of the diversion and discharge of stormwater and industrial or trade activity and the associated effects on the receiving environment subject to the above recommended conditions.

Signed

A handwritten signature in black ink, appearing to read 'A. Hanna', is written over a horizontal line.

Date

Arsini Hanna

26/03/2023

Technical Memo – Ecology

To:	Warwick Pascoe, Principal Project Lead
From:	Claire Webb, Senior Ecologist, Environmental Services
Date:	17 th March 2023

Applicants Name:	Eastern Busway Alliance
Application Number:	BUN60407133 (5 Reeves Rd, Pakuranga Heights) EB2 NoR & RCs and BUN60407121 (207 Ti Rakau Drive, Pakuranga) EB3R RCs
Application Type:	Vegetation Removal within a Significant Ecological Area/Riparian/Coastal margin etc
Site Address:	EB2 – 5 Reeves Road EB3R - 207 Ti Rakau Drive, Pakuranga

Summary of proposal

The Eastern Busway Alliance (hereafter referred to as *EBA*) has submitted a Notice of Requirement and regional earth and stream works consent applications to enable the construction of the Eastern Busway (Pakuranga to Botany) including the Reeves Road flyover, bus stations, walking and cycling facilities and associated road widening along Ti Rakau Drive.

A full description of the proposal, as it relates to terrestrial ecological effects, is provided in the following application documents which have been considered in the preparation of this memo:

- *EB2 and EB3 Residential: Terrestrial and Freshwater Ecological Effects Assessment*, prepared by Eastern Busway Alliance, dated 18/07/2022 (Document Number: EB234-1-PL-RP-Z2-000031). Hereafter referred to as the 'EclA'.
- *Eastern Busway 2 – Pakuranga Town Centre General Arrangement Drawings, 31.05.2022* (provided as Appendix 4 in NOR application documents).
- *Eastern Busway Pakuranga to Botany Town Centres Consenting Package Landscape, Ecological and Arboricultural Plans, Rev A 20.07.2022* (provided as Appendix 5 in NOR application documents). Hereafter referred to as the 'Landscape Plan'
- *Eastern Busway – EB2/EB3R Lizard Management Plan* (Document number: EB234-1-PL-RP-Z2-000042)
- *Response to S92 Request for Further information dated: 9 September 2022*
- *Response to Further Information Request on EB3R, 10th November 2022*
- *Response to Further Information Request on ecological assessment for EB3R, 17 February 2023*

This review focusses on terrestrial ecological effects pertaining to the Notice of Requirement application, including vegetation and terrestrial native fauna effects as well as regional matters under E15: Vegetation Management and Biodiversity.

Ecological effects on streams and natural inland wetlands are reviewed separately in the Earthworks and Streamworks Technical Memo prepared by Ms. Langdon while, coastal ecosystems and coastal avifauna effects are reviewed in the Coastal Ecosystems and Avifauna Technical Memos prepared by Ms. Sivaguru.

Assessment methodology

Terrestrial ecological effects were assessed by the applicant using a combination framework that scores/rates ecological value and condition attributes alongside a determination of magnitude to determine an overall level of effect.

The Value Assessment Framework (Table A2-1) defines and rates ecological value attributes to determine an overall rating for ecological value. The attribute definitions and categories scored are generally consistent with standard practice set out in the EIANZ Guidelines for Ecological Impact Assessment in New Zealand (Roper-Lindsay et al., 2018). It is not clear how the scores are aggregated for each sub-attribute or how the overall rating has been determined in Table A5-1; however, the justifications provided in these tables support the end conclusions.

Magnitude of effects were determined by professional judgement with justification descriptions that are consistent with standard practice set out in the EIANZ Guidelines for Ecological Impact Assessment in New Zealand (Roper-Lindsay et al., 2018).

The Zone of Influence (ZOI) is described as the area occupied by habitats and species that are adjacent to and may fall beyond the boundary of the project area. For vegetation/habitat effects, the Zone of Influence is defined as the project footprint assumed for the purposes of this review to match the General Arrangement Plans dated 31/05/2022 (App. 4 of NOR application documents).

For native fauna effects, EclA Section 4.1.2. correctly outlines that the likelihood of a species occurring or being affected by the project will differ from species to species. Furthermore, species record searches were guided by taxa-specific search areas estimated from the project corridor (birds = 5km; lizards = 10km and bats = up to 15km). The search areas provide a representative sample of similar, accessible habitat in relative proximity to the site to identify a comprehensive list of species potentially present in the ZOI.

The EclA is informed by field investigations undertaken by the applicant's ecology team. Vegetation surveys were completed for all terrestrial vegetation within the project footprint. No targeted bird or lizard surveys (limited manual searches) were completed however habitat assessments and incidental observations support native species effects assessments and a pre-cautionary approach was applied for the presence of Threatened or At-Risk species. Targeted bat surveys were undertaken for 14 days using standard survey and monitoring methods for bats.

A Biodiversity Compensation Model was used to determine compensation for residual terrestrial ecological effects. This method is a simplified alternative to a Biodiversity Offset and Accounting Model (BOAM) where project data is insufficient to allow for the use of a BOAM. It provides an appropriate alternative for this project with limitations of the model clearly articulated and adjusted to avoid false "net gain" outcomes.

Assessment of Ecological Effects

Terrestrial ecological effects for EB2 and EB3R included in this assessment were adequately identified for construction and operational phases.

These include:

1. Permanent and temporary loss and fragmentation of vegetation and associated habitat values, (including temporary loss of riparian vegetation around outfalls).
2. Increased edge effects on remaining vegetation and habitats
3. Permanent loss and fragmentation of bird habitat (foraging and nesting)
4. Permanent loss and fragmentation of lizard habitat (foraging and breeding)
5. Potential injury/mortality of native fauna (birds and lizards)
6. Permanent loss of accessibility / use of habitat, disruption and displacement of natural native fauna from disturbance (noise, vibration and lighting activities).
7. Discharge of sediment and contaminants into freshwater and coastal ecosystems (wetlands, streams and CMA) – this is not addressed in this review – see specialist freshwater and coastal reviews by Ms. Langdon and Ms. Sivaguru respectively.
8. Indirect effects such as increased pest invasion, alterations to soil chemistry, airborne dust and effects on remaining vegetation.
9. Cumulative effects on native species and ecosystems.

Construction effects:

1. Moderate to High adverse effects on native birds and lizards

Native fauna adverse effects included direct habitat loss and fragmentation; indirect disturbance-related habitat loss and the potential injury / mortality of fauna during construction on native birds and lizards¹.

With respect to native lizards, the project is likely to result in high adverse habitat loss effects on local native skink populations with an associated Very High risk of injury/mortality of animals during clearance. This is based on the presence of suitable skink habitat in the project corridor and the confirmed copper skink presence in the nearby EB1: Panmure to Pakuranga project footprint. This provides sound evidence that native skinks are likely present in the project corridor and justifies the overall level of effects as a precautionary approach for potential skink populations within EB2 and EB3R.

Very Low adverse effects for native birds are expected based on proximity of wider available habitat along with the wide range of common, introduced, and non-threatened native birds observed. Furthermore, these species are urban-adapted - making use of a wide range of stepping-stone habitats and are not solely reliant on the terrestrial habitat in EB2 and EB3R.

The loss and fragmentation of tree and shrub habitat for terrestrial birds is therefore unlikely to have substantive effects on the broader populations. However, native birds do forage, roost and most likely nest (unconfirmed) in the terrestrial vegetation and the potential injury / mortality of eggs and chicks during vegetation clearance is assessed as a moderate adverse effect. Given that all native fauna is protected under the Wildland Act 1953, the magnitude and subsequent level of adverse effect is appropriate.

¹ Bats were excluded from the assessment due to no supporting survey evidence nor suitable habitat that suggested that long-tailed bats are present in the project footprint.

Several coastal wader species of conservation concern were also identified. Effects on coastal avifauna are addressed in the Coastal Ecosystems and Avifauna Technical Memo prepared by Ms. Siviguru.

2. Very Low to Low adverse effects for habitat / ecosystem loss from vegetation clearance

The Terrestrial Effects Assessment concludes that for all other identified effects, the overall level of adverse ecological effects is Very Low to Low. This includes permanent and temporary loss of habitat/ecosystem, fragmentation, edge effects and temporary loss of riparian vegetation. It is noted that there is a discrepancy between the ecological values of vegetation types in Table 5-2 and Table 6-2. For the purposes of this technical review, Appendix 5 and Table 5-2 align and as such the values considered as part of this review are taken from these sections.

The basis for this effects assessment seems to be the small extent of loss of vegetation (0.76ha) which assessed as unlikely to change the underlying character, composition, and attributes of the existing environment. The existing environment is characterised as “urban landscape with heavily modified ecological habitats” of High to Low ecological value.

No further justification is provided as to why the permanent loss of most of the existing vegetation in the footprint is unlikely to result in a change. The extent of loss is not fully discussed in context of the relative proportion of vegetation lost to that retained in the Zone of Influence (inferred as the project footprint which may or may not include a construction buffer). Furthermore, there is no discussion of how or if, there is any embedded remediation or revegetation that minimises the magnitude of effects other than a note that states that temporary riparian vegetation will be addressed through replanting.

For example, it could be assumed that 0.76ha equates to the partial, permanent clearance of the total vegetation extent in the ZOI. As such, this cannot then be justified that there is no change from the existing environment. Arguably, this will result in at least a moderate magnitude (partial change from existing environment) and the overall level of adverse effect becomes ‘moderate’ for moderate value vegetation. Moderate levels of adverse effects meet the threshold for effects management where currently, none is proposed.

This is most likely to occur in EB3R for Mixed Native Exotic Treeland (TL.2 vegetation type) which makes up the greatest proportion of vegetation to be cleared. It is unknown what proportion of the total TL.2 extent in EB3R will be cleared and without this context, the conclusion for the low level of overall effects stated in the report cannot be supported.

It is also noted that this vegetation type overlaps with the favourable lizard habitat and riparian vegetation for which mitigation and compensation has been proposed to manage residual effects. There may be an opportunity to address the direct loss of vegetation as part of the compensation model.

a. Loss of stream shading and wetland buffer due to vegetation clearance

Vegetation clearance within the riparian yards was addressed as part of Response to S92 Further Information Request (10th November 2022) Attachment 1. Approximately, 1390.5m² of vegetation will be cleared to enable the construction or upgrade of stormwater culverts. Vegetation types within the riparian yard are mapped as mixed native exotic scrub (TL.2) and exotic scrub (ES) of moderate and low value respectively. The ecological effects of this removal are included as part of the broader assessment of habitat ecosystem lost and are assessed as a Very Low-Low overall effect. This level of effect is attributed to the small extent of vegetation clearance (see discussion above).

Furthermore, riparian vegetation clearance around stormwater outfalls is assessed as a temporary effect that will be addressed by replanting. A review of the Landscape, Ecological and Arboricultural

Plans shows areas of Ecological Mitigation Planting – SW Outfalls, that correspond to Streams 2, 3a and 3b. No detail regarding the amount of replanting relative to loss has been provided and the areas indicated in the Landscape Plan may overlap with proposed stream compensation areas (see streamworks technical memo). Further detail regarding mitigation of riparian vegetation clearance in relation to stream compensation and the additionality thereof has also been requested from the applicant.

No information was provided regarding the extent of vegetation clearance within proximity of a natural inland wetlands 1 & 2 (AUP: OP 20m setback, NES FW: 10m setback). A review of the Landscape Plan and Combined Plans submitted to support EB2 NOR seems to indicate that no vegetation clearance is proposed within 10-20m of Wetlands 1 & 2 however these plans do not show the extent of the construction footprint. Confirmation is needed from the applicant that this is indeed the case.

3. Negligible indirect effects on remaining ecosystems and species.

Indirect construction effects such as increased pest invasion, decreased ecosystem/species function through airborne dust and changes to soil chemistry properties are identified in the report. These are assessed as negligible due to implementation of best practice construction management protocols and plans. It is assumed that a Construction Management Plan will be part of a suite of conditions to provide certainty that adverse effects will be managed as is standard practice for large infrastructure projects.

4. Low adverse cumulative construction effects on ecosystems and species

Low adverse cumulative effects are assumed without detailed assessment of adjacent development / projects that may also impact on the ecological features and values (including native fauna species) or the relative contribution to these impacts.

This conclusion is based on the urban locality of the project that is subject to long-term development leading to modified ecological habitats and urban-adapted species. As a result, any additional impacts from construction on the existing environment is unlikely to result in a substantive change in the underlying character and composition of ecological values within the ZOI. This is a pragmatic approach to determining cumulative construction effects albeit lacking in detail.

Operational Effects

Operational effects on terrestrial ecology are confined to disturbance from artificial lighting, increased traffic and active mode movements. Both EB2 and EB3R are included in this assessment. Potential discharge effects on natural wetlands are addressed in Ms. Langdon's technical memo.

1. Very Low to Low disturbance and displacement effects on native fauna

The highly modified existing environment is accurately cited as the primary reason supporting a low level of adverse effects on terrestrial fauna. The project does not represent a substantive change in land use or expected to fundamentally alter the levels of artificial lighting, noise and disturbance to adjacent habitat areas.

The ability for native fauna to recolonise newly established habitat areas is not discussed however, given the current suite of species present are described as urban-adapted, no operational effects are expected that may limit these species from utilising the remaining or newly established habitat.

2. Very low levels of cumulative operational effects on native ecosystems and species.

As with cumulative construction effects, the operation of the eastern busway within its urban locality coupled with surrounding development will not result in additional pressures on the natural environment than already experienced.

Effects management

1. Avoidance, Remediation and Minimisation

- a. Construction Environmental Management measures

The report states that the project has integrated design features to avoid and minimise adverse ecological effects but does not identify which design features are relied upon to do so other than in reference to indirect effects. More specifically, best practice construction protocols for erosion and sediment control, dust management and landscaping are relied on to achieve negligible levels of indirect adverse effects.

It is assumed that appropriate management plans will form part of the suite of designation and regional consent conditions and may include specification / direction on the following matters:

- Sediment discharge
- Dust / air discharges
- Hygiene protocols to address weeds and other soil borne pathogens
- Weed control as part of landscape specifications
- Replanting of vegetation at stormwater outfalls

- b. Native Fauna vegetation clearance measures

The report recommends retaining vegetation type TL.1 Native Treeland; TL.2 Mixed Native Exotic Scrub (and associated unmanaged grassland) and PL.1 Native Planting where possible. These vegetation types provide suitable habitat for native birds and lizards. Where clearance of these vegetation types cannot be avoided or minimised, native fauna management protocols are recommended to minimise injuring or killing animals. This includes pre-clearance bird nest surveys during bird nesting season and the implementation of a Lizard Management Plan (draft provided as Appendix 17 & 18 of the application documents).

The Draft Lizard Management Plan (LMP) was prepared by a suitably experience herpetologist(s) and is informed by desktop review and site investigations completed for the terrestrial ecological effects assessment as well as the LMP and results of the lizard salvage for the EB1 project phase. Reference is made to a *Habitat Restoration Plan* (HRP) to be prepared and submitted for council's certification prior to construction and will include details of the relocation sites and restoration requirements. Indicative lizard relocation sites within the project footprint are also provided in the Landscape Plan.

Although the content and methodology set out in the draft LMP is generally consistent with standard lizard salvage practice, the additional detail to be included in the HRP is required to provide a holistic approach to managing effects on native lizards. It is recommended that a final LMP is submitted for certification at the same time as the Habitat Restoration Plan prior to construction.

- c. Replanting to remediate loss of riparian and wetland buffer vegetation

Although the report states that replanting of native vegetation at stormwater outfalls is an embedded project measure no further information was provided to demonstrate that the quantum of replanting is equivalent to that lost. A minimum of a 1:1 area ratio is required and should be incorporated into the proposed Stream Restoration Plan to adequately address adverse effects and integrate where stream compensation is required. It is reiterated that the area set aside for replanting is additional to that required for stream compensation.

2. Biodiversity Offset and Compensation of Residual Effects

As stated in the assessment methodology section, the Biodiversity Compensation Model (BCM) as an alternative to a Biodiversity Offset and Accounting Model (BOAM) provides a useful alternative where sufficient data is lacking for the BOAM. The applicant has highlighted the BCM limitations and made adjustments to mitigate and address these limitations. This provides increased certainty that the quantum of compensation required will achieve no net loss as a minimum.

The BCM calculator was not provided as part of the application documents however Appendix 6 of the EclA details the model inputs. A net gain of 13.5% (EB2) and 11.9% (EB3R) is predicted to be achieved through compensation actions. The model inputs are described along with justification to support the inputs utilised. These accurately reflect the existing habitat values of varying vegetation types prior to impact. The value score after compensation and the moderate compensation confidence of 50%-75% of success of the compensation actions are arguably optimistic given the location and future management trajectory of these areas (roadside plantings with no long-term predator control).

The uncertainty regarding the success of lizard relocations especially to mainland sites without predator control coupled with further uncertainty that viable populations can be established and maintained at the indicative relocation sites is troubling. However, in this instance, there is limited benefit in adjusting the model inputs as the mostly likely outcome would be an increase in the required compensation area which will not improve the certainty of successfully establishing a viable population.

Preferably, adaptive management and monitoring would be a better approach should large numbers (>20 individuals) require relocation. Post-release monitoring (as set out in the LMP) is only required for three years and the LMP does not make any recommendations regarding any follow up actions should the relocation fail. It is therefore recommended that the LMP include recommendations for adaptive management and ongoing monitoring to demonstrate that effects on lizard populations are adequately addressed.

Overall, the proposed compensation approach and outputs adequately address residual lizard habitat loss effects and provide partial compensation for the loss of moderate value vegetation.

Statutory Considerations

Wildlife Act 1953: All native birds and lizards are absolutely protected under the Wildlife Act 1953 under which it is an offence to disturb, harm, or remove them without a permit from the Minister of Conservation. This includes the deliberate disturbance of potential habitat even if presence of native species has not been specifically surveyed.

Adequacy of information

The above assessment is based on the information submitted as part of the application. It is considered that the information submitted is sufficient to enable the consideration of the above matters on an informed basis:

Consent: BUN60407133 BUN60407121

Address: 5 Reeves Rd, Pakuranga Heights & 207 Ti Rakau Drive, Pakuranga

- a) The level of information provides a reasonable understanding of the nature and scope of the proposed activities as they relate to the Auckland Unitary Plan: (Operative in Part).
- b) The extent and scale of any adverse effects on the environment are able to be assessed.

Recommendation

The terrestrial ecological effects arising from EB2 and EB3R have been sufficiently assessed in the application documents and include appropriate effects management measures. Subject to the imposition of consent conditions, it is considered that the potential ecological effects of the project will be adequately managed to low levels with no outstanding residual effects.

Proposed Conditions

The applicant has provided proposed designation and regional consent conditions for EB2 and EB3. The proposed conditions do not address ecological mitigation requirements and it is suggested that the following ecological measures are included as conditions:

1. Ecological Management Plan that includes:
 - a. Updated Lizard Management Plan development and implementation
 - b. Habitat Restoration Plan development and implementation
 - c. Vegetation Clearance Protocols for avifauna protection
 - d. Stream Restoration Plan
 - e. Biodiversity Compensation implementation

Regards,



**Claire Webb | Senior Ecologist
Ecological Advice | Infrastructure and Environmental Services**

Technical memo reviewed and approved for release by:

**pp.
Simon Mills | Team Manager
Ecological Advice Team | Infrastructure and Environmental Services
Date:**

24 March 2023

Auckland Council
 c/o Warwick Pascoe – Principal Project Lead
 135 Albert Street
AUCKLAND 1010

Attention: Warwick Pascoe

Dear Warwick

Resource Consent – Eastern Busway Stage 2: Traffic and Transportation submissions

Stantec New Zealand (**Stantec**) has been commissioned by Auckland Council to undertake a review of transportation matters in relation to the Eastern Busway consenting packages of **EB2** and **EB3 Residential (EB3R)** Resource Consent (**RC**) Application prepared by Auckland Transport (**Applicant**) subject to section 96 of the Resource Management Act 1991 (**RMA**).

EB2 and EB3R form part of the wider Eastern Busway Project, improving the transport network across southeast Auckland. EB2 is located in the Pakuranga Town Centre and involves the extension of the existing busway, the construction of the Reeves Road Flyover (**RRF**) over, and active mode improvements. EB3R covers the area from Pakuranga (SEART intersection) to the Ti Rakau bridge including Edgewater Bus station.

Figure 1 illustrates the general extent and location of both EB2 and EB3R.

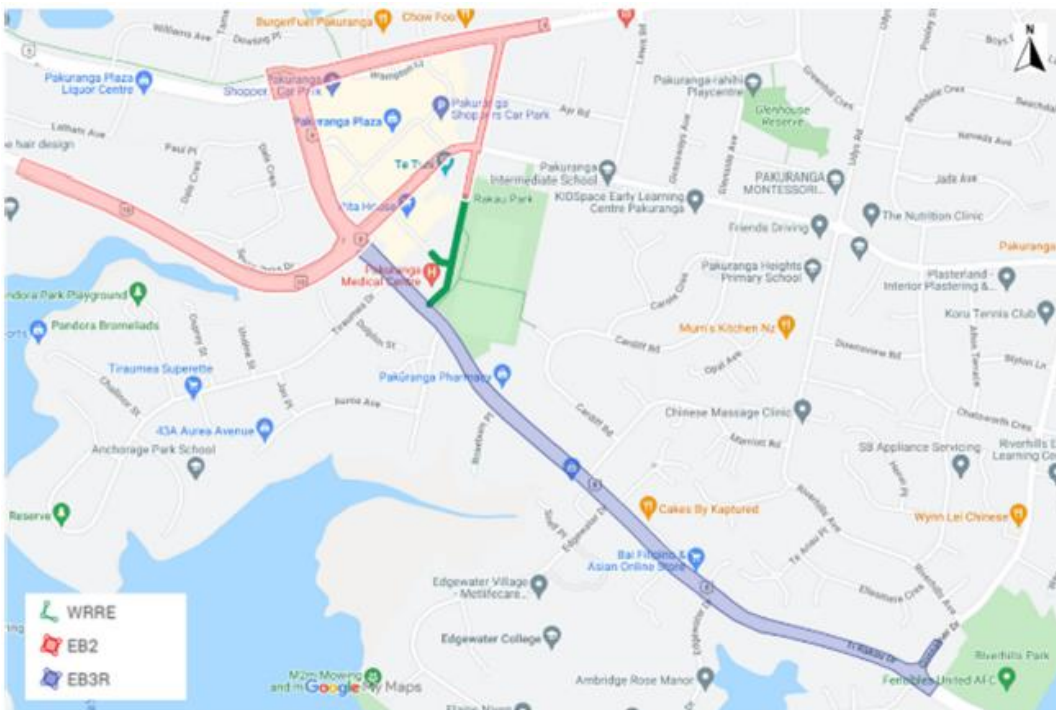


Figure 1: EB2 and EB3R project extent (Source: Integrated Transport Assessment – Eastern Busway Alliance)

Stantec New Zealand
 Level 3 Stantec House
 111 Carlton Gore Road
 Newmarket, Auckland 1023

PO Box 13-052
 Armagh
 Christchurch 8141

TEL +64 9 580 4500

Ref No: 310205059

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Please visit www.stantec.com to learn more about how Stantec design with community in mind.

Background

The preparation of this technical memo has been led by Martin Huang who is a Principal Transportation Engineer based in Stantec's Auckland office. Martin is a Chartered Professional Engineer with Engineering New Zealand and has a Master of Transportation Engineering from the University of Canterbury. Martin has over 17 year's work experience in the transportation planning and traffic engineering sectors with previous experience in presenting expert evidence in hearings.

The purpose of this technical memorandum is to provide a relevant assessment of the transport implications of the project in relation to the RC matters for which consent is required in accordance with Chapter E27 of the Auckland Unitary Plan Operative in Part (**AUP-OP**), along with an identification of the most relevant and/or most recurring traffic and transport-related matters raised by submitters and to review the Section 92 (**S92**) response prepared by the applicant in response to further information requested for the Integrated Transport Assessment (**ITA**) as part of the initial lodgement.

This document should be read in conjunction with the technical memo of assessment on the Notice of Requirement process (**NoR**), which complements the general assessment of traffic and transportation matters and public submissions.

Assessment of RC

It is important to note that EB2 does not have any traffic/transportation-related activities that require resource consent with such matters being considered under the Notice of Requirement process, and therefore this memo will focus on EB3R where there are technical non-compliances according to Chapter E27 of AUP-OP.

In particular, the applicant has sought consent in association with the widening of Ti Rakau Drive, which is identified as an arterial road. This will result in a number of vehicle crossings being modified and relocated, which will trigger consent requirements in accordance with AUP-OP Standard E27.6.4.1(2) and (3).

An assessment against criteria outlined in E27.8.2 (11) has been undertaken as below:

- Effects of the location and design of the access on the safe and efficient operation of the adjacent transport network having regard to:
 - Visibility and safe sight distances;
 - Existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring;
 - Proximity to and operation of intersections;
 - Existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Plan;
 - Existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes, and cycleways;

The design scheme and its assessment by the Applicant have considered each of the above matters by providing a comprehensive ITA and subsequent S92 response to address specific matters. It is considered that the proposed vehicle crossings will be designed in a manner that will have sufficient sight visibilities and the corridor layout has accommodated future travel patterns and behaviours by different road user groups. In particular, restriction of right turn movements at some places ensures the efficient and safe operation of the public road network. Furthermore, the renovated public infrastructure including new bus stations and dedicated bus/cycle lanes will add benefits to the project outcome without compromising the vehicle crossing operation in practice.

- The effects on the continuity of activities and pedestrian movements at street level in the Business–City Centre Zone, Business–Metropolitan Centre Zone, Business–Town Centre Zone and Business–Local Centre Zone; or

EB3R involves the area in the Business–Town Centre Zone at the south-eastern corner of the Ti Rakau Drive / Pakuranga Highway /Reeves Road intersection as shown in **Figure 2** below.

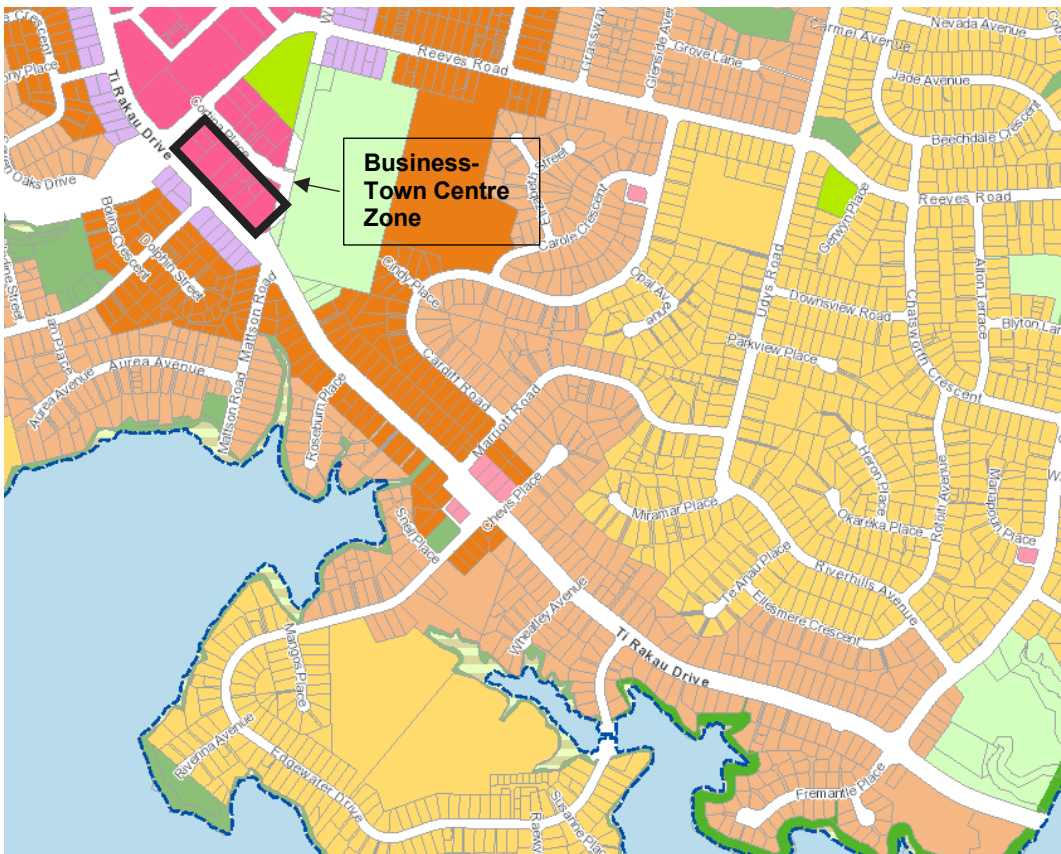


Figure 2: AUP-OP Zoning for EB3R (Source: Auckland Council Geomaps)

It is considered that all vehicle crossings that require changes will not adversely affect this particular area, and that the construction of these crossings will be expected to follow Auckland Transport standards with priority given to the continuity (and safety) of pedestrian movements across the driveway crossings.

- the practicality and adequacy of the access arrangements considering site limitations, arrangement of buildings and activities, user requirements and operational requirements, proximity to and operation of intersections, having regard to:
 - the extent to which the site can reasonably be served by different access arrangements including:
 - access from another road;
 - shared or amalgamated access with another site or sites;
 - via a frontage road, such as a slip lane or service road; or
 - the extent to which the need for access can reasonably be avoided by entering into a shared parking and/or loading arrangement with another site or sites in the immediate vicinity.

Most of these vehicle crossings are required as Ti Rakau Drive is the only frontage serving these properties to the public road network. The detailed design layout of these facilities will be optimised at a later stage to ensure relevant AUP-OP and Auckland Transport standards are met.

Overall, it is considered that the construction and use of vehicle crossings along Ti Rakau Drive as part of EB3R project scope will have minimal adverse effects on the safe and efficient operation of the public road network.

As will be discussed, review of the proposed parking area at 105 Ti Rakau Drive has identified further aspects of (potential) technical non-compliance with the provisions of Chapter E27 of AUP-OP.

Review and analysis of submissions

Council received a total of 14 public submissions including nine with respect to EB2 and five for EB3R during the public consultation process. All submissions have been read and the concerns raised by submitters were assessed as relevant to the traffic engineering expertise area to determine the merit of the concern. In relation to those issues and concerns that have been considered to have merit, conditions will be recommended to appropriately deal with the concerns identified.

Submission ID 15953, 16016 (Equal Justice Project) and Submission ID 16015 (Grant Hewison & Associates Ltd) have not been discussed in this memo as the submitters support the RC applications and have not raised any general or specific traffic/transportation concerns associated with the proposal. In addition, Submission ID EP0008 (Kāinga Ora) relates to the NoR for EB2 and will be addressed in the relevant process and associated assessment.

The remaining submissions have been submitted by various institutions/businesses that raise concerns with regard to the construction and operation of the proposal. **Table 1** below outlines the summary of various traffic/transportation matters from each submission.

Table 1: Summary of submissions on traffic/transport matters

Submission ID	Submitter	Traffic/Transportation matters
EP0001	MPKD Group Ltd	<ul style="list-style-type: none"> - Loss of parking spaces at the Pakuranga Plaza during construction - Accessibility to site entrances and delivery
EP0002	Brownsons Jewellers	<ul style="list-style-type: none"> - Loss of parking spaces at the Pakuranga Plaza during construction - Accessibility to site entrances
EP0003	JT tech/Novo tech/mango tech	<ul style="list-style-type: none"> - Loss of parking spaces at the Pakuranga Plaza during construction - Accessibility to site entrances
EP0004	Gibb & Milner Holdings LTD	<ul style="list-style-type: none"> - Loss of parking spaces at the Pakuranga Plaza during construction - Accessibility to site entrances and delivery
EP0005 / 16031	Pakuranga Plaza Limited / GYP Properties (GYPP)	<ul style="list-style-type: none"> - Accessibility to site entrances/carpark and for loading/delivery - Intersection design safety - Growth rate application in transport modelling - Construction effects including traffic management and wayfinding
EP0006	Just Trading Limited	<ul style="list-style-type: none"> - Removal and accessibility of closed parking spaces
EP0007	General Distributors Limited	<ul style="list-style-type: none"> - General adverse effects on operations of Countdown Pakuranga
16018	Ministry of Education (the Ministry)	<ul style="list-style-type: none"> - Construction effects during school peaks - Disruptions to the Edgewater College bus route
16045	Metlifecare Limited (Metlifecare)	<ul style="list-style-type: none"> - Edgewater Drive intersection configuration

As identified in the previous section, while the above submissions have been assessed in the NoR traffic memo completed by Stantec, this document will mainly address ones that fall within the EB3R extent, namely Submission ID numbers 16018, 16031, and 16045.

A brief outline of each of the key themes or matters raised by the submitter is provided and is followed by a discussion of the supporting reasoning on the basis of the RC lodged and/or mitigation approach provided by the Applicant is then assessed for appropriateness and any further recommendations with respect to the RC and supporting conditions made.

Submission ID 16018: The Ministry

Several schools are affected by the proposed works and the Ministry has indicated concerns relates to the potential effects on students in Pakuranga from construction traffic and the preferred bus route for Edgewater College during the construction period. The main concerns raised by the Ministry have been outlined below:

“The Ministry does not think the proposed times where truck movements must avoid the affected schools cover the entire school peak pick-up and drop-off period when students walk to and from school. The Ministry wants the morning and afternoon “blackout” period along Reeves Road to be extended to between 8:10am-9:00am and 2:55pm-3:15pm, respectively.”

- Disruption to Edgewater College bus route

The Ministry also considers that:

“The proposal involves the upgrade of the two Edgewater Drive intersections with Ti Rakau Drive which will cause disruptions to the Edgewater College bus route. The Ministry requests further engagement with the applicant regarding alternative routes to find a suitable final option.”

The upgrade will be undertaken as part of the EB3R application scope which is expected to commence following the completion of EB2 focussed on the section between Pakuranga Road to the SEART/Ti Rakau. It is recommended that the applicant continue to consult with the Ministry, so a suitable interim solution is found and developed.

Submission ID 16031: GYPP

This submission has been fully addressed in the NoR technical memo and there are no additional matters to be assessed from an RC perspective.

Submission ID 16045: Metlifecare

This submitter has raised two specific items to be considered as below:

- Relocating Edgewater Station

Metlifecare provides the following statement with the proposed suggestion as shown in **Figure 3**:

“Relocating the proposed Edgewater bus station further to the west would appear to be a cost-effective compromise. Pedestrian connections are retained, and at least one of the proposed U-turn bays could be removed.”

“This concept would:

- *Consolidate the right turns in/out of these two streets at a single intersection*
- *Reduce the number of signalised intersections that buses must pass through – from the currently proposed 2 intersections and separate pedestrian crossing, to just a single signalised intersection*
- *Reduce traffic volumes and vehicle distances travelled on the section of Ti Rakau Drive between the two U-turn facilities.”*

While there are always pros and cons to different design options, the current proposal advanced by the Applicant is considered to optimise the objective bus travel times along the corridor by restricting right turn movements for both Marriot Road and Edgewater Drive. The early concept layout discussed by the submitter is considered to incur unnecessary delays (and consequential safety risks) as a crossroad intersection. The U-turn provision in the vicinity of the site being approximately 200m from the intersection will allow vehicles to reach destinations without compromising the safety and efficiency benefits demonstrated by the ITA and subsequent S92 statements for the EB2R (and wider Eastern Busway) project overall.

Overall, it is considered that the current proposed scheme remains the preferred design layout, but it is recommended that the Applicant continues to consult with Metlifecare to demonstrate the desired project outcome and provide practical solutions to address Metlifecare’s detailed concerns through the detailed design and construction phases.

Other Matters

This technical memo also provides an overview of the following matters with associated assessments.

Objectives and Policies

The Applicant’s Assessment of Effects on the Environment (**AEE**) report has provided the associated assessment of relevant objectives and policies related to transport matters in accordance with E27.2, and E27.3 of AUP-OP.

It is acknowledged that the AEE has appropriately addressed the anticipated project outcome to consistently align with the relevant objectives and policies of the transport elements of the AUP-OP. In particular, the establishment of public transport and active travel facilities along this corridor will noticeably improve the quality and reliability of these alternative travel modes and assist with the desired residential intensification development in this area. Further, the AEE has recognised the potential effects that may be experienced during the construction period, and it is considered that the implementation of the proposed Construction Traffic Management Plan will be able to provide appropriate measures and mitigations to manage traffic effects during the construction.

The technical infringement from the RC perspective has been identified and the proposal includes measures to avoid, remedy, and mitigate adverse effects in an effective manner. Therefore, it is considered that the proposed activity in EB3R complies with the relevant objective and policies set out in AUP-OP.

New Parking Area – 105 Ti Rakau Drive

As part of the proposed works in EB3R, a new parking area will be established to compensate for the loss of parking at the Edgewater Shopping Centre as shown in **Figure 5** overleaf.

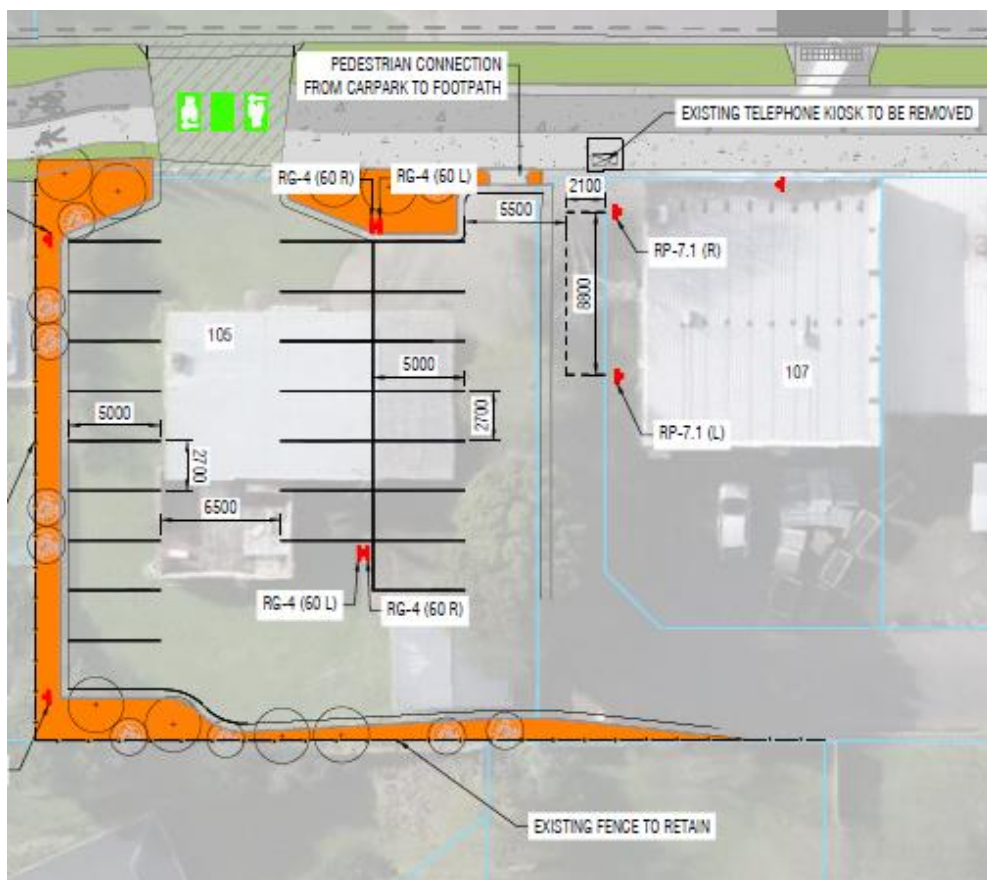


Figure 5: New Parking Area at 105 Ti Rakau Drive (Source: ITA)

The subject site is within the Residential–Terrace Housing and Apartment Building Zone and the Applicant’s AEE has provided associated assessments with respect to relevant matters in Chapter H6 of AUP-OP.

It is recognised that the proposed parking provision will effectively mitigate the effects on the existing situation in this location as the resultant deficit of one parking space is not expected to have a significant impact on the Edgewater Shopping Centre operation or give rise to any overspill parking or associated effects beyond the centre’s parking area. It is also acknowledged the patronage of this carpark will be utilised by the local neighbourhood on a regular basis and therefore it is considered that the regular, local users will be generally familiar with the layout and scale of parking proposed, and the safe and efficient operation of this facility.

While the new crossing applies the same technical infringement of being connected to an arterial road frontage as identified in the earlier section, the new vehicle crossing has been designed to enable two-way movements. This provision also enables the efficient and safe operation of the carpark to minimise delays and conflicts with traffic movements along Ti Rakau Drive.

However, it has been identified that there are two technical non-compliances with regard to the design dimensions of the vehicle crossing width and the manoeuvring space in relation to the AUP-OP standards within Table E27.6.4.3.2 (T151) and Table E27.6.3.1.1 requirements (T120), respectively. In particular, the proposed vehicle crossing width is 6.5m, which exceeds the maximum permitted width of 6m, and the manoeuvring space of the eastern circulation/access aisle is 5.5m, which is less than the required AUP-OP standard of 5.9m. While the difference may not be substantial, it is considered that the design can be optimised to achieve full compliance, which can better achieve a convenient and safe access to and from the parking spaces without the need for multiple turning manoeuvres.

In addition, it is expected that the carpark will be utilised during the hours of darkness and therefore lighting is required where there are 10 or more parking spaces which are likely to be used in accordance with E27.6.3.7. It is considered that lighting provision will need to be included to accommodate the parking and manoeuvring areas and associated pedestrian route to be adequately lit.

Furthermore, it is proposed to establish more than 20 parking spaces, which requires at least one accessible parking space according to New Zealand standard for Design for Access and Mobility – Building and Associated Facilities (NZS: 4121-2001). Therefore, it is considered that this feature should be included in the proposed scheme, or its provision included by way of conditions to the consent (if granted).

Conclusion and Recommendation

It is concluded that the proposed Resource Consent for both EB2 and EB3R can be supported in general terms from a traffic and transportation perspective, however, it is recommended that the Applicant address particular and detailed concerns raised by the submitters. The majority of the submitter issues can be resolved as the Applicant undertakes further consultation and/or provides minor changes to the proposal through subsequent detailed design stages. Recommended changes to include as consent conditions for 105 Ti Rakau Drive are included below to improve the carpark provision as identified in the above section:

- Reduce the vehicle crossing width to 6m
- Undertake amendment to the internal layout to achieve full compliance in accordance with Table E27.6.3.1.1 (T120), e.g., shifting the manoeuvring space between western rows to make room for the eastern row
- Include appropriate lighting provisions in a manner that complies with the rules in E24 of AUP-OP
- Provide at least one assessable parking space in accordance with NZS:4121-2001.

Yours sincerely



Martin Huang
Principal Transportation Engineer

Stantec New Zealand

Technical memorandum for a notice of requirement for Eastern Busway Stage EB2 (NoR EB2) and resource consent applications for Eastern Busway Stage EB2 (BUN60407133) and Eastern Busway Stage EB3R (BUN60407121): urban design

To: David Wren, Consultant Planner NoRs
Celia Wong, Council Planner Resource Consents

And to: David Wong, Senior Policy Planner, Planning Central/South
Warwick Pascoe, Principal Project Lead Premium Resource Consents

From: Trevor Mackie, consultant urban designer and planner

1. Application details

Applicant's name: Auckland Transport (**Applicant**)

Application number: NoR EB2, EB2 BUN60407133 and EB3R BUN60407121

Activity type: Various (described in more detail below)

Site address: 5 Reeves Road, Pakuranga Heights (EB2) and including parts of South Eastern Arterial (SEART). Ti Rakau Drive, Reeves Road, Pakuranga Road and William Roberts Road; and 207 Ti Rakau Drive, Pakuranga Heights (EB3R) and including Ti Rakau Drive from Reeves Road to Riverhills Park at Pakuranga Creek

2. INTRODUCTION

QUALIFICATIONS AND RELEVANT EXPERIENCE

- 2.1. My name is Trevor Stewart Mackie.
- 2.2. I hold a Bachelor of Architecture (Hons) degree from Victoria University of Wellington (1982); and a Bachelor of Town Planning degree from University of Auckland (1987).
- 2.3. I am a sole consultant on urban design and planning since June 2022. For 12 years prior to that I was an urban design and planning consultant with Hill Young Cooper, and before that Urban Design Planner and then Manager of Environmental Policy at North Shore City Council.
- 2.4. I have approximately 40 years professional experience, practising in central and local government and the private sector. In these positions I have assisted with project design, urban design review, heritage and special character review, district plan preparation and urban design guidance. I have

provided urban design review for a wide range of resource consent applications, plan changes and notices of requirement. These assessments relate to a range of rural, residential and commercial proposals, and infrastructure.

- 2.5. In my current role I regularly assist local authorities with policy and district plan development in relation to growth management, urban design, character and amenity matters, and the integration of land use and transport. I have completed the Making Good Decisions programme, and have been an accredited independent hearing commissioner since 2014, hearing six to ten cases each year, on resource consents, notices of requirement and plan changes.
- 2.6. I am a member of the Resource Management Law Association.

EXPERT WITNESS CODE OF CONDUCT

- 2.7. I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this technical memo. Other than where I state that I am relying on the advice of another person, this evidence is within my area(s) of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express. I have qualified my evidence where I consider that any part of it may be incomplete or inaccurate, and identified any information or knowledge gaps, that I am aware of, and their potential implications. I have stated in my evidence where my opinion is not firm or concluded because of insufficient research or data or for any other reason, and have provided an assessment of my level of confidence, and the likelihood of any outcomes specified, in my conclusion.

3. OVERVIEW AND SCOPE OF TECHNICAL MEMORANDUM

EXECUTIVE SUMMARY RECOMMENDATIONS

EB2 NOR AND RESOURCE CONSENTS RECOMMENDATIONS

Having considered the NoR EB2 and the resource consent applications for EB2 in their urban design considerations, and the associated suite of conditions, I consider that the NoR EB2 should be recommended confirmed with amended Conditions 39 and 40 UDLP and the EB2 resource consents should be granted.

EB3R RESOURCE CONSENT RECOMMENDATIONS

Having considered the EB3R resource consent applications for EB3R in their urban design considerations, and the associated suite of conditions, I consider that the EB3R resource consents should be granted with amended Conditions 40 and 41 UDLP.

RECOMMENDED AMENDMENTS TO CONDITIONS

Amendments should be made to Conditions 39 and 40 EB2 NoR and 40 and 41 EB3R resource consents to seek the following outcomes:

- a. UDLP to focus design and landscaping on the future more intensively developed environment
- b. UDLP should include a CPTED audit of the stations, land beneath the RFF, and the walking and cycling networks.

c. I recommend more street trees, parks frontage trees and station platform trees. My preference would be for greater certainty from the Landscape, Ecological and Arboricultural Mitigation Plans being amended to show the additional trees and their locations, and for the UDLP condition to be amended to require implementation of those Mitigation Plans.

NOTICE OF REQUIREMENT NOR EB2

- 3.1. The Applicant as a requiring authority has served the Council with a notice of requirement (**NoR**) for an extension of the existing Panmure to Pakuranga busway along Ti Rakau Drive, with the construction of a new Pakuranga Bus Station, the construction and operation of the Reeves Road Flyover, modifications to the SEART off-ramp at Ti Rakau Drive, and local walking, cycling and stormwater infrastructure. This is Eastern Busway Stage 2 (**EB2**) at Pakuranga Heights, generally on the roads around and through the Pakuranga Town Centre (**Project**).

EB2 RESOURCE CONSENTS

- 3.2. The Applicant has applied for resource consents to enable the development, construction, operation and maintenance of a new Eastern Busway Stage 2 (**EB2**) and accompanying walking and cycling facilities and stormwater infrastructure and a Reeves Road Flyover at Pakuranga Heights, generally on the roads around the Pakuranga Town Centre (**Project EB2** BUN60407133). These resource consents are LUC60407134 - land use consent: for land disturbance, and vegetation removal around two terrestrial wetlands and the coastal areas of the Tamaki River; DIS60407135 and DIS60407492 - discharge permits: for the discharge of stormwater to freshwater under the National Environmental Standards for Freshwater, and for the disturbance and discharge of contaminated soil; and CST60408360 and CST60408369 - coastal permits: for the occupation of permanent stormwater infrastructure within the coastal marine area, and for the mangrove removal and coastal disturbance associated with the construction of this infrastructure.

EB3R RESOURCE CONSENTS

- 3.3. The Applicant has applied for resource consents to enable the development, construction, operation and maintenance of a new Eastern Busway Stage 3R (**EB3R**) and accompanying walking and cycling facilities and stormwater infrastructure at Pakuranga Heights, generally on Ti Rakau Drive between Reeves Road and Riverhills Park at Pakuranga Creek (Project EB3R BUN60407121). These resource consents are LUC60407123 - land use consent for: construction noise, construction of the road network on land not yet legalised as road, tree removal, trimming and alterations in the road or in open space, earthworks including those within 100m of a natural wetland and the disturbance of contaminated soil requiring consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, modification of vehicle crossings where a Vehicle Access Restriction applies, works altering overland flow paths and within the one per cent AEP (Annual Exceedance Probability) floodplain, temporary satellite offices and laydown areas, and a proposed public car park at 105 Ti Rakau Drive; DIS60407122, DIS60407493 and DIS60412893 - discharge permits: for the discharge of stormwater to freshwater and the temporary discharge of water within 100m of a natural wetland, ancillary to erosion and sediment controls under the National Environmental Standards for Freshwater, and for the disturbance of contaminated soil under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health; WAT60412894 – water permit for the temporary diversion of water within 100m of a natural wetland, ancillary to erosion and sediment controls under the National Environmental Standards for Freshwater; LUS60412895 – streamworks consent for three

separate structures that do not meet permitted activity criteria;
CST60408460 and CST60408461 - coastal permits: for the occupation of permanent stormwater infrastructure within the coastal marine area, and for the mangrove removal and coastal disturbance associated with the construction of this infrastructure.

- 3.4. The NoR EB2 and EB2 resource consent applications were publicly notified (at the request of the applicant) on 21 November 2022, and submissions on the NoR EB2 and EB2 resource consent applications closed on 19 December 2022. EB3R resource consent applications were publicly notified on 13 December 2022 and submissions closed on 1 February 2023.
- 3.5. I have reviewed the Applicant's NoR EB2 and EB2 BUN60407133, and EB3R BUN60407121, and the relevant supporting information with reference to the requirements of relevant provisions in the Auckland Unitary Plan (Operative in Part) (**AUP-OP**) and overarching policy set out the National Policy Statement: Urban Development 2020 (**NPS:UD**), to assist the preparation of the Council's reporting planners' reports under s 42A of the RMA.
- 3.6. More specifically, my technical memorandum assesses urban design considerations and the associated effects on amenity associated with the NoR and resource consent applications and will cover the following matters:
 - a. Project objectives and a brief summary of the proposal
 - b. Summary of the NoR
 - c. Summary of the consents required and scope for urban design assessment
 - d. Permitted activities within EB3R not subject to urban design review
 - e. Project need and positive benefits (effects)
 - f. New urban street
 - g. Walking amenity
 - h. William Roberts Road South
 - i. NoR EB2 UDLP condition
 - j. EB3R resource consent UDLP condition
 - k. Proposed UDLP condition commentary
 - l. Movement
 - m. Streetscape and existing environment
 - n. Climate change, emissions and Urban Forest Ngāhere Strategy
 - o. Urban design effects on parks and reserves
 - p. UDLP management of street trees
 - q. Reeves Road Flyover urban design effects
 - r. Natural character, landscape and visual effects
 - s. Urban design of landscape and landforms
 - t. Statutory considerations – AUP-OP and NPS:UD
 - u. Submissions relevant to urban design considerations
 - v. Recommendations and conditions

- 3.7. In preparing this technical memorandum, I have reviewed the following documents relevant to the NoR EB2, EB2 BUN60407133 and EB3R BUN60407121:
- a. EB2 Assessment of Effects dated 11 August 2022 (**AEE**) and EB3R AEE 17Aug22
 - b. EB2 Options Report (AEE, Appendix 20)
 - c. EB2 Land Requirement Plan (AEE, Appendix 2)
 - d. EB2 Proposed Conditions (AEE, Appendix 3)
 - e. EB2 & RRF Combined Plans (AEE, Appendix 4) and EB3R Consent Plans 19Aug22
 - f. EB2 & EB3R Landscape Ecological and Arboricultural Mitigation Plans (AEE, Appendix 5)
 - g. EB2 & EB3R Stormwater Effects Assessment (AEE, Appendix 6)
 - h. EB2 & EB3R Consultation & Communication Plan (AEE, Appendix 11)
 - i. EB2 & EB3R Integrated Traffic Assessment (AEE, Appendix 12)
 - j. EB2 & EB3R Arboricultural Report (AEE, Appendix 16)
 - k. EB2 & EB3R Tree Protection Management Plan (AEE, Appendix 17)
 - l. EB2 & EB3R Landscape and Visual Effects Assessment (AEE, Appendix 21)
 - m. EB2 & EB3R Terrestrial and Freshwater Ecological Effects Assessment (AEE, Appendix 22)
 - n. EB2 AUP-OP Maps (AEE, Appendix 24)
 - o. EB2 & EB3R Archaeological Report (AEE, Appendix 27)
 - p. EB2 & EB3R Open Space Assessment (AEE, Appendix 32)
 - q. Ngai Tai Ki Tamaki Maori Values Assessment Report
 - r. Ngati Paoa Cultural Values Assessment
 - s. Te Ākitai Waiohua Waka Taua Incorporated MVA & CVA
 - t. Section 92 further information response dated 3 November 2022 (**Section 92 Response**) including its Attachments;
 - u. Submissions received on the NoR EB2 and on both EB2 BUN60407133 and EB3R BUN60407121 resource consent applications.

4. SUMMARY OF PROPOSAL

OVERVIEW

- 4.1. The Eastern Busway has been developed to meet the following objectives (Project Objectives):
- Provide a multi modal transport corridor that connects Pakuranga and Botany to the wider network and increases access to a choice of transport options
 - Provide transport infrastructure that integrates with existing land use and supports a quality, compact urban form
 - Provide transport infrastructure that improves linkages, journey time and reliability of the public transport network

- Contribute to accessibility and place shaping by providing better transport connections between, within and to the town centre
- Provide transport infrastructure that is safe for everyone
- Safeguard future transport infrastructure required at (or in vicinity of) Botany Town Centre to support the development of a strategic public transport connection to Auckland Airport.[AEE at 1.3, p15]

NOR EB2

4.2. The Eastern Busway NoRs, if confirmed, will:

- Designate land in the AUP:OP to authorise works relating to the construction, operation, and maintenance of the Project, subject to conditions;
- Authorise land use activities that would otherwise require resource consent under District Plan provisions under section 9(3) of the RMA; and
- Restrict the use of land that would prevent or hinder works to which the designation relates, without the requiring authority's consent.

4.3. Section 171(1)(c) of the RMA requires that territorial authorities have particular regard to “whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority seeking the designation”.

4.4. The EB2 NoR is for the construction, operation, and maintenance of the Eastern Busway Stage 2 on land between the intersection of Ti Rakau Drive/ South-Eastern Highway (SEART) and Pakuranga Road/William Roberts Road/Reeves Road, Pakuranga.

Key features of the Project include:

- an extension of the existing Panmure to Pakuranga busway, through and past the Pakuranga Town Centre, with the construction of a new Pakuranga Bus Station
- the construction and operation of the Reeves Road Flyover
- modifications to the SEART off-ramp at Ti Rakau Drive
- local walking, cycling and stormwater infrastructure.

EB2 RESOURCE CONSENTS

4.5. The resource consents for EB2 are listed in section 3.2 above. There is very little scope within those resource consents to apply an urban design assessment, as the resource consent assessment criteria and policies have a functional focus on the activities and management of specific environmental effects. The protection of street trees and parks trees is a district plan level rule, and the tree removals are undertaken in EB2 by the designation of the land, which overrides the district plan level rules. The NoR allows assessment of the effects of those tree removals and mitigations such as replacement planting. I am confident that ecological restoration planting proposed by the Applicant will adequately mitigate the effects on the consented works areas, in relation to land opposite Pauls Place Reserve, the stormwater outfalls and within the coastal marine area. The stormwater outfalls may require permanent access for maintenance.

EB3R RESOURCE CONSENTS

- 4.6. The resource consents for EB3R are listed in section 3.3 above. Works will involve the removal of trees measuring greater than 6m in height and/or 600mm in girth for trees located in coastal areas and riparian margins for the construction of network utilities. No notable trees are impacted by the proposed works in EB3R, however tree trimming is required for trees located in the road and Open Space zone. Proposed works will be undertaken within the protected root zone and may exceed the permitted levels of pruning. The proposed works will require removal of trees greater than 4m in height and/or 400mm in girth for trees located in the road and Open Space zone as a result of the Project footprint. These tree works are restricted discretionary activities. Vegetation clearance and earthworks near a natural wetland is a discretionary activity if for the purpose of constructing specified infrastructure. Transport infrastructure on residential zoned land and on Open Space zoned land is a discretionary activity. Construction of road network utilities will occur in land that is not yet legalised as road. In particular this relates to works within land zoned residential (the construction of the new westbound general traffic lanes) and land zoned Open Space (the construction of the new westbound traffic lanes, and works within Riverhills Park including the western bridge abutment).
- 4.7. In practical terms, these EB3R resource consents would allow urban design assessment and intervention only in relation to appearance and landscaping of the stormwater outfall works, the design of the public carpark proposed adjacent to the Edgewater shops, mitigation for treeworks and tree removals, and design and mitigation of the transport parts of the Project to be located on land currently zoned Residential or Open Space. I am confident that ecological restoration planting proposed by the Applicant will adequately mitigate the effects on the consented works areas, in relation to the frontage of Riverhills Park, the stormwater outfalls and within the coastal marine area.

PERMITTED ACTIVITIES WITHIN EB3R NOT SUBJECT TO URBAN DESIGN REVIEW

- 4.8. Permitted activities within EB3R include 'road network activities' under Rule E26.2.3.2 (A67) of the AUP-OP, with few standards applying. This includes the following transport-related activities:
- Footpaths, footways and footbridges, bridges for roads, tunnels, retaining walls for roads both above and below the road
 - Road verges and berms
 - Site access including vehicle crossings
 - Road carriageways
 - Road pavements
 - Cycle facilities
 - Road lighting and support structures
 - Traffic operation and safety signs, direction signs, road name signs

- Road safety devices including interactive warning signs, road markings, rumble strips, barriers, fences, speed tables and speed cushions, traffic separators, bus friendly vertical deflection devices
- Ancillary equipment and structures associated with public transport systems including seats, shelters, real time information systems and ticketing facilities, bicycle storage and cabinets
- Traffic control devices including traffic islands, pedestrian crossings and roundabouts and intersection controls, traffic and cycle monitoring devices, traffic signals and support structures, cabinets and ancillary equipment associated with traffic signals
- Devices and structures to implement regulatory controls (no-stopping, no-overtaking parking control, bus lane controls, vehicle restrictions) including speed limit and parking restriction signs, parking meters and pay and display kiosks, speed cameras and red light/traffic cameras and on-street parking areas
- Road drainage devices including culverts, sub-soils, catch pits, water tables, manholes, inlets, outlets, flumes
- Scour and erosion control devices
- Stormwater management devices including rain gardens, wetlands, stormwater treatment areas and ponds; and noise attenuation walls or fences
- Devices associated with intelligent transport systems including vehicle detection systems (electronic vehicle identification, and infra-red vehicle occupancy counters), lane control signals, ramp signals, variable messaging signs, CCTV cameras, incident detection, emergency telephones, cables and ducting.

4.9. EB3R is largely a continuation of the approach in EB2, although mainly within a residential context. The Project is not seeking to designate EB3R, but to implement it through permitted activities and resource consents. Permitted activities can be undertaken as-of-right if they meet the performance standards, and do not allow for qualitative assessments. That means there is very limited scope to apply an urban design assessment across the Project stage, and mainly confined to mitigation of street tree and park tree removals, effects on park frontages and operations, and linkages into the EB2 and EB3C NoRs at each end of EB3R. The proposed carpark adjacent to the Edgewater Shops has proposed landscape planting mitigation, and its northwest adjacent site appears to be a business use rather than residential so a screen fence may not be required.

4.10. Effects on the parks' operations, and their mitigations, will largely be negotiated with the Parks and Community Facilities managers of those assets. The parks and reserves are public open spaces and there are also urban design issues with their public faces. This includes the parks trees removals and mitigations, taking of parts of the park frontages for the transport infrastructure project, changes to public accessibility to the parks, and in the case of Riverhills Park a consequential loss of recreational walking amenity in front of the park and onto the northern side (creek-facing) of the proposed new busway bridge. The decision to widen Ti Rakau Drive along its southern edge and keep the northern edge intact may have had the effect of not allowing sufficient berm space for street trees along much of the northern side of Ti Rakau Drive within EB3R.

PROJECT NEED AND POSITIVE BENEFITS (EFFECTS)

- 4.11. Although framed as a transport problem and positive transport benefits, the Eastern Busway project is also an urban design intervention, for movement, accessibility and connectedness. It also involves place shaping and environmental and amenity improvements. These are potentially substantial positive urban design effects.
- 4.12. AEE Appendix 12 Integrated Transport Assessment - Executive Summary (at pages 1 & 2, or 16 & 17 of pdf) states:

Without intervention, demand for public transport, walking and cycling will remain low, the heavy reliance on car travel will continue and the road network will experience significantly increased congestion. This will further impede the efficient movement of people and goods within the area, lead to detrimental environmental outcomes and exacerbate the area's limited access to opportunities compared to the rest of the region both in terms of the quality of life for residents and the economic wellbeing of businesses. It will also limit the area's potential to sustainably accommodate further residential and employment growth.

The Eastern Busway programme presents an opportunity to address these problems by extending the rapid transit, high frequency busway between Panmure and Pakuranga [EB1], through to Botany Town Centre. The Project will include new walking and cycling connections, placemaking, urban renewal initiatives and improvements for general traffic. The end result will see customers being able to travel between Botany and Britomart by bus and train in less than 40 minutes, which is 20 minutes quicker than the current journey times.

EB2 and EB3R will help alleviate congestion, principally through the diversion of traffic from the Ti Rakau Drive / Pakuranga Road intersection and onto the Reeves Road Flyover (RRF). This diversion will reduce the volumes of through-traffic within the Pakuranga Town Centre and local roads. As such, EB2 and EB3R's contribution to congestion reductions will improve travel times, supporting the rapid movement of freight and people.

The Project will also provide increased transport choices for residents and visitors. The dedicated bus lanes and stations will improve the public transport experience for passengers and make it more attractive to current private vehicle users. Increased uptake of public transport will also ease congestion and reduce greenhouse gas emissions. Similarly, the Project's walking and cycling investments make those transport modes safer and more attractive to users. Lastly, an additional positive effect associated with EB2/EB3R, and the wider Project, is improved accessibility.

Therefore, reduced congestion, better public transport, safer walking and new cycling infrastructure will improve the ability for both local residents and visitors to access jobs, education, recreation, housing and healthcare. Given the above, EB2 and EB3R will have significant positive effects for Auckland. [Extract from AEE Appendix 12 Integrated Transport Assessment - Executive Summary (at pages 1 & 2, or 16 & 17 of pdf)].

NEW URBAN STREET

- 4.13. Although the EB2 NoR and the EB2 and EB3R resource consent applications are assessed for their effects on the existing environment, the busway, new walking and cycling facilities, and re-forming of much of the existing roads are effectively the creation of a new urban street, for a future more intensively used and built-up Town Centre, Mixed Use and Residential corridor through Pakuranga Heights. In urban design terms, the street and its streetscape, bus station identity and street trees, and its walking amenity, should be designed for that future context.

- 4.14. The Council s92 further information request asked for urban design information in the AEE on how the project, its station, streetscape and accessibility will address the future public realm / private land interface, which will be developed to substantially greater scale and intensities under the Intensification Planning Instrument (IPI) plan changes. The Requiring Authority's response was:

Given the proposed status of Plan Change 78 and the limited scope of the permitted activity provisions with immediate legal effect, AT considers it inappropriate to undertake a detailed assessment of the Project in relation to what are currently hypothetical development scenarios that are not part of the existing environment (as defined by the RMA). Please note that an assessment against the objectives and policies of the plan change has been provided as Attachment 1.

Regardless, AT notes that the Project enables further intensification, as enshrined by the Project's own objectives and highlighted throughout the AEE and Options Assessment. Please refer to those documents for further detail.

The future built context of these roads will be substantially different to that which currently exists. Land along the eastern side of William Roberts Road (North) and along the western side of Ti Rakau Drive adjacent to the Pakuranga Town Centre currently has stand alone and semi-detached houses, but the AUP-OP zoning is Business – Mixed Use. Business – Mixed Use zone allows for five storey buildings. For most of the rest of Ti Rakau Drive, within EB3R, there are also mainly stand alone and semi-detached houses flanking the road. However the Residential – Mixed Housing Urban zone and the new Medium Density Residential Standards (MDRS) plan change allow for many more houses and larger buildings, in many cases as permitted activities (the existing environment). There is a sufficient step in scale and intensity to incentivise redevelopment of the existing houses. This is not speculative or fanciful, although the fine-grained pattern of land ownership may mean that intensification occurs over a longer period of time than would be likely in a greenfields location. The operative Residential – Mixed Housing Urban zone is currently only a one to three house depth corridor along Ti Rakau Drive, with the AUP-OP reducing to the more suburban Residential – Mixed Housing Suburban zone further away from the road. However, the MDRS Plan Change 78 extends the more intensive zoning to

all of the land within the walkable catchment of Ti Rakau Drive, as shown in Figure 1 below.

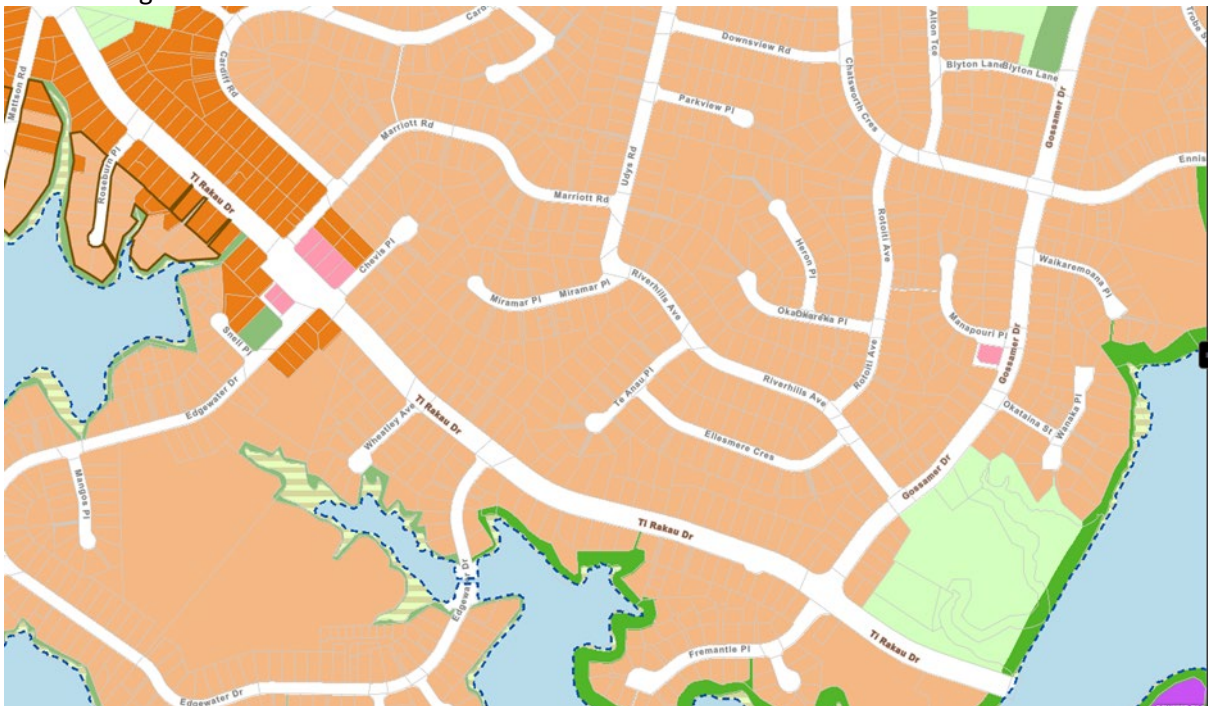


Figure 1 Proposed intensive residential zoning along Ti Rakau Drive, extending across whole catchment

The urban design implications of that three storey intensive re-development flanking Ti Rakau Drive, and five or more storey adjacent to the Pakuranga Plaza, include increased vulnerability to loss of the larger trees on private land, and a greater need for larger trees within the public realm, on streets and in parks. The wider scope of residential intensification will also mean many more people within the walking catchment of the busway stations.

WALKING AMENITY

- 4.15. New and re-built footpaths will generally contribute to high quality walking amenity and connectivity. On some stretches there appear to be few street trees proposed. The highest walking amenity potential is along the frontages of parks and reserves, and along the stream-facing sides of the Pakuranga Creek bridge, with many of those areas affected by the construction and later operation of the Project.
- 4.16. EB3R foreshadows a loss of the recreational walking amenity along the frontage of Riverhills Park and the bridge northern-side pathway, as walking access is at that point to be diverted across the busway and to carry on along the northern side of the existing bridge for EB3C. That will allow the new busway bridge to be constructed without the additional cost of a new stream-facing edge walkway/cycleway. The new western Pakuranga Creek bridge abutment (for the new Eastern Busway Bridge adjacent to the existing Ti Rakau Drive bridge in EB3C) is shown in the EB3R General Arrangement Plans, within Riverhills Park but outside of the Coastal Marine Area. If the Eastern Busway had continued from EB3R into EB3C as central running on the existing bridge, then the new bridge could have been designed for eastbound general traffic and a new stream-facing walkway/cycleway. Alternatively, and if the existing bridge has a limited service life, the new bridge could be for the busway along with a new northern-side walkway and cycleway, as has been provided in EB1 adjacent to the Panmure Bridge. This opportunity should in my opinion, be taken up in EB3C, and if it occurs would affect the location of the Gossamer eastbound station.

WILLIAM ROBERTS ROAD SOUTH

- 4.17. An earlier William Roberts Road extension consent package sought to extend William Roberts Road South through to Ti Rakau Drive, to change what was essentially a cul-de-sac lane with carparking areas into a through road between Reeves Road and Ti Rakau Drive. That project included some proposed replanting of trees in Ti Rakau Park, to mitigate effects on the park. However, it did not change the character of the part of William Roberts Road South connecting into Reeves Road, which appears to remain as a lane access to carparking areas rather than an urban street. The EB2 construction area appears to extend into this northern end of WRR South, and could allow the reforming of part of that emerging urban street. It appears to have been a lost opportunity, as works in William Roberts Road South are almost completely outside the scope of EB2.

EB2 NOR UDLP CONDITION

- 4.18. The Requiring Authority has proposed the following Urban Design and Landscaping Mitigation conditions for EB2, which the Council can include changed or unchanged in its recommendation to the Requiring Authority:

39. At least 10 working days prior to the commencement of any construction activity the Requiring Authority shall submit an Urban Design and Landscape Plan (UDLP) to Council for certification in accordance with Conditions 7 to 11 above [Conditions 7 to 11 deal with the Management Plan, Certification and Amendment processes]. The objective of the UDLP is to mitigate any landscape and visual effects of the Eastern Busway Project (Package EB2).

40. The UDLP shall include:

- a) Urban design details for works: i. The Reeves Road Flyover; ii. Pakuranga Bus Station; iii. Ti Rakau Drive widening between Pakuranga Road and Reeves Road*
- b) Landscape design details for works at: i. Paul Place Reserve; ii. Bus Stop Reserve; iii. Within Ti Rakau Drive; and iv. SEART.*
- c) A maintenance plan and establishment requirements over a three-year period for landscaping and five years for specimen trees following planting.*
- d) Lighting, signage and street furniture details for Eastern Busway Project (Package EB2);*
- e) Measures to achieve a safe level of transition for cycling and walking modes, including providing advanced warning and signage to cyclists and pedestrians, and safe and convenient cycling transitions at the ends of the project;*
- f) Design features and methods for cultural expression;*
- g) A Crime Prevention Through Environmental Design Assessment of the Pakuranga Bus Station; and*
- h) Design features associated with the management of stormwater, including both hard and soft landscaping.*

41. The Requiring Authority is required to carry out all works out in accordance with the certified UDLP, unless otherwise amended by the process in Conditions 9 to 10.

EB3R RESOURCE CONSENT UDLP CONDITION

- 4.19. The Applicant has proposed the following Urban Design and Landscaping Mitigation conditions for the EB3R resource consents, which the Council can apply changed or unchanged in its decision on the resource consents:

40. At least 10 working days prior to the commencement of any construction activity the consent holder shall submit an Urban Design and Landscape Plan (UDLP) to Council for certification in accordance with Conditions 12 to 16. The objective of the UDLP is to mitigate any landscape and visual effects of the Eastern Busway Project (Package EB3R).

41. The UDLP shall include:

a) Urban design details for works: i. Edgewater Station ii. Gossamer Station iii. Ti Rakau Drive widening between Reeves Road and Pakuranga Road.[I think this is meant to be: "Ti Rakau Drive widening between Reeves Road and Pakuranga Creek"]

b) Landscape design details for works: i. Riverhills Park; ii. Within Ti Rakau Drive.

c) A maintenance plan and establishment requirements over a three-year period for landscaping and five years for specimen trees following planting.

d) Lighting, signage and street furniture details for Eastern Busway Project (Package EB3R);

e) Measures to achieve a safe level of transition for cycling and walking modes, including providing advanced warning and signage to cyclists and pedestrians, and safe and convenient cycling transitions at the ends of the project;

f) Design features and methods for cultural expression; and

g) Design features associated with the management of stormwater, including both hard and soft landscaping.

42. The consent holder is required to carry out all works out in accordance with the certified UDLP, unless otherwise amended by the process in Conditions 12 to 16 above.

PROPOSED UDLP CONDITION COMMENTARY

4.20. I note that the objective of the UDLP is to "mitigate any landscape and visual effects of the Eastern Busway Project", and does not necessarily acknowledge any wider urban design or place shaping purpose. The UDLP is required to include 'urban design' details for specified works, such as stations and road widenings and the RRF, and 'landscape design' details for specified works in parks and within Ti Rakau Drive. The stations, or bus shelters, along Ti Rakau Drive generally do not require resource consent (except where located on Open Space zoned land) but the proposed Pakuranga Station is part of the NoR. The proposed UDLP condition, for a required management plan and its certification, may be able to achieve good urban design, landscape and visual effects outcomes, as has largely been achieved in EB1. However I do not consider the existing environment effects assessment to provide a suitable standard for designing the Project. The effects to be managed and the performance required of the mitigations in the UDLP should have a focus on the future environment, which will likely have a substantially greater scale and intensity of built environmental context than the existing environment. A focus on the future environmental context, rather than the existing environment, would in my view not have many significant implications on the design of the Project, its streetscape and street tree planting mitigations. The street trees would increase in scale and frequency, and the bus stations and any affected parks and reserves frontages would need to be given greater public presence.

4.21. The EB2 requirement for a Crime Prevention Through Environmental Design Assessment of the Pakuranga Bus Station is part of the updated proposed condition set, and was included in response to the Council s.92 further information request. In my opinion a CPTED assessment should have been undertaken for the whole project, with recommendations implemented in the design, rather than be left to a certification process which occurs 10 days prior to

commencement of construction. In the absence of a CPTED assessment to inform the overall design, CPTED design audits of each of the stations, the RRF and the walking and cycling routes and their connections will likely be needed within the UDLP, and may have the implication of changes being needed to facilities design at a relatively late stage.

MOVEMENT

- 4.22. The Project achieves urban design movement objectives well generally. It connects nodes of activity and public transport access, although the cross-corridor movement will be largely limited to intersection crossings. It connects travel modes for travel choice and connectivity. It supports access to employment and industry, and also in its next EB3C stage. Active modes and public transport are prioritised. There will be a legible corridor function provided, with consistent cross sections, stations and landscaping. The Reeves Road Flyover will provide some easing of traffic congestion through and around the Pakuranga Town Centre.

STREETSCAPE AND EXISTING ENVIRONMENT

- 4.23. Overall the existing suburban streetscape, of the Pakuranga Town Centre and the residential areas surrounding the Town Centre and extending along Ti Rakau Drive, is generally not of high urban quality. There are few street trees, many of which are of only low to medium scale and not contributing well to the streetscape. They are supplemented more strongly by larger trees in private properties and along parks frontages and around Pakuranga Town Centre and its adjacent Ti Rakau Park. On Ti Rakau Drive there are Washington Palms and box gums, some of distinctive scale, however it has always been intended that Ti Rakau Drive would have capacity for a transit system of some type. The streetscape will no doubt be improved by the Project, but not necessarily as mitigation of the Project effects, rather as a renewal of the urban road context.

- 4.24. EB2/3R AEE Appx 21 – Natural Character, Landscape and Visual Effects Assessment, p6, states:

As works tend to occur along the road corridor, in an environment which is modified, effects are generally contained to the designation or just beyond in the case of viewing audiences. During construction, the greatest landscape effects will be due to the removal of vegetation, being moderate adverse. However, this will be temporary, occurring for a short period prior to replacement mitigation planting. Once replacement planting has established, residual effects on vegetation during operation are considered to be low beneficial.

- 4.25. This statement shows a focus on addressing effects on the existing environment, rather than the creation of a new high quality urban environment. ‘Low beneficial’ as an outcome is a bare pass mark, being a minor positive effect on the existing environment.

CLIMATE CHANGE, EMISSIONS AND URBAN FOREST NGĀHERE STRATEGY

- 4.26. In relation to the issue of adapting to a changing climate and responding to microclimate factors, the streets and in particular Ti Rakau Drive need to have suitable space for street tree planting that will contribute to a reduction in heat island effects of the increased paved surfaces. I note that establishing trees within the urban environment would be consistent with the Council’s Urban Ngāhere Forest Strategy (2019) and its vision to increase the tree canopy cover across Auckland’s urban area. In my opinion, UDLP requirements should be expanded to address the need for planting of a sufficient number and suitably scaled trees within the street and parks frontages to achieve this outcome.

- 4.27. One of the most significant positive urban design effects of the Project is its support for transport mode change, providing rapid transit and improved active mode transport options. That will result in reductions or smaller increases in greenhouse gas emissions, even before the diesel buses are replaced with electric vehicles.

URBAN DESIGN EFFECTS ON PARKS AND RESERVES

- 4.28. The Open Spaces Effects Assessment (AEE Appendix 32) (**OSEA**) identifies the parks and reserves and esplanade reserves affected by the construction and permanent land take requirements of the Project. Land required for construction activity will be reinstated after completion. The parts of esplanade reserves affected by stormwater outfall works will have ecological mitigation planting. Where reserves land is permanently required for the Project at Riverhills Park, the OSEA has assessed the open space values, consulted with Auckland Council Parks, Sport and Recreation and Community Facilities departments and park lessees, and proposed outline mitigation plans. The proposed mitigation options presented in the OSEA are acknowledged as the minimum requirement and are still subject to final approval, detailed design and consultation with mana whenua and the wider community.
- 4.29. For Ti Rakau Park the mitigation planning was undertaken as part of the resource consents for changes to William Roberts Road South, and the landscape plan was provided as Attachment 7 to the AT Response to s92 Further Information Request. That plan shows tree planting along the northwestern and southeastern edges of Ti Rakau Park, and a vegetated swale along the Ti Rakau Drive frontage.
- 4.30. For Pauls Place Reserve and Bus Stop Reserve, where land is required for temporary construction activity, mitigation will be provided within the UDLP and CEMP.
- 4.31. I am comfortable that the urban design effects within the Open Spaces will be appropriately managed, being public and user experience, informal and formal recreation uses, internal landscaping and public access.
- 4.32. The Ti Rakau Park and Riverhills Park frontages to Ti Rakau Drive require greater public presence in my opinion, with large tree planting along the frontages. That type of planting appears to have been proposed for the Ti Rakau Park frontage to William Roberts Road South, although a '160L tree' is only referring to the planting bag size and not necessarily a tree of a large size at maturity.
- 4.33. At Riverhills Park, the OSEA states in a 'Table 1 Minimum Mitigation Requirements' that 72 trees will be removed (mainly along the Ti Rakau Drive frontage) and tree replacement will involve 216 native tree plantings. These proposed trees do not show up on the Landscape Ecological and Arboricultural Mitigation Plan (AEE Appendix 5) except as 14 '80L trees' in a grove adjacent the Pakuranga Creek and an area of 'Potential Lizard Relocation Zone' below the new retaining wall frontage to Ti Rakau Drive. As land uses intensify on private land, the public open space parks and streets will be the main locations for large trees in the future.
- 4.34. I did earlier consider that there should be additional walking access directly into Riverhills Park at its southern corner, for walkers coming west over the bridge and for access to the Pakuranga Creek esplanade without going through the park. However, the nearest eastern residence (source of walkers) is more than 800m from the park. The Project does not include walking access along the northern (stream-facing) side of the proposed new busway bridge, however there could be a retained or cantilevered walkway along the Riverhills Park frontage to Ti Rakau

Drive. I would leave that to Parks and Community Facilities negotiations for mitigation of effects on open space, if they consider that appropriate.

URBAN DESIGN AND LANDSCAPE PLAN (UDLP) MANAGEMENT OF STREET TREES

- 4.35. The final design of urban design and landscape components is proposed to be managed by a UDLP, rather than an Outline Plan of Works, and requires certification by Council rather than a separate consent. This reliance on a UDLP management plan and certification process may not allow adequate evaluation of effects mitigation, which needs to be undertaken in the AEE. Notwithstanding the mapping of proposed tree removals and the replacement tree planter bag sizes. The condition requiring an UDLP does not contain adequate objectives and performance standards to guide a certification process. For example, if too few trees are proposed, as I consider shows in the Landscape Ecological and Arboricultural Mitigation Plans (AEE Appendix 5), or many will be of insufficient scale at maturity, albeit with large planter bag sizes on installation, there is no measure that would allow the Council to decline certification. This is particularly important given the AEE emphasis on effects on the existing environment, the likelihood that there will be a substantially more intensive future built context (NPS:UD and MDRS plan changes), and the Eastern Busway Alliance response to pre-lodgement comments on street tree omissions:

“In terms of determining the omission of trees, while landscaped areas were considered, specialists have worked with the EBA design and construction team given the constraints of existing and proposed utilities and services which cannot be moved or relocated to an alternative location. Transport Design Manual standards and ongoing asset maintenance was also considered during this process.”

- 4.36. In my opinion the street trees should not be compromised by utilities and services, but may require specialised planting details and some movement and/or armouring of utilities to allow them to co-exist. The street and its busway and walking/cycling facilities have place functions within a future intensive urban environment as well as a movement function. The movement function has been provided for very well in most parts, but perhaps with insufficient land area or planting deployment to provide for the place functions as well. If an Outline Plan of Works were proposed, the Council could only recommend changes to the Requiring Authority and potentially appeal the decision. I understand the Urban Design and Landscape Management Plan technique is becoming more commonly proposed in large scale infrastructure projects. I consider it is more appropriately used in the ‘route protection’ type longer term designations where detailed design is not advanced. In this case site clearance and preparation works are already underway in a number of places and the Landscape Ecological and Arboricultural Mitigation Plans show intentions for removals, retentions and new trees. I understand at least one tree, which was to be retained, came down in the recent Cyclone Gabrielle, and would also need replacement.
- 4.37. The Council s92 further information request asked for information on indicative tree and plant species and their mature scale. The Requiring Authority response was:

“This information will be provided as part of the UDLP and is subject to further development with both Council Parks and mana whenua. The UDLP will be subject to certification by Auckland Council, and it is that certification process that is considered the appropriate time to provide the requested information.”

- 4.38. [AEE Appendix 5 Landscape, Ecological & Arboricultural Mitigation Plans] shows proposed extents of landscape mitigation planting, ecological mitigation planting, and new tree locations

and planting bag sizes (45L, 80L and 160L). It is to be hoped the larger planting bag sizes represent specimens of the larger-growing tree species indicated in pre-lodgement information, such as Pohutukawa, Totara, Puriri, Kahikatea, Kohekohe and Pukatea. Very few of those 160L trees are proposed at the road edges, being largely deployed in areas with more space to grow, or to provide a larger screening function, such as between the Reeves Road Flyover and William Roberts Road North. I agree that tree species need to be selected in collaboration with Council Parks and mana whenua, and my concerns are only the urban design aspects of sufficient frequency and scale of the tree species chosen.

- 4.39. There are also considerable stretches of Ti Rakau Drive with no large or medium street trees proposed, and particularly along the northeastern side of the road, where there is little new land taken and the existing berm appears to be largely taken up by walking and cycling facilities. AEE at 3.2.1 states there will be eastbound existing footpath to remain, a new 2.0m wide segregated cycleway and a 1.0m berm separation from traffic lanes. The AEE accompanying reference diagram Figure 3-2 is not of the general road cross-section but of a Ti Rakau Drive Bus Station, with an existing 3.5m footpath and berm to remain and a new 2.0m wide cycleway with an additional 1.0m separation from the traffic lane.
- 4.40. Figure 2 below shows a sample of Ti Rakau Drive proposed street tree planting (from AEE Appendix 5 Landscape, Ecological & Arboricultural Mitigation Plans), with a scarcity of large trees, or any trees along the northeastern side of parts of Ti Rakau Drive. The small green dots on the northeastern side are not trees, but are not referenced in the plan legend, so may be from some other infrastructure asset map. The footpath and cycleway appear to take up almost the whole of the northeastern berm. This effect is exacerbated by the counting of privately-owned trees as being retained and the dismissal of quantities of unprotected (smaller) street and parks trees by removal as a permitted activity or permitted baseline: The Applicant's Master Tree Plan (AEE Appendix 16) shows street trees in red to be removed and both public and private trees in green to be retained. Many of these private trees "to be retained" are outside of the control of the Applicant, are not protected by any rule in the AUP-OP, and will be vulnerable to loss when intensive redevelopment of those properties occurs.

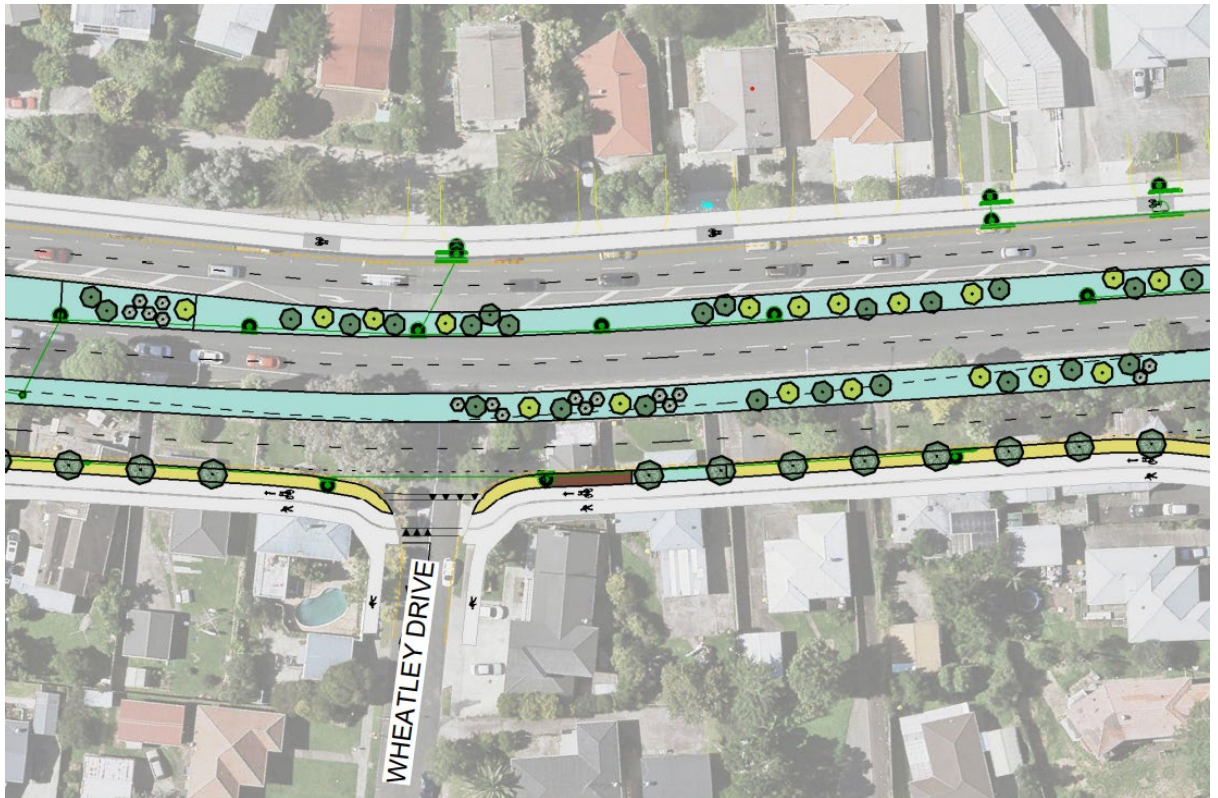


Figure 2 Screenshot Few street trees northern side of Ti Rakau Drive

- 4.41. Along Ti Rakau Drive, from its intersection with Pakuranga Road, there are few new street trees proposed along the western side of the road, with all being allocated to the eastern side of the road or within medians and traffic islands. There is a narrow grassed berm along the western side, mainly in the existing location of the road edge, and not really usable for tree planting as it is directly adjacent to the kerb and trees would hang over the road. The Ti Rakau Corner Reserve at the intersection has some large trees. Then moving southeast along Ti Rakau Drive, the AEE Appendix 16 Arborlab Master Tree Plan shows 12 trees to be removed along the west side of the road, and no new trees (in AEE Appendix 5 Landscape, Ecological and Arboricultural Mitigation Plans) on the street edge until the reserve adjacent to the Ti Rakau Drive Off Ramp at SEART. SEART and the southeastern side of Reeves Road are the boundary between EB2 and EB3R. Then it is along the EB3R western edge of Ti Rakau Drive another 200 metres before a new street tree is proposed. Moving further southeast along Ti Rakau Drive, there are then a good number of new street trees proposed along the southwest side of the road but a dearth along the northeast side of the road. Again, the berm does not appear to be provided with sufficient width to accommodate new street trees of any substantial scale, being almost wholly taken up with the footpath and cycle facilities. This omission of new street trees along the northeast side of the road continues until the frontage of Riverhills Park at Pakuranga Creek. At Riverhills Park the proposed busway and station occupy the frontage of the park, including removal of the parks trees along that frontage and replacement with a 'potential lizard relocation zone' and some mitigation by fourteen 80L trees in a grove on the esplanade alongside Pakuranga Creek.
- 4.42. Within EB2 street trees and parks trees can be removed by the NoR overriding the district plan level tree protection rules, however they are adverse effects to be managed, by mitigation of new tree planting (via the Landscape, Ecological and Arboricultural Mitigation Plans and the Urban Design and Landscape Plan (UDLP)). Within EB3R a NoR is not proposed, and resource consents are required for the removal of the medium and large trees from the road and from

the parks. Again mitigation would be proposed by new tree planting, via the Landscape, Ecological and Arboricultural Mitigation Plan and confirmed in the UDLP. In my opinion, for EB3R mitigation for street tree removal is not as simple as replacing one large tree by two or three or four younger tree specimens. The new plantings need to create a whole new street tree streetscape. In my recommendation for more street trees and parks frontage trees, my preference would be for the Landscape, Ecological and Arboricultural Mitigation Plans to be amended to show the additional trees and their locations, and for the UDLP condition to be amended to require implementation of those Mitigation Plans.

REEVES ROAD FLYOVER URBAN DESIGN EFFECTS

- 4.43. I have not assessed the urban design effects of the Reeves Road Flyover (**RRF**), and the Applicant has provided no urban design assessment. Mr Rob Pryor is assessing the landscape and visual impacts of the proposed Flyover.
- 4.44. In urban design terms, a flyover is usually seeking movement and traffic congestion improvements by grade separation of traffic flows. That is often achieved at the expense of ground level connectedness, with the flyover creating or exacerbating severance within the community. The ends of the flyover ramps can be long enough and situated so as to mean pedestrians and cyclists need to make long detours to get around the structure. I consider that is not the case here, as the western ramp part of the flyover is part of SEART, which is already a long-established separation of its flanking communities, and the eastern ramp part is largely accommodated by the land sloping up to Pakuranga Road. North – South access through beneath the flyover is maintained on the ground level parts of old Reeves Road and by Aylesbury Street and the opening through of Cortina Place. There will be short term construction effects of severance, but anticipated to be managed through the construction management plans. The treatment of the land beneath the RRF warrants a CPTED audit, in my opinion, as it could easily become an unsafe space.

5. NATURAL CHARACTER, LANDSCAPE AND VISUAL EFFECTS

- 5.1. APPLICANT ASSESSMENT OF NATURAL CHARACTER, LANDSCAPE AND VISUAL EFFECTS (Summary recommendations and conclusions - Appendix 18 of EB2 and EB3R AEE) states:

In summary, a number of mitigation measures have been recommended to ensure any adverse natural character, landscape or visual amenity effects are appropriately managed. These recommendations will ensure high quality design and environmental outcomes.

The EB2 and EB3R Projects will occur within or alongside an existing road corridor and clearly relate to and signify significant infrastructure upgrades alongside an established transport orientated environment. Effects during construction are often greater than those during operation (once the project is completed), due to construction activities occurring prior to the completion of mitigation measures such as tree planting and the ultimate appearance of above ground structures (e.g. RRF) and therefore construction effects are temporary.

Once the project is completed and the proposed mitigation measures (such as tree planting) have been established, residual / long term effects can be fully appreciated. On the whole, whilst the Project will result in a level of change to the receiving environment, it is considered that the Project will achieve high quality design and environmental outcomes whilst meeting the Project Objectives.

5.2. Mr Rob Pryor is reviewing the landscape and visual effects assessment and its proposed mitigations for EB2.

5.3. APPLICANT ASSESSMENT OF LANDSCAPE VISUAL AND URBAN DESIGN (4.7 of EB3R AEE) states:

As noted in the Natural Character, Landscape and Visual Effects Assessment (Appendix 18), EB3R will be constructed in a highly urbanised environment where there are few remaining natural landscape features. The area largely covers a series of low hills, which gently descend from 15 m above mean high water springs (MHWS) westwards to sea level at the Tāmaki River. These hills have been extensively modified during the area’s urbanisation, as highlighted by the retaining walls present along sections of Ti Rakau Drive. This urban environment contains a variety of built forms and land uses, although 20th century housing and roading infrastructure act to define the local area.

As highlighted above, there are few natural elements contributing to the area’s landscape or visual appearance. These elements are largely limited to deliberately planted trees, both within the road corridor and at Ti Rakau Park. Any streams in the area have been previously culverted, leaving the area free of any identifiable watercourses. The exceptions to this are Tāmaki River, Pakuranga Creek, and their minor inlets. Pakuranga Creek is formed from a mangrove lined estuary, with a deeply incised main channel passing through extensive mud flats. Pakuranga Creek is visible from Ti Rakau Drive, as well as from Riverhills Park. Views to the south and eastern banks of Pakuranga Creek are compromised by a pipe bridge and business development in East Tāmaki.

There are two large parks adjacent to the corridor, these being Ti Rakau Park and Riverhills Park. These parks contribute to local amenity values within the adjoining properties and streets. A planted median on Ti Rakau Drive between Edgewater Drive and Ti Rakau Bridge also provides some degree of amenity to the EB3R area.

Lastly, the EB3R features the coastal margins of Tāmaki River and Pakuranga Creek. These coastal features provide views towards East Tāmaki, Burswood and Mount Wellington, though they have experienced some degradation of their amenity values due to invasive floral species colonising their margins, as well as unauthorised rubbish dumping.

5.4. Mr Rob Pryor is reviewing the landscape and visual effects assessment and its proposed mitigations for EB3R.

URBAN DESIGN OF LANDSCAPE AND LANDFORM

5.5. I understand there are no significant natural feature landscapes involved in the Project. That is, there are no local Outstanding Natural Features or Landscapes, High or Outstanding Natural Character areas. There are some Significant Ecological Areas in the areas where stormwater is to be discharged, to the coastal Tamaki River and its tributaries. There are no regionally or locally significant volcanic viewshafts crossing the Project.

5.6. Changes in landform will not overall be substantial, as much of the land involved is not steep, but some property accesses will require level management. Riverhills Park will have a bus station at its frontage, and a retaining wall to manage the level difference, dropping down from the street into the park. The playing fields are at a level approximately 3 to 4 metres below the road.

5.7. In response to the flatness of the landforms, the bus stations will need their design and landscaping to provide their presence. They are stations by their catchment spacings and transport interchange functions, rather than by their bus shelter buildings. The simulations of the

bus stations in the application documents show relatively low public profile, essentially long bus shelters rather than station buildings. A typical model can be seen in EB1 on Pakuranga Road. However, if locations are marked by distinctive large trees and signage and possibly future community artworks, they will provide sufficient public presence.

6. STATUTORY CONSIDERATIONS

AUCKLAND UNITARY PLAN (OPERATIVE IN PART)

- 6.1. Objective B2.2.1(1) of the AUP-OP Regional Policy Statement (**RPS**) seeks to achieve a quality compact urban form that enables, amongst other things, a high-quality urban environment, efficient provision of new infrastructure, improved and more effective public transport, greater social and cultural vitality and reduced environmental effects.
- 6.2. I consider delivery of the Eastern Busway and its associated walking and cycling facilities will be a valuable catalyst for development and modal shift in the wider environment, and will play an important role in the network of transport options.
- 6.3. In terms of Objective B2.3.1(1) relating to creating a quality built environment and the suite of supporting policies, I consider the requirements of the UDLP will be important to ensure the design of the Stations and associated access infrastructure and walking and cycling facilities, creates a quality built environment that responds to the intrinsic qualities of the sites and the area. The access infrastructure will functionally provide good access enabling a range of travel options, however the future built context will likely be substantially different to the existing environment. In particular, the scale and intensity of buildings and the residential and mixed use land use activity will have many more people wanting to access the Eastern Busway and its stations. The amenity of the walking and cycling paths will need to complement that more intensive future environment.
- 6.4. The objective for transport set out in Section B3 of the RPS (Infrastructure, transport and energy) (Objective B3.3.1) seeks to ensure effective, efficient and safe transport is achieved via a number of outcomes including integrating with and supporting a quality compact urban form; enabling growth; avoiding, remedying or mitigating adverse effects on the quality of the environment, amenity values and the health and safety of people and communities; and facilitating transport choices.
- 6.5. I consider the provision of the Eastern Busway, and the associated walking and cycling facilities, will enable growth and facilitate transport choices. The requirements of the UDLP will be important to ensure the infrastructure supports the creation of a quality compact urban form, with good amenity.
- 6.6. In terms of the RPS policy framework relating to natural heritage, I note that the busway and stations and surrounding environs do not include any outstanding natural features or landscapes. The stormwater outfalls (new and altered) associated with EB3R will discharge into the Tamaki River and its tributaries, some of which are Significant Ecological Areas, and involve ecological restoration planting.

OTHER STATUTORY DOCUMENTS

- 6.7. The NPS:UD provides a relevant national planning framework. At a broad level, Objectives 1 and 6 are of particular relevance to urban design considerations. Policy 3 provides guidance around the scale and intensity of development that will be enabled around a rapid transit stop, requiring building heights of at least 6 storeys to be enabled within at least a walkable catchment. The

Auckland Council plan changes implementing the NPS:UD and the MDRS have not yet acknowledged the Pakuranga Station and the intermediate Edgewater and Gossamer Stations as 'rapid transit stops' requiring a higher building height limit, however that may change through the submissions and decision-making on those plan changes. The Residential - Mixed Housing Urban Zone is being expanded by PC78, to cover the full walking catchments of Ti Rakau Drive.

- 6.8. In my opinion, the Project (EB2 NoR, EB2 resource consents and EB3R resource consents) would be consistent with the NPS: UD, if the street tree planting was more intensive and capable of greater overall tree canopy area, than shown in the Application, to contribute to a high quality urban environment. The Project, in my opinion, needs to respond to its likely more intensive and built-up future environmental context, rather than focus on mitigation of effects on the existing environment.

7. SUBMISSIONS RELEVANT TO URBAN DESIGN CONSIDERATIONS

- 7.1. I have reviewed the submissions in relation to the EB2 NoR and the EB2 and EB3R resource consents. A number of submissions address relevant urban design matters.
- 7.2. Submissions from Grant Hewison and Equal Justice Project support the Project NoR and resource consents for the reduction in greenhouse gas emissions by transport modal change. This is an urban design issue, as a city needs to be designed to support lower emissions transport options. The busway and associated walking and cycling facilities are primary parts of that change.
- 7.3. A number of submissions from businesses within the Pakuranga Plaza complex raise concerns about the effects of loss of carparking and obstructed or inconvenient access, and loss of roadside presence. To the extent that these are temporary construction effects, they will need Management Plan conditions (which are proposed by the Applicant) to get the best practicable outcomes for those businesses. To the extent that there will be permanent changes to carparking and access arrangements, this may be balanced by the public transport access and walking and cycling connectivity to the Pakuranga Town Centre being greatly improved.
- 7.4. Metlifecare and Ministry of Education had concerns about the Edgewater Drive / Ti Rakau Drive intersection design and their access. I understand further changes are now proposed to that intersection design, but am unable to confirm whether the submitters' concerns have been resolved. The urban design issue is access to sites and convenience of intersections.
- 7.5. Submissions 05 Kāinga Ora on NoR EB2 and EP0008 Kāinga Ora on EB2 resource consents support the project in part, including the condition requiring a UDLP, but require further urban design effects mitigation. Kāinga Ora did not submit on the EB3R resource consent application. Kāinga Ora consider that greater emphasis should be placed on the importance of quality urban design outcomes, Crime Prevention through Environmental Design, addressing issues of severance and improving connectivity for pedestrians between the Pakuranga Town Centre, the Pakuranga Bus Station and the surrounding residential, community and business land uses given the increases in development that will be facilitated. Kāinga Ora are concerned that the proposal, specifically the RRF, may contribute to the severance and isolation between the Town Centre and the surrounding community, and that the proposal may be missing opportunities to both mitigate this and improve the existing situation. Vehicles continue to dominate the northern and eastern boundaries and with the inclusion of bus lanes and the RRF, the EB2 Project appears to contribute to the dominance of vehicles and the 'island' effect of the Pakuranga Town Centre with its surrounds.

COMMENTARY ON KĀINGA ORA SUBMISSION

- 7.6. Although the Application AEEs and Assessments had a Natural Character, Landscape and Visual Effects focus for EB2 and EB3R rather than an urban design assessment or review, many of the urban design issues were addressed in the Project design. The importance of quality urban design outcomes will largely be recognised by the design approach following on from EB1. Crime Prevention Through Environmental Design should have been included in the Project design process, although that would need to be determined by a CPTED audit as part of the UDLP. I do not consider the RRF and walking and cycling networks will cause severance, as they will provide good connectivity to and through the Pakuranga Town Centre as well as to the Pakuranga Road and Ti Rakau Drive communities. I have recommended amendments to the proposed Conditions, requiring UDLP design to focus on the future more intensive environment; CPTED audits of the stations and land beneath the RRF and the walking and cycling networks; and more street trees and parks frontage trees and distinctive trees at station platforms.

8. RECOMMENDATION AND CONDITIONS

ADEQUACY OF INFORMATION

- 8.1. The above assessment is based on the information submitted by the Applicant as part of the applications for NoR EB2 and the EB2 and EB3R resource consents. I consider that the information submitted is sufficiently comprehensive to enable the consideration of urban design considerations and the associated effects on amenity on an informed basis:
- a. The level of information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the AUP-OP and NPS:UD.
 - b. The extent and scale of any adverse effects on the environment in terms of urban design are able to be assessed, with the exception that the resource consent approach to EB3R (without a NoR EB3R) treats much of that part of the Project as permitted activities, without scope for full urban design assessment.
 - c. Persons who may be adversely affected are able to be identified.

EB2 NOR AND RESOURCE CONSENTS RECOMMENDATIONS

- 8.2. Having considered the NoR EB2 and the resource consent applications for EB2 in their urban design considerations, and the associated suite of conditions, I consider that the NoR EB2 should be **recommended confirmed with amended Conditions 39 and 40 UDLP** and the EB2 resource consents should be **granted**.

EB3R RESOURCE CONSENT RECOMMENDATIONS

- 8.3. Having considered the EB3R resource consent applications for EB3R in their urban design considerations, and the associated suite of conditions, I consider that the EB3R resource consents should be **granted with amended Conditions 40 and 41 UDLP**.

AMENDMENTS TO CONDITIONS

- 8.4. The amendments to Conditions 39 and 40 EB2 NoR and 40 and 41 EB3R resource consents should seek the following outcomes:
- a. The UDLP is required to focus design and landscaping on the future more intensively developed environment [This statement should be added to the end of Condition 39 EB2 NoR and the end of Condition 40 EB3R]
 - b. The UDLP should include a CPTED audit of the stations, land beneath the RFF, and the walking and cycling networks. EB2 NoR Condition 40 g) should be amended to: “A Crime Prevention Through Environmental Design Assessment Audit of the Pakuranga Bus Station, land beneath the Reeves Road Flyover, and the new walking and cycling networks; and...”. EB3R Resource Consent Condition 41 should be amended to have a new sub-clause: “h) A Crime Prevention Through Environmental Design Audit of the Edgewater and Gossamer Stations, and the new walking and cycling networks”
 - c. More trees should be provided, as street trees on the west side of Ti Rakau Drive between Pakuranga Road and Pakuranga Highway (SEART) in EB2; as street trees on the north side of Ti Rakau Drive between Reeves Road and William Roberts Road South in EB3R; as large trees at the Ti Rakau Park frontage to Ti Rakau Drive in EB3R; as street trees on the north side of Ti Rakau Drive from Ti Rakau Park frontage along to Pakuranga Creek in EB3R; as large trees at the frontage to Riverhills Park in EB3R; and as large distinctive trees at the busway station platforms, being Pakuranga Station in EB2 and Edgewater and Gossamer Stations in EB3R. [There is not sufficient certainty in this requirement for “more trees”, so in my recommendation for more street trees, parks frontage trees and station platform trees, my preference would be for greater certainty from the Landscape, Ecological and Arboricultural Mitigation Plans being amended to show the additional trees and their locations, and for the UDLP condition to be amended to require implementation of those Mitigation Plans].



Trevor Mackie

Urban Designer/Planner

14 March 2023

APPENDIX 2

MAP OF SUBMITTERS' LOCATIONS



16031 Pakuranga Plaza Limited

Other Submitters
16015 Grant Hewison
16016 Equal Justice Project
16018 Ministry of Education
*submission discusses bus route
for Edgewater College*

16045 Metlifecare Limited

Edgewater College

APPENDIX 3

COPIES OF SUBMISSIONS AND LOCAL BOARD VIEWS

From: NotifiedResourceConsentSubmissionOnlineForm@donotreply.aucklandcouncil.govt.nz
Sent on: Thursday, January 26, 2023 10:15:21 PM
To: CentralRCSubmissions@aucklandcouncil.govt.nz
CC: Sonja.Lister@easternbusway.nz
Subject: BUN60407121 [ID:16015] Submission

We have received a submission on the notified resource consent for Auckland Transport Resource Consent Applications for Eastern Busway Stage 3R, part of the Eastern Busway Project.

Details of submission

Notified resource consent application details

Property address: Auckland Transport Resource Consent Applications for Eastern Busway Stage 3R, part of the Eastern Busway Project

Application number: BUN60407121

Applicant name: Sonja Lister- Auckland Transport

Applicant email: Sonja.Lister@easternbusway.nz

Application description: Auckland Unitary Plan

Resource consent applications: Eastern Busway Stage 3R, part of the Eastern Busway Project

Application details

The proposal relates to the construction, operation, and maintenance of the Eastern Busway Stage 3 Residential (EB3R) generally located on Ti Rakau Drive between the intersection of Ti Rakau Drive/South-Eastern Highway (SEART) and Riverhills Park, Pakuranga.

The proposal includes the following Resource Consent applications collectively referred to under the administration number BUN60407121:

- LUC60407123 - land use consent for: construction noise, construction of the road network on land not yet legalised as road, tree removal, trimming and alterations in the road or in open space, earthworks including those within 100m of a natural wetland and the disturbance of contaminated soil requiring consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, modification of vehicle crossings where a Vehicle Access Restriction applies, works altering overland flow paths and within the one per cent AEP (Annual Exceedance Probability) floodplain, temporary satellite offices and laydown areas, and a proposed public car park at 105 Ti Rakau Drive.
- DIS60407122, DIS60407493 and DIS60412893 - discharge permits: for the discharge of stormwater to freshwater and the temporary discharge of water within 100m of a natural wetland, ancillary to erosion and sediment controls under the National Environmental Standards for Freshwater, and for the disturbance of contaminated soil under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.
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- CST60408460 and CST60408461 - coastal permits: for the occupation of permanent stormwater infrastructure within the coastal marine area, and for the mangrove removal and coastal disturbance associated with the construction of this infrastructure.

Overall, the proposal requires consent as a non-complying activity.

Application Numbers

BUN60407121 LUC60407123 DIS60407122 DIS60407493 DIS60412893 WAT60412894 LUS60412895 CST60408460
CST60408461

Supporting Documents

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If you have any questions about the Resource Consent applications, please contact: Warwick Pascoe, Principal Project Lead, Premium Consents Unit 09 301 0101 or warwick.pascoe@aucklandcouncil.govt.nz.

Making a submission

By post

Post your completed submission to:

Auckland Council
Resource Consents
Private Bag 92300
Auckland 1142

Submitter contact details

Full name: Grant Hewison

Organisation name: Grant Hewison & Associates Ltd

Contact phone number: 021577869

Email address: grant@granthewison.co.nz

Postal address:

PO Box 47397, Ponsonby
Auckland
Auckland 1011

Submission details

This submission: supports the application in whole or in part

Specify the aspects of the application you are submitting on:

Those aspects concerning the reduction of greenhouse gas emissions from transport

What are the reasons for your submission?

I support the Project because it will reduce greenhouse gas emissions from transport.

Transport accounts for 43.6% of the Auckland region's greenhouse gas emissions, with 86% of these emissions arising from road transport. An important mitigation response to this issue is achieving modal shift from private motor vehicle use to increases in both public and transport modes' patronage. The Project is a critical part of achieving modal shift, particularly through its planned improvements in bus and active transport infrastructure and is projected to reduce the region's carbon emissions by 9,929 kg per day by 2028.

I understand from the Social Impacts Assessment that during consultation several respondents noted the need to do more to address climate change. The transport system is recognised as a key factor in New Zealand reaching its emission reduction targets. Domestically transport is responsible for 47% of CO₂ emissions and 19.7% of total greenhouse gas (GHG) emissions (Te Manatū Waka Ministry of Transport, 2021). In addition, reliance on private vehicle for transport has been identified as having a negative effect on physical and mental health and wellbeing (Rees, Masari, & Appleton-Dyer, 2020).

I understand that the Project includes an overarching sustainability objective to encourage sustainable public transport and support a modal shift away from private vehicles to more sustainable transport options including public transport, walking and cycling through providing well-designed and inclusive transport infrastructure.

A sustainability strategy has been prepared which seeks to address GHG emissions during construction and operation of the Project. The objectives of this strategy include: • Ensuring this infrastructure is resilient to climate change effects

through design • Reducing the consumption of resources by applying circular economy principles and innovative construction techniques • Minimising GHG emissions during construction and contribute to industry knowledge of GHG emissions reduction • Protecting and enhancing the environment around the busway through design which positively influences climate change. The Project will create opportunities to address climate change and has the potential to provide an overall positive social impact rating.

What decisions and amendments would you like the council to make?

To approve the application

Are you a trade competitor of the applicant? I am not a trade competitor of the applicant.

Do you want to attend a hearing and speak in support of your submission? Yes

If other people make a similar submission I will consider making a joint case with them at the hearing: Yes

Supporting information:



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To: CentralRCSUBmissions@aucklandcouncil.govt.nz
CC: Sonja.Lister@easternbusway.nz
Subject: BUN60407121 [ID:16016] Submission

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Applicant email: Sonja.Lister@easternbusway.nz

Application description: Auckland Unitary Plan

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Making a submission

By post

Post your completed submission to:

Auckland Council
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Private Bag 92300
Auckland 1142

Submitter contact details

Full name: Tom Heyward and Hannah Jang

Organisation name: Equal Justice Project

Contact phone number: 02041467105

Email address: advocacy@equaljusticeproject.co.nz

Postal address:

C/O University of Auckland Faculty of Law Private Bag 92019 Auckland Mail
Private Bag 92019 Auckland Mail
Auckland 1010

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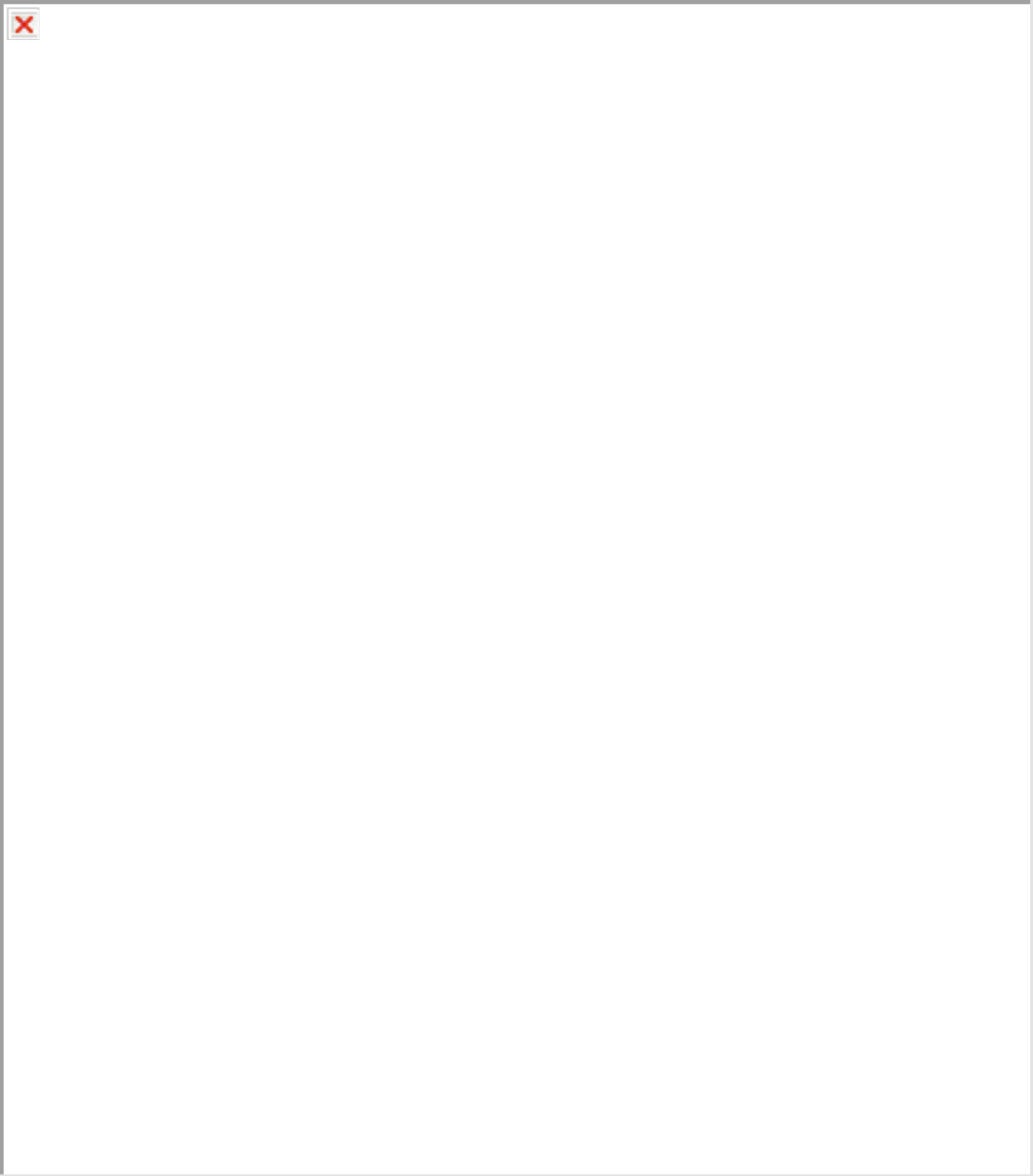
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From: NotifiedResourceConsentSubmissionOnlineForm@donotreply.aucklandcouncil.govt.nz
Sent on: Friday, January 27, 2023 3:45:19 AM
To: CentralRCSUBmissions@aucklandcouncil.govt.nz
CC: Sonja.Lister@easternbusway.nz
Subject: BUN60407121 [ID:16018] Submission
Attachments: Ministry of Education - Submission on Eastern Busway Stage 3 Residential (EB3R).pdf (309.64 KB)

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Auckland Council

Resource Consents

Private Bag 92300

Auckland 1142

Submitter contact details

Full name: Sian Stirling

Organisation name: Ministry of Education

Contact phone number: 093009722

Email address: sian.stirling@beca.com

Postal address:

see submission

see submission

Auckland 6345

Submission details

This submission: is neutral regarding the application in whole or in part

Specify the aspects of the application you are submitting on:

See attachment

What are the reasons for your submission?

See attachment

What decisions and amendments would you like the council to make?

See attachment

Are you a trade competitor of the applicant? I am not a trade competitor of the applicant.

Do you want to attend a hearing and speak in support of your submission? Yes

If other people make a similar submission I will consider making a joint case with them at the hearing: No

Supporting information:

Ministry of Education - Submission on Eastern Busway Stage 3 Residential (EB3R).pdf



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FORM 13

Submission on a publicly notified application concerning a resource consent under section 96, Resource Management Act 1991

To: Auckland Council

Name of submitter: Ministry of Education - Te Tāhuhu o te Mātauranga ('the Ministry')

Address for service: C/- Beca Ltd
PO Box 6345
Wellesley
Auckland 1141

Attention: Sian Stirling

Phone: 09 300 9722

Email: sian.stirling@beca.com

This is a submission on Auckland Transport's application for resource consents for the Eastern Busway Stage 3 Residential Project in Pakuranga.

This submission relates to the potential safety effects on students in Pakuranga from construction traffic and the preferred bus route for Edgewater College during the construction period.

Background:

The Ministry is the Government's lead advisor on the New Zealand education system, shaping direction for education agencies and providers and contributing to the Government's goals for education. The Ministry assesses population changes, school roll fluctuations and other trends and challenges impacting on education provision at all levels of the education network to identify changing needs within the network so the Ministry can respond effectively.

The Ministry has responsibility for all education property owned by the Crown. This involves managing the existing property portfolio, upgrading and improving the portfolio, purchasing and constructing new property to meet increased demand, identifying and disposing of surplus State school sector property and managing teacher and caretaker housing.

The Ministry is therefore a considerable stakeholder in terms of activities that may impact on existing and future educational facilities and assets in the Auckland region.

The Ministry of Education's submission is:

Under the Resource Management Act 1991, decision makers must have regard to the health and safety of people and communities. Furthermore, there is a duty to avoid, remedy or mitigate actual and potential adverse effects on the environment.

Auckland Transport (AT), with its delivery partner, Eastern Busway Alliance (EBA), has sought all relevant resource consents for the construction and operation of the 'Eastern Busway Stage 3 Residential' project (EB3R). This will



include a separated busway from Pakuranga Town Centre in the west to Pakuranga Creek in the east. EB3R forms part of the wider Eastern Busway Project, a multi-stage transport project being undertaken between Panmure and Botany to improve the transport networks across southeast Tāmaki Makaurau Auckland. EB3R also connects into the Eastern Busway Stage 2 project which the Ministry recently submitted on to address similar issues outlined in this submission.

The Ministry broadly supports the project's aim to better enable public transportation in Pakuranga. However, there are a number of schools along the project corridor that will be affected by the construction of EB3R. The Ministry seeks for potential construction traffic effects on the safety of schools in Pakuranga be appropriately addressed and managed. The Ministry's specific concerns are outlined below.

Construction traffic effects:

EBA's Construction Traffic Management Plan (CTMP) outlines how all heavy truck movements should avoid schools between 8.25am - 9.00am and 2.55pm - 3.15pm during term time. Figure 1 below shows the roads which heavy vehicles are proposed to avoid during these times. The Ministry supports EBA and AT's willingness to prioritise the safety of students at Elm Park School, Riverhills School, Edgewater College, Anchorage Park School, Pakuranga Heights School and Pakuranga Intermediate.

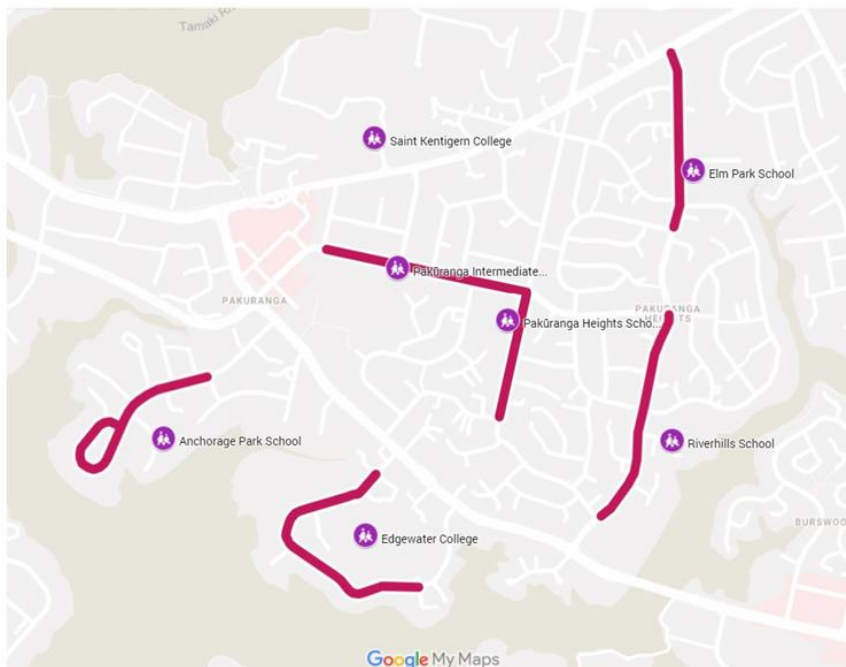


Figure 1: Proposed locations where heavy truck movements will avoid during 8.25am - 9.00am and 2.55pm - 3.15pm

However, the Ministry still have concerns relating to construction traffic around Pakuranga Heights School, Pakuranga Intermediate, Elm Park School and Riverhills School. Reeves Road is an identified construction route for the project. The CTMP states that Reeves Road will carry roughly one construction vehicle every six minutes, either in the westbound or eastbound directions at the peak of construction. Pakuranga Intermediate is located on Reeves



Road and Pakuranga Heights School is located just off Reeves Road on Udys Road. Elm Park School and Riverhills School are also located on or just off Gossamer Drive, another key identified construction route for the project.

The Ministry do not think the proposed times where truck movements must avoid these schools covers the entire school peak pick-up and drop-off period when students walk to and from school. The proposed morning period of 8.25am - 9.00am is appropriate for Pakuranga Heights School, Elm Park School and Riverhills School. However, students are expected to arrive at Pakuranga Intermediate at 8.15am and start school at 8.40am. Therefore, the proposed morning period along Reeves Road should be extended to start from 8.10am. The end of the morning period for Pakuranga Intermediate should remain 9.00am to ensure students from Pakuranga Heights School who walk along Reeves Road to get to school by 9.00am are also protected.

The Ministry also considers the proposed afternoon peak of 20min (2.55pm-3.15pm) outlined in the CTMP to avoid each school is not long enough to ensure the safety of students leaving the school grounds. All schools finish at 3.00pm, and schools advise it can take a minimum of 30 minutes for students to clear the school grounds and the surrounding roads after classes finish. Therefore, the Ministry request that the afternoon period be extended to 3.30pm to ensure all students can get home safely.

Currently, Auckland Transport are required to implement the CTMP as part of a proposed consent condition. The Ministry supports this condition. However, the Ministry seeks amendments to the CTMP to reflect an appropriate period where heavy vehicles must avoid the surrounding schools to maintain the safety of tamariki in Pakuranga. These changes are outlined further down in this submission.

The Ministry would also like to acknowledge that there are some existing signalised and unsignalised pedestrian crossing facilities near the schools, as AT and EBA have pointed out in the application. However, these facilities do not always guarantee the safety of students, or ensure all students use them appropriately. It is important that all heavy vehicle movements avoid these schools during the proposed extended window outlined below, to protect the safety of students throughout construction.

The Ministry looks forward to working with AT to manage construction traffic effects on student safety.

Disruptions to the Edgewater College bus route

The proposal also involves the upgrade of the two Edgewater Drive intersections with Ti Rakau Drive. Currently, the S013 school bus proceeds down Edgewater Drive east and the S073 bus proceeds down Edgewater Drive west to Edgewater College. Both of these school bus services will be interrupted when the Edgewater Drive intersections are upgraded.

AT has proposed two mitigation measures to be consulted on with the Ministry and Edgewater College. The first option would involve temporarily removing some of the school's off-street parking area to allow the buses to turn into the school carpark and perform a U-turn to proceed back to whichever intersection on Edgewater Drive is open. This option could result in the temporary loss of 19 parking spaces on the school site for approximately two weeks. The school is concerned about this option as they would need to actively manage the carpark and bus movements. The school has limited resources to have someone put the cones out, stop parents from using the parking area, and remove the cones after pick-up and drop-off times to enable staff to park there. This option might be more workable if AT provided traffic management support to the school.

The second option AT has proposed involves using the existing bus stops on Ti Rakau Drive. This option would result in the student needing to walk for just over five minutes from the bus stop to the school. Edgewater College is also concerned about this option, as they have students under 14 years old. Therefore, the students must be supervised



to and from the remote bus stop. The school has limited resources to allocate a teacher to supervise the students walking to and from the bus stop. The distance between the bus stop and the school will result in students arriving at the bus stop at different times (due to varied walking speeds, kids getting distracted etc.) in the afternoon and may delay the bus service for other students.

At this stage, the school has confirmed that the preferred option would be the remote bus stop on Ti Rakau Drive, as it would be more workable than the U-turn facility. However, the Ministry request further engagement with AT and the school on these options to better understand the feasibility of them and ensure the final option considers the safety of students, the public and the bus service provider, while recognising that the safest option might not necessarily be the most convenient option. Lastly, if the remote bus stop is the final option, students will be walking by a live construction site on Ti Rakau Drive. Construction trucks should also avoid the remote bus stop during school pick-up and drop-off times to ensure students can get to and from school safely.

Decision sought

The Ministry is neutral on EB3R if Council accepts the following relief and any consequential amendments required to give effect to the matters raised in this submission.

The Ministry request the following changes to section 5.4.3 and Table 11 of the CTMP as outlined below. The Ministry’s additions are underlined in red, and deletions are shown in ~~red strikethrough~~.

5.4.3 Sensitive Receivers

Within EB2/ EB3R area there are multiple sensitive receivers which should be avoided during sensitive times.

The following schools (Table 11) should be avoided by heavy vehicles during the below hours on school days. Light vehicles should also take additional care and caution when traversing these areas.

~~08:25 – 09:00~~

~~14:55 – 15:15~~

Table 11 Schools at which heavy vehicle restrictions apply

School Name	Address	Associated no travel route	<u>Times heavy vehicles must avoid the schools</u>
<i>Pakuranga Intermediate School</i>	<i>43/49 Reeves Road, Pakuranga, Auckland 2010</i>	<i>Reeves Road spanning from William Roberts Road to Gossamer Drive.</i>	<i><u>8.10am – 9.00am</u> <u>2.55pm – 3.30pm</u></i>
<i>Pakuranga Heights School</i>	<i>77 Udys Road, Pakuranga, Auckland 2010</i>	<i>Udys Road spanning from Marriott Road to Reeves Road.</i>	<i><u>8.25am – 09.00am</u> <u>2.55pm – 3.30pm</u></i>
<i>Saint Kentigern College</i>	<i>130 Pakuranga Road, Pakuranga, Auckland 2010</i>	<i>None – signalised access off main arterial considered low risk.</i>	<i><u>NA</u></i>



<i>Edgewater College</i>	<i>32 Edgewater Drive, Pakuranga, Auckland 2010</i>	<i>Edgewater Drive spanning from Snell Place to Raewyn Place.</i>	<u><i>8.25am – 09.00am</i></u> <u><i>2.55pm – 3.30pm</i></u>
<i>Anchorage School</i>	<i>16 Swan Crescent, Pakuranga, Auckland 2010</i>	<i>Tiraumea Drive and side streets south-west of Jan Place.</i>	<u><i>8.25am – 09.00am</i></u> <u><i>2.55pm – 3.30pm</i></u>
<i>Elm Park School</i>	<i>46 Gossamer Drive, Pakuranga Heights, Auckland 2010</i>	<i>Gossamer Drive spanning from Beechdale Crescent to Pakuranga Road</i>	<u><i>8.25am – 09.00am</i></u> <u><i>2.55pm – 3.30pm</i></u>
<i>Riverhills School</i>	<i>13 Waikaremoana Place, Pakuranga Heights, Auckland 2010</i>	<i>Gossamer Drive spanning from Riverhills Avenue to Reeves Road</i>	<u><i>8.25am – 09.00am</i></u> <u><i>2.55pm – 3.30pm</i></u>

Finally, the Ministry request that further engagement on the two temporary bus change options is undertaken with Edgewater College closer to the time of construction. Janet Van Borssum is the appropriate contact for Edgewater College. Janet can be reached on 021 664 018. If the remote bus stop is the final option, details should also be included in the CTMP on how heavy vehicles must avoid the remote bus stop on Ti Rakau Drive during school pick-up and drop-off times to ensure students can get to and from school safely.

The Ministry request this be enforced via a consent condition.

Construction Traffic Management Plan:

- 1.) Prior to construction, Auckland Transport must undertake engagement with Edgewater College to confirm a temporary bus route for Bus Service S013 and S073. The agreed outcome and any changes must be recorded in the final Construction Traffic Management Plan, which must be submitted to Auckland Council for review before construction commences.

The Ministry wishes to be heard in support of its submission

Sian Stirling

Planner – Beca Ltd

(Consultant to the Ministry of Education)

Date: 27th January 2023

From: NotifiedResourceConsentSubmissionOnlineForm@donotreply.aucklandcouncil.govt.nz
Sent on: Monday, January 30, 2023 11:15:11 PM
To: CentralRCSubmissions@aucklandcouncil.govt.nz
CC: Sonja.Lister@easternbusway.nz
Subject: BUN60407121 [ID:16031] Submission
Attachments: Submission on Resource Consent Application for EB3R - PPL - 31 January 2023_20230131120441.730.pdf (203.33 KB)

We have received a submission on the notified resource consent for Auckland Transport Resource Consent Applications for Eastern Busway Stage 3R, part of the Eastern Busway Project.

Details of submission

Notified resource consent application details

Property address: Auckland Transport Resource Consent Applications for Eastern Busway Stage 3R, part of the Eastern Busway Project

Application number: BUN60407121

Applicant name: Sonja Lister- Auckland Transport

Applicant email: Sonja.Lister@easternbusway.nz

Application description: Auckland Unitary Plan

Resource consent applications: Eastern Busway Stage 3R, part of the Eastern Busway Project

Application details

The proposal relates to the construction, operation, and maintenance of the Eastern Busway Stage 3 Residential (EB3R) generally located on Ti Rakau Drive between the intersection of Ti Rakau Drive/South-Eastern Highway (SEART) and Riverhills Park, Pakuranga.

The proposal includes the following Resource Consent applications collectively referred to under the administration number BUN60407121:

- LUC60407123 - land use consent for: construction noise, construction of the road network on land not yet legalised as road, tree removal, trimming and alterations in the road or in open space, earthworks including those within 100m of a natural wetland and the disturbance of contaminated soil requiring consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, modification of vehicle crossings where a Vehicle Access Restriction applies, works altering overland flow paths and within the one per cent AEP (Annual Exceedance Probability) floodplain, temporary satellite offices and laydown areas, and a proposed public car park at 105 Ti Rakau Drive.
- DIS60407122, DIS60407493 and DIS60412893 - discharge permits: for the discharge of stormwater to freshwater and the temporary discharge of water within 100m of a natural wetland, ancillary to erosion and sediment controls under the National Environmental Standards for Freshwater, and for the disturbance of contaminated soil under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.
- WAT60412894 – water permit for the temporary diversion of water within 100m of a natural wetland, ancillary to erosion and sediment controls under the National Environmental Standards for Freshwater.
- LUS60412895 – streamworks consent for three separate structures that do not meet permitted activity criteria.
- CST60408460 and CST60408461 - coastal permits: for the occupation of permanent stormwater infrastructure within the coastal marine area, and for the mangrove removal and coastal disturbance associated with the construction of this infrastructure.

Overall, the proposal requires consent as a non-complying activity.

Supporting Documents

If you don't have access to a computer, a full set of all application documentation including technical reports can be viewed during business hours at:

- Pakuranga Library, 7 Aylesbury Street, Pakuranga
- Howick Library, 25 Uxbridge Road, Howick
- Botany Library, Level 1, Botany Town Centre, Sunset Terrace, East Tāmaki

If you have any questions about the Resource Consent applications, please contact: Warwick Pascoe, Principal Project Lead, Premium Consents Unit 09 301 0101 or warwick.pascoe@aucklandcouncil.govt.nz.

Making a submission

By post

Post your completed submission to:

Auckland Council
Resource Consents
Private Bag 92300
Auckland 1142

Submitter contact details

Full name: Mike Doesburg

Organisation name: Wynn Williams

Contact phone number: 09 300 5755

Email address: mike.doesburg@wynnwilliams.co.nz

Postal address:

Wynn Williams, Level 25, Vero Centre, 48 Shortland Street
City Centre
Auckland 1140

Submission details

This submission: opposes the application in whole or in part

Specify the aspects of the application you are submitting on:

Please refer to the document attached.

What are the reasons for your submission?

Please refer to the document attached.

What decisions and amendments would you like the council to make?

Please refer to the document attached.

Are you a trade competitor of the applicant? I am not a trade competitor of the applicant.

Do you want to attend a hearing and speak in support of your submission? Yes

If other people make a similar submission I will consider making a joint case with them at the hearing: No

Supporting information:

Submission on Resource Consent Application for EB3R - PPL - 31 January 2023_20230131120441.730.pdf

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SUBMISSION ON RESOURCE CONSENTS FOR EASTERN BUSWAY STAGE 3R

Section 96 of the Resource Management Act 1991

To Auckland Council (**Council**)
Private Bag 92300
Victoria Street West
Auckland 1142

Name of submitter: Pakuranga Plaza Limited

1. Pakuranga Plaza Limited (**PPL**) makes this submission on the Auckland Transport's (**AT**) application for resource consents associated with the Eastern Busway 3R (**EB3R** or **Proposal**), referred to under administration number BUN60407121.

About PPDL

2. PPL owns Pakuranga Plaza, at 10 Aylesbury Street, Pakuranga.
3. PPL is the controlling company of Pakuranga Plaza Management Limited and Pakuranga Precinct Development Limited. All three companies are wholly owned by GYP Properties (**GYPP**).
4. The sites owned and managed by GYPP are collectively called Pakuranga Plaza and sit within the Pakuranga Town Centre site which includes holdings by others. A Plan showing the ownership of the Pakuranga Town Centre is attached as **Appendix 1**.
5. Pakuranga Plaza will be significantly impacted by the Proposal, which includes works on the roads needed to provide access to the site for northbound traffic on Ti Rakau Drive, and construction works within 100 m of our site.

Submission

6. This submission relates to the Proposal as a whole, but with a particular focus on:
 - (a) the adverse effects of the Proposal during the construction phase; and
 - (b) the appropriate conditions on the resource consent.
7. PPL generally supports the vision and outcomes proposed by the Eastern Busway project, including the benefits it will bring in providing greater connectivity in eastern Auckland. However, PPL opposes the Proposal in its current form on the basis that the Proposal, as notified, will have adverse effects on PPL and the environment, including access, loading and parking effects during construction; and other construction effects.
8. EB3R proposes works essential to accessing the Plaza over many years – this will have adverse effects on PPL and tenants over the course of the construction period. PPL considers that:
 - (a) Construction sequencing needs to be carefully managed to avoid adverse transportation effects, including the need to ensure safe and efficient access to the Plaza before closure of the Ti Rakau Dr end of Reeves Road.

- (b) The Warehouse loading dock, and routes to it, must be fully accessible at all times to the satisfaction of The Warehouse. Failure to provide for access to and efficient use of the loading dock would adversely affect The Warehouse and would cause other adverse transport effects on the Plaza.
 - (c) All loading docks to the Plaza, including the Countdown loading dock, must have accessible routes to the Plaza at all times to the satisfaction of our tenants.
 - (d) The Proposal has not demonstrated that the proposed accessways to the general Plaza loading areas and car parking areas will be safe and efficient at all stages of construction.
9. PPL also considers that there are a range of other construction-related effects that the Proposal must appropriately manage, including:
- (a) Construction noise and vibration;
 - (b) Dust;
 - (c) Traffic management;
 - (d) Wayfinding; and
 - (e) Communication with PPL and other stakeholders as the project progresses.

Decision sought

10. PPL seeks that the Council:
- (a) decline the application for resource consents; or
 - (b) impose conditions on the resource consents to address all of the concerns raised in this submission.
11. PPL also seeks such alternative, further or consequential relief as may be required to address the concerns raised in this submission.

Procedural matters

12. PPL could not gain an advantage in trade competition through this submission.
13. PPL wishes to be heard in support of its submission. PPL does not wish to present a joint case at the hearing.

Signed for and on behalf of Pakuranga Plaza Limited by:



Mike Doesburg

Solicitor for **Pakuranga Plaza Limited**

Date: 31 January 2023

Address for service: Wynn Williams
Level 25, Vero Centre, 48 Shortland Street
P O Box 2401
AUCKLAND 1140

Contact person: Mike Doesburg

Email: mike.doesburg@wynnwilliams.co.nz

Telephone: 09 300 5755

Appendix 1 – Ownership Plan



From: NotifiedResourceConsentSubmissionOnlineForm@donotreply.aucklandcouncil.govt.nz
Sent on: Wednesday, February 1, 2023 6:00:40 AM
To: CentralRCSubmissions@aucklandcouncil.govt.nz
CC: Sonja.Lister@easternbusway.nz
Subject: BUN60407121 [ID:16045] Submission
Attachments: MLC_EDG EB3 Submission.pdf (1.21 MB)

We have received a submission on the notified resource consent for Auckland Transport Resource Consent Applications for Eastern Busway Stage 3R, part of the Eastern Busway Project.

Details of submission

Notified resource consent application details

Property address: Auckland Transport Resource Consent Applications for Eastern Busway Stage 3R, part of the Eastern Busway Project

Application number: BUN60407121

Applicant name: Sonja Lister- Auckland Transport

Applicant email: Sonja.Lister@easternbusway.nz

Application description: Auckland Unitary Plan

Resource consent applications: Eastern Busway Stage 3R, part of the Eastern Busway Project

Application details

The proposal relates to the construction, operation, and maintenance of the Eastern Busway Stage 3 Residential (EB3R) generally located on Ti Rakau Drive between the intersection of Ti Rakau Drive/South-Eastern Highway (SEART) and Riverhills Park, Pakuranga.

The proposal includes the following Resource Consent applications collectively referred to under the administration number BUN60407121:

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Overall, the proposal requires consent as a non-complying activity.

Application Numbers

BUN60407121 LUC60407123 DIS60407122 DIS60407493 DIS60412893 WAT60412894 LUS60412895 CST60408460

CST60408461

Supporting Documents

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- Howick Library, 25 Uxbridge Road, Howick
- Botany Library, Level 1, Botany Town Centre, Sunset Terrace, East Tāmaki

If you have any questions about the Resource Consent applications, please contact: Warwick Pascoe, Principal Project Lead, Premium Consents Unit 09 301 0101 or warwick.pascoe@aucklandcouncil.govt.nz.

Making a submission

By post

Post your completed submission to:

Auckland Council

Resource Consents

Private Bag 92300

Auckland 1142

Submitter contact details

Full name: Dylan Pell

Organisation name: Metlifecare Limited

Contact phone number: 021824103

Email address: dylanp@metlifecare.co.nz

Postal address:

Level 4, 20 Kent Street

Auckland

Auckland 1151

Submission details

This submission: opposes the application in whole or in part

Specify the aspects of the application you are submitting on:

Edgewater Drive / Te Rakau Drive Intersection

What are the reasons for your submission?

See attachment.

What decisions and amendments would you like the council to make?

Reconsider the Edgewater Drive intersection configuration.

Are you a trade competitor of the applicant? I am not a trade competitor of the applicant.

Do you want to attend a hearing and speak in support of your submission? Yes

If other people make a similar submission I will consider making a joint case with them at the hearing: Yes

Supporting information:

MLC_EDG EB3 Submission.pdf

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Auckland Council
Resource Consents
Private Bag 92300
Auckland 1142

1 February 2023

**Re: Eastern Busway Stage 3R, part of the Eastern Busway Project
Notified Resource Consent Submission (BUN60407121)**

Level 4, 20 Kent Street,
Newmarket, Auckland 1023
PO Box 37463,
Parnell, Auckland 1151
0800 909 303

metlifecare.co.nz

Dear Auckland Council

Introduction

Metlifecare wishes to make a submission in opposition to part of this proposed resource consent application.

Metlifecare opposes the roading reconfiguration at the intersection of Edgewater Drive (West) and Te Rakau Drive. Metlifecare believes the objectives of the Eastern Busway Stage 3R (EB3) can still be achieved with the signalised intersection retained in its current configuration.

Metlifecare supports the remaining aspects of EB3.

Background

Metlifecare (through its subsidiary Metlifecare Retirement Villages Ltd) owns and operates the Edgewater Retirement Village located at 14 Edgewater Drive.

The village has 122 retirement living units plus a 24-bed aged care home. The village just completed a major redevelopment to modernise its common services, care home and provide additional apartments. The village will eventually be home to more than 150 residents and road users. These residents have frequent visitors particularly those in care. Furthermore, the village is supported by numerous staff, third-party services, and contractors. Except for Edgewater College, road users associated with the Metlifecare village are likely to account for the majority of the Edgewater Drive (West) intersection road users.

Details of Submission

Resident Wellbeing

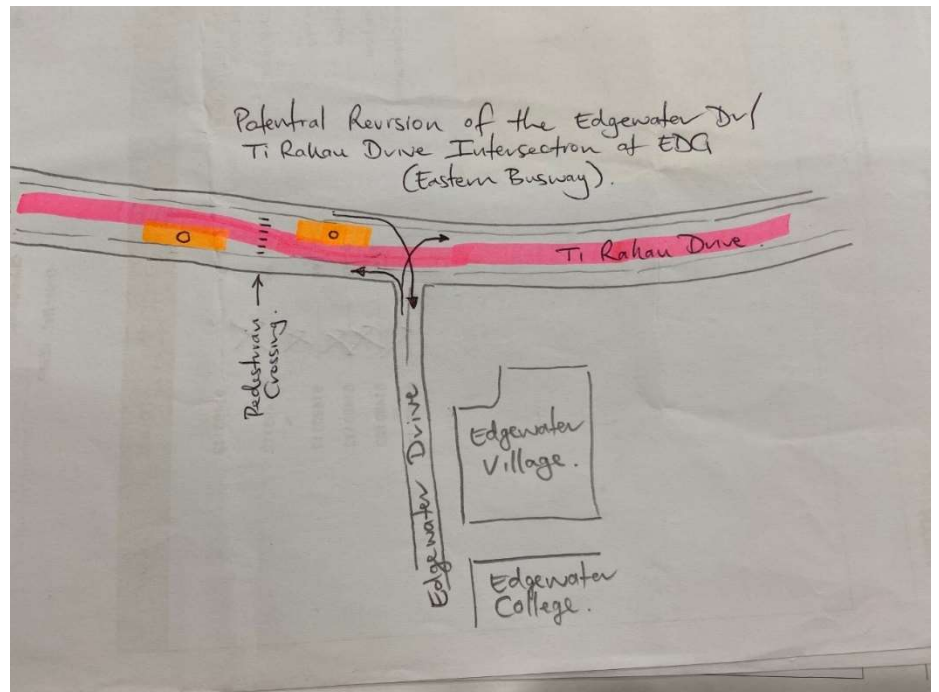
Concerns raised by the residents of Edgewater Village during public consultation have not been addressed. Many residents' concerns relate to removing the right hand turns to-and-from Ti Rakau Drive. Stress and anxiety have been considered in the Social Impact Report, but the mitigations are limited to communication, construction, noise and vibration management. A revised design should be considered as a suitable mitigation strategy.

Economic and Commercial Considerations

No economic impact assessment was made available in the notified documents. However, Metlifecare expects that it will incur negative financial effects if the application is approved in its current form. These negative financial effects are likely to arise from lower sales due to the reduced profile and accessibility than would have occurred if the intersection was to remain the same.

Relocated Edgewater Station

Relocating the proposed Edgewater bus station further to the west would appear to be a cost-effective compromise. Pedestrian connections are retained, and at least one of the proposed U-turn bays could be removed.



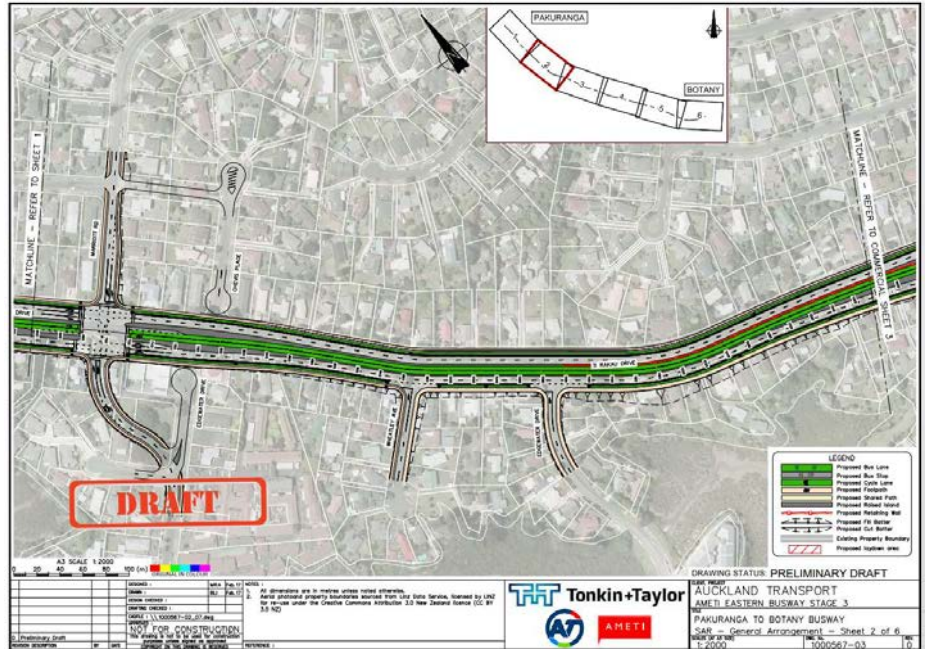
Relocating the Signalised Intersection

Marriott Road is classified as a Supporting Collector in Auckland Transport’s strategic transport network (Future Connect), while Edgewater Drive (west) provides access to two retirement villages, Edgewater College and in the order of 260 properties. Further intensification will be enabled by Council’s Plan Change 78 zoning changes. Right turns in and out of both streets are currently permitted and provide an important access function for these homes and destinations.

The current proposal removes right turns in/out of both streets. It requires right turning traffic to turn around via signalised U-turn facilities to the east and west.

These right turns could potentially be better catered for if Edgewater Drive (west) is realigned to meet Marriott Road at a single, signalised intersection, as per previous EB3 concepts.

Earlier EB3 Concept:



This concept would:

- consolidate the right turns in/out of these two streets at a single intersection
- reduce the number of signalised intersections that buses must pass through – from the currently proposed 2 intersections and separate pedestrian crossing, to just a single signalised intersection
- reduce traffic volumes and vehicle distances travelled on the section of Ti Rakau Drive between the two U-turn facilities

Summary

Metlifecare opposes the reconfigured Edgewater Drive (West) and Te Rakau Drive junction. Metlifecare requests the applicant to retain or relocate the existing signalised intersection.

Regards,

Dylan Pell
 Metlifecare
 MOB: 021 824 103
 Email: dylanp@metlifecare.co.nz

NOTIFIED APPLICATION FOR RESOURCE CONSENT FOR THE EASTERN

BUSWAY STAGE 3R, PART OF THE EASTERN BUSWAY PROJECT.

Please accept the following as my comments on the application as the Local Board Resource Consent Lead. I note that the activities that require resource consent are limited to:

Road and car park outside of current legal road reserve, Construction noise and vibration, Two satellite construction offices, Earthworks, Disturbance and discharge of contaminated soil, Vegetation clearance, Works in the CMA.

The proposal includes the following Resource Consent applications collectively referred to under the administration number BUN60407121:

-LUC60407123 - land use consent for: construction noise, construction of the road network on land not yet legalised as road, tree removal, trimming and alterations in the road or in open space, earthworks including those within 100m of a natural wetland and the disturbance of contaminated soil requiring consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, modification of vehicle crossings where a Vehicle Access Restriction applies, works altering overland flow paths and within the one per cent AEP (Annual Exceedance Probability) floodplain, temporary satellite offices and laydown areas, and a proposed public car park at 105 Ti Rakau Drive.

-DIS60407122, DIS60407493 and DIS60412893 - discharge permits: for the discharge of stormwater to freshwater and the temporary discharge of water within 100m of a natural wetland, ancillary to erosion and sediment controls under the National Environmental Standards for Freshwater, and for the disturbance of contaminated soil under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.

-WAT60412894 – water permit for the temporary diversion of water within 100m of a natural wetland, ancillary to erosion and sediment controls under the National Environmental Standards for Freshwater.

-LUS60412895 – streamworks consent for three separate structures that do not meet permitted activity criteria.

-CST60408460 and CST60408461 - coastal permits: for the occupation of permanent stormwater infrastructure within the coastal marine area, and for the mangrove removal and coastal disturbance associated with the construction of this infrastructure.

General Comments: The Howick Local Board and wider community have supported the original AMETI project including the busway and Reeves Road flyover for a number of years. We have seen the first stage of this developed from Panmure to the Pakuranga Town Centre, constructed with great success with limited impact on the community. It would be desirable to see the next stages of the project continue in such a way with minimal affects on the community at large, regarding any impact on traffic flow, noise and vibration and other disturbances and a reasonable level of mitigation of any environmental effects.

Under **LUC60407123 Land Use Consent**, it would be expected that any earthworks or other disturbance of the wetland including removal of vegetation be limited to where physical structures including any embankments are required and any further work to areas required solely for the purposes of construction of the project be kept to an absolute minimum. Where the land required for the sole purposes of construction of the project may be considered excessive in relation to the extent of the actual land area of the project itself, this land wherever possible be returned to natural vegetation or where possible further back to wetland.

Also that during any earthworks or other disturbance of the wetland that at all times best practices are followed in regard to containing runoff from the site and as required, treated or allowed to settle any siltation before any discharge or other removal from the site.

Further, it is anticipated that there will be higher than normal levels of noise and also vibration during the construction period. To that point consideration needs to be given to the specific hours construction can take place. Ideally this would be through a typical allowed daytime construction period but also to consider earlier and later than standard start and finish times if there was to be an optimisation to be made which meant the overall construction period was reduced or there were specific reductions in impacts of specific work on specific areas or communities.

it would be expected that during construction of the project and during the lifetime of the busway, project that at all times the National Environmental Standards for Freshwater and National

Under **DIS60407122, DIS60407493 and DIS60412893 permits**, as above it would be expected that during construction of the project and during the lifetime of the busway, project that at all times the National Environmental Standards for Freshwater and National

Under **WAT60412894 – water permit** it would be expected that during the temporary diversion of water within 100m of a natural wetland, that all ancillary to erosion and sediment controls comply with the National Environmental Standards for Freshwater.

Under **LUS60412895 – streamworks consent** we would not support three separate structures if they did not meet permitted activity criteria.

Under **CST60408460 and CST60408461 - coastal permits:**

it would be expected that where there is any disruption to the coastal marine area due to stormwater infrastructure that this be kept to a minimum or otherwise reduced or mitigated.

Also we expect this would be the case regarding mangrove removal where it would be kept to a minimum or otherwise reduced or mitigated.

And similar for any environmental effects due to coastal disturbance associated with the construction of this infrastructure, that it be kept to a minimum or otherwise reduced or mitigated.

General Comments:

Environmental Effects:

Note the close proximity of the project and construction to the Tamaki Estuary which is a highly valued waterway and general body of water, both from an environmental perspective and also for recreation. Therefore, any improper storm water mitigation could adversely affect the ecology, marine and bird life in and around the area and significantly affect recreational activity all due to silt runoff etc.

Impact on Traffic:

During the construction period there is likely to be significant impact on traffic flow around and through the construction zone. We don't need to point out the significant flows of traffic along Ti Rakau Drive to and from the Pakuranga Town Centre. There is concern that construction of the project will heavily impact this and it is expected that comprehensive traffic management plans are developed to allay any effects to the network including the existing bus routes.

In the long term it is also hoped that there will be an overall improvement to general traffic flow but there are concerns that this project could increase traffic in some places where it doesn't exist and ask that there be consideration to this.

Noise and Vibration:

It is anticipated that there will be higher than normal levels of noise and also vibration during the construction period. To that point consideration needs to be given to the specific hours construction can take place. Ideally this would be through a typical allowed daytime construction period but also to consider earlier and later than standard start and finish times if there was to be an optimisation to be made which meant the overall construction period was reduced or there were specific reductions in impacts of specific work on specific areas or communities.

Also consideration needs to be made in regard to increase in noise levels in the long term and how this could be mitigated to address any effects due to noise. The same would apply in the case of vibration, although different to noise, the majority would be experienced during the construction.

Thank you for the opportunity to provide feedback on this consent application, can I please request to speak at the hearing and also reserve my right to provide subsequent information should anything further come to light.

Kind Regards

David Collings

Local Board Resource Consent Lead

Howick Local Board

027-576-2350

APPENDIX 4

PROPOSED RESOURCE CONSENT CONDITIONS

RESOURCE CONSENT CONDITIONS

Please note these conditions have been based on the set of conditions proposed as part of the application. In this regard, ~~Strike through~~ is deleted text, while all other **highlighted** text signifies new or altered wording.

EB3R GENERAL ACCORDANCE

1. Except as modified by the conditions below, the activity must be carried out in general accordance with the plans and information submitted with the application, as follows:

Table 1: Application Documents

Document Title	Author	Revision	Date

Table 2: Drawings

Drawing Title	Designer	Revision	Date

Table 3: Management Plans

Management Plans	Author	Revision	Date

Where there may be an inconsistency between the documents listed in condition 1 above and the requirements of the following conditions, the following conditions prevail.

Advice Note: *The reports, Management Plans and drawings listed above may be updated in accordance with the processes listed in Condition 11 to 14, subject to the effects of the consented activities remaining within the nature and scale of effects considered by the listed document. Where effects change in nature or increase in scale, the Consent Holder must consult with Council to determine whether a change of conditions is required under s 127 of the RMA.*

MONITORING CHARGE

2. The Consent Holder must pay the Council an initial consent compliance monitoring charge of a dollar amount (GST inclusive) to be agreed with the Team Leader Compliance Monitoring South plus any further monitoring charge(s) to recover the actual and reasonable costs incurred to ensure compliance with the conditions of these consents.

Advice Note: *The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work that ensures compliance with the resource consents. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, will be charged at the relevant hourly rate applicable at the time. The Consent Holder will be advised of the further monitoring charge(s). Only after all conditions of the resource consent have been met, will the Council issue a letter confirming compliance at request by the Consent Holder.*

LAPSE DATE

3. Under section 125 of the RMA, this consent will lapse five years after the date it commences unless:
 - a) The consent is given effect to; or
 - b) On application, the Council determines to extend the period after which the consent will lapse.

EXPIRY DATE – LAND USE - LUC60407123

4. Resource consent LUC60407134 (earthworks) expires five (5) years from the date of issue unless it has been surrendered or cancelled at an earlier date pursuant to the RMA.

EXPIRY DATE – COASTAL (OCCUPATION) - CST60408460

5. The coastal permit associated with the occupation of the coastal marine area by the stormwater outfall expires 35 years after consent has been given effect to.

EXPIRY DATE – COASTAL (DISTURBANCE) - CST60408461

6. The coastal permit associated with the disturbance of the coastal marine area by stormwater outfalls expires five (5) years after consent has been given effect to.

EXPIRY DATE – DISCHARGE OF CONTAMINANTS - DIS60407493

7. ~~The discharge permit associated with the construction of the Eastern Busway Project (EB3R) shall expire 5 years after consent has been given effect to.~~
Consent DIS60407493 expires five years from the date of commencement unless it has been surrendered or been cancelled at an earlier date pursuant to the RMA.

SITE ACCESS

8. Subject to compliance with the Consent Holder's health and safety requirements and provision of reasonable notice, servants or agents of Council are permitted to have access to relevant parts of the construction site(s) at reasonable times for the purpose of carrying out inspections, surveys, investigations and/or to take samples.

PRE-CONSTRUCTION CONDITIONS

Mana Whenua Engagement

9. At least 10 working days prior to the commencement of construction, the Consent Holder must confirm and submit to Council a framework to ensure appropriate engagement with mana whenua during the construction of the Eastern Busway Project (Package EB3R).
10. The framework must include:
 - a) The methods for identifying and engaging with mana whenua;
 - b) The process for involvement of mana whenua in reviewing and the implementation of the management and environmental management plans as they relate to:
 - i. Recognising and providing for the cultural values and interests of mana whenua;
 - ii. Implementing and applying tikanga
 - iii. Managing and monitoring sediment quality; and
 - iv. Promoting ecology and biodiversity, including the use of native vegetation;
 - c) As a minimum the matters identified in (b) above must be addressed in the preparation of the following management plans:
 - i. Construction Environmental Management Plan
 - ii. Urban Design and Landscape Plan
 - iii. Habitat Restoration Plan.

MANAGEMENT PLANS – CERTIFICATION AND REVIEW

Advice Note: *Conditions 11 to 14 below, apply to all Management Plans that require certification unless otherwise specified in these conditions or finalised through the resource consent process. Management Plans listed in Condition 1 are deemed certified.*

11. Unless listed in Condition 1 above or otherwise stated, all Management Plans required by the conditions of this consent **must** be submitted to the Council for certification at least 10 working days prior to commencement of construction works (excluding **enabling works, site clearance**, site investigations, **relocation of services** and establishment of **site entrances and temporary construction fencing**). All works **must** be carried out in accordance with the approved Management Plans. Related construction works must not commence until certification of all relevant Management Plans for those works have been received, unless otherwise approved in writing by the Council.

~~12. If the Consent Holder does not receive a written response from Council within 10 working days of the Management Plan(s) being submitted for certification, the Management Plan(s) will be deemed to have certification and the Consent Holder can commence the related construction works.~~

~~**Advice Note:** *The Council will acknowledge receipt of any Management Plan submitted for certification within 2 working days. The Council will confirm if any information required for certification is missing from any submitted management plan within 5 working days. Where no further information is required, the Council will provide certification to the Consent Holder within 10 working days of submission of the Management Plan. If further information*~~

~~has been requested, the Council will provide confirmation of certification to the Consent Holder within 5 working days of the requested information being provided.~~

12. Any certified Management Plan may be amended, if necessary, to reflect any minor changes in design, construction materials, methods or management of effects to align with the conditions of consent. Any amendments are to be agreed by the Council in writing prior to implementation of any changes. Re-certification is not required in accordance with Condition 12, if Council confirms those amendments are within **scope of this consent** and any changes to the draft Management Plans are clearly identified.
13. Any amendments to a certified Management Plan that may result in a materially different outcome **must** be submitted to the Council in accordance with Condition 12 to certify these amendments are consistent with the relevant condition(s) prior to implementation of any changes. Where a Management Plan was prepared in consultation with interested or affected parties, any material changes to that Plan **must** be prepared in consultation with those same parties.
14. Management Plans may be submitted in parts or stages to address activities or to reflect the staged implementation of the Project. If submitted in part, Management Plans must clearly show the linkage with the Management Plans for adjacent stages and interrelated activities.

STAKEHOLDER COMMUNICATION AND ENGAGEMENT

15. The Consent Holder is required to implement and comply with the Communication and Consultation Plan (CCP) listed in Condition 1, unless otherwise amended by the process in Condition **17**. The objective of the CCP is to set out a framework to ensure appropriate communication and consultation is undertaken with the community, stakeholders, affected parties and interest groups during construction of the Eastern Busway Project (Package EB3R).
16. Any amendments to the CCP listed in Condition 1 that may result in a materially different outcome or to address unforeseen adverse effects arising from construction must comply with Conditions **18 and 19**.
17. The Consent Holder must submit the updated or revised CCP to Council for comment. The Consent Holder must consider any comments received from Council when finalising the CCP. If the Consent Holder has not received any comments from Council within 10 working days of submitting the CCP, the Consent Holder will consider Council has no comments.

Advice Note: *The CCP does not require certification from Council.*

18. The CCP must set out how the Consent Holder will for the Eastern Busway Project (Package EB3R):
- a. Inform the community and businesses of construction progress, future construction activities and constraints that could affect them;
 - b. Provide information on key project milestones;
 - c. Provide a process for responding to queries and complaints including, but not limited to:
 - i. Who is responsible for responding;
 - ii. How responses will be provided;
 - iii. The timeframes for responses to be provided; and
 - iv. How complaints will be reviewed and monitored to ensure mitigation is effective.

The CCP must include:

- a) A communications framework that details the Consent Holders communication strategies, the accountabilities, frequency of communications and consultation, the range of communication and consultation tools to be used (including any modern and relevant communication methods, community noticeboard, local paper, newsletters or similar, advertising etc.) and any other relevant communication matters;
- b) Details of the Communication and Consultation Manager for the Eastern Busway project, including their contact details (phone, email, project website and postal address);
- c) Methods for identifying, communicating and engaging with people affected by the construction works for the project, including but not limited to:
 - i. All residential and business property owners and occupiers directly affected by construction works;
 - ii. All community and education facilities directly affected to construction works for the project, including methods to assist these facilities to consult with their customers/stakeholders;
 - iii. Key stakeholders (including the Council's Parks Department); and
 - iv. Network utility operators.
- d) Methods for communicating with and notifying directly affected parties in advance where practicable of:
 - i. proposed construction activities outside normal working hours (including night works); and
 - ii. Temporary traffic management measures and permanent changes to road networks and layouts.
- h) Details of specific communications proposed for updating stakeholders including affected parties on construction timeframes; and
- i) A list of the stakeholders directly affected to be communicated with.

Pre-Commencement Meeting

19. Prior to the commencement of the construction and / or earthworks activity, the Consent Holder must hold a pre-start meeting that:

- is located on the subject site
- is scheduled not less than 5 days before the anticipated commencement of construction and/or earthworks
- includes Monitoring Inspector
- includes representation from the contractors who will undertake the works

The following matters must be discussed at the meeting:

- the erosion and sediment control measures.
- the earthworks methodology.
- must ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.

The following information must be made available at the pre-start meeting:

- Timeframes for key stages of the works authorised under this consent
- Resource consent conditions
- Certified Control and Management Plans as set out in condition 1

Advice Note: *To arrange the pre-start meeting required by condition above please contact the Team Leader Compliance Monitoring South to arrange this meeting or email monitoring@aucklandcouncil.govt.nz. The conditions of consent should be discussed at this meeting. All information required by the council and listed in that condition should be provided 2 days prior to the meeting.*

CONSTRUCTION ENVIRONMENTAL MANAGEMENT

20. The Consent Holder is required to carry out all works in accordance with the Construction Environmental Management Plan (CEMP) listed in Condition 1, unless otherwise amended by the process in Conditions 11 to 14. The objective of the CEMP is to set out an overarching framework and construction methods to be undertaken to avoid, remedy or mitigate any adverse effects associated with the construction of the Eastern Busway Project (Package EB3R) so far as is reasonably practicable.

21. Any amendments to the CEMP listed in Condition 1 that may result in a materially different outcome or to address unforeseen adverse effects arising from construction must comply with Conditions 22 and 23.

22. The Consent Holder must submit the updated or revised CEMP to Council for certification in accordance with Conditions 11 to 14 as soon as practicable following identification of the need for an update as a result of a material change. The purpose of the CEMP is to set out an overarching framework and construction methods to be undertaken to avoid, remedy or mitigate any adverse effects associated with the construction of the Eastern Busway Project (Package EB3R) so far as is reasonably practicable.

23. The CEMP must include details of:

- a. An outline of the construction programme of the work, including construction hours, indicating linkages to the other subsidiary plans which address management of adverse effects during construction;
- b. The document management system for administering the CEMP and compliance, including review and Consent Holder / constructor / Council requirements;
- c. Training requirements for employees, sub-contractors and visitors for cultural induction, construction procedures, environmental management and monitoring;
- d. Roles and responsibilities for the implementation of the CEMP;
- e. Environmental incident and emergency management procedures (including spills);
- f. Environmental complaint management procedures;
- g. Specific details of demolition and site clearance works to be undertaken;
- h. The location of construction compounds and measures adopted to keep them secure;
- i. Methods to provide for the safety of the general public;
- j. Measures to be adopted to keep the construction areas in a tidy condition in terms of disposal / storage of rubbish and storage, unloading construction materials (including equipment). All storage of materials and equipment associated with the construction works must take place inside the Eastern Busway Project (Package EB3R) boundaries; and
- k. Site reinstatement measures upon completion of the activities including the removal of any temporary structures used during the construction period.

Advice Note: *The CEMP may be prepared as a combined document that also addresses the matters required under the associated designation and resource consents for the Eastern Busway Project (Package EB3R).*

TRANSPORT, ACCESS AND PARKING

24. The Consent Holder is required to carry out all works in accordance with the Construction Traffic Management Plan (CTMP) listed in Condition 1, unless otherwise amended by the process in Condition 26. The objective of the CTMP is to identify the means to be used to avoid, remedy or mitigate the adverse effects of construction of the Eastern Busway Project (Package EB3R) on transport, parking and property access so far as it is reasonably practicable.

Particular regard must be had to the potential construction effects on: Pakuranga Plaza, Edgewater College and Metlifecare Edgewater.

25. Any amendments to the CTMP listed in Condition 1 that may result in a materially different outcome or to address unforeseen adverse effects arising from construction must comply with Condition 24.

26. The Consent Holder must submit the updated or revised CTMP to Council for comment. The Consent Holder must consider any comments received from Council when finalising the CTMP. If the Consent Holder has not received any comments from Council within 10 working days of submitting the CTMP, the Consent Holder will consider Council has no comments.

Advice Note: *The CTMP does not require certification from Council.*

CONSTRUCTION NOISE AND VIBRATION MANAGEMENT

27. The Consent Holder must prepare a finalised Construction Noise and Vibration Management Plan (CNVMP) for the proposed works. The objectives of the CNVMP are to:

- a. Identify and implement the Best Practicable Option (BPO) for the management of all construction noise and vibration effects;
- b. Define the procedures to be followed where the noise and vibration standards (Conditions 29 and 30) are not met (following the implementation of the BPO);
- c. Set out the methods for scheduling works to minimise disruption; and
- d. Ensure engagement with affected receivers and timely management of complaints.

28. The final CNVMP must include:

- a. Description of the works, anticipated equipment/processes and their scheduled durations;
- b. Hours of works, including a specific section on works at night (2230h - 0700h), incorporating clear definitions of the works undertaken at night (if any);
- c. Contact details for staff responsible for implementation of the CNVMP;
- d. The construction noise and vibration performance standards for the project (as set out in conditions 29 and 30);
- e. Management and mitigation options to be adopted for all works during the Project, including prohibition of tonal reverse alarms;
- f. Minimum separation distances from receivers for plant and machinery where compliance with the construction noise and vibration standards is achieved;
- g. Procedures to manage the noise and vibration effects where these minimum separation distances cannot be met;
- h. Identification of affected sensitive receivers where noise and vibration project standards apply;
- i. Methods and frequency for monitoring and reporting on construction noise and vibration;
- j. Procedures for the regular training of the operators of construction equipment to minimise noise and vibration and procedures for the management of behaviours for all construction workers;

k. A specific section setting out the requirements for Schedules to be prepared where the noise or vibration levels from any works that cannot comply with the noise and vibration project standards in Condition 29 and Category B of Condition 30. The Schedules must set out the mitigation, monitoring and management measures (including communication with stakeholders and use of temporary noise barriers) that will be adopted for works which cannot comply with the project standards specified in Condition 29 and 30. Schedules must be prepared in accordance with Condition 31.

l. Procedures for communication, consultation and complaints response including specific provisions for determining the times that receivers are sensitive to noise and vibration and the extent to which high noise and vibration works can be scheduled around those times where practicable.

m. Procedures and timing of reviews of the CNVMP.

29. Construction noise must be measured and assessed in accordance with New Zealand Standard NZS 6803:1999 'Acoustics - Construction Noise' (NZS6803:1999) and comply with the following Project Noise Standards noise standards unless otherwise provided for in any Schedule (refer Condition 32).

Time of week	Time Period	Project Noise Standards	
		L _{Aeq} dB	L _A F _{max} dB
Occupied buildings containing activities sensitive to noise			
Weekdays	0630 - 0730	55	75
	0730 – 1800	70	85
	1800 – 2000	65	80
	2000 - 0630	45	75
Saturdays	0730 – 1800	70	85
	All other times	45	75
Sundays and public holidays	0630 - 0730	55	85
	All other times	45	75
Occupied buildings containing all other activities			
All days	0730 - 1800	70	-
	1800 - 0730	75	-

Activities sensitive to noise are defined in Chapter J of the Auckland Unitary Plan

Advice Note:

The CNVMP required by Condition 28 and Schedules authorised by Condition 32 may authorise noise levels exceeding those set out in this condition. The noise limits in this condition that apply between 1800 and 0730 on any day may only be exceeded by works that cannot be completed between 0730 and 1800 for practical reasons related to avoiding unreasonable traffic congestion during the day, or similar. These noise limits may not be exceeded for reasons related to shortening the construction timeframe or for making up lost time.

Vibration

30. **Part 1** - Construction vibration must comply with the project vibration standards set out the following Table A. Construction vibration must be measured and assessed in accordance with DIN4150-3:1999.

Table A – Construction Vibration Standards:

Receiver	Time	Category A	Category B
Occupied activities sensitive to noise <i>(As defined in Chapter J of the Auckland Unitary Plan)</i>	Night-time 2000 – 0700	0.3 mm/s PPV	1 mm/s PPV
	Daytime 0700 – 2000	2 mm/s PPV	5 mm/s PPV
Other occupied buildings	At all times	2 mm/s PPV	5 mm/s PPV
All other buildings	At all times	5 mm/s PPV	Tables 1 and 3 of DIN4150-3:1999

Part 2 - If measured or predicted vibration from construction activities exceeds the vibration standards in Category A, the Consent Holder must consult with the affected receivers to:

- a. Discuss the nature of the work and the anticipated days and hours when the exceedances are likely to occur; and
- b. Determine whether the exceedances could be timed or managed to reduce the effects on the receiver.

The Consent Holder must maintain a record of these discussions and make them available to the Council on its request.

Part 3 – If measured or predicted vibration from construction activities exceeds the vibration standards on Category B, those activities may only proceed subject to a certified Schedule.

Construction Schedules

31. A Schedule must be prepared and submitted to the Council when:
- a. Construction noise is either predicted or measured to exceed the standards in Condition 30, except where the exceedance of the standards in Condition 30 is no greater than five (5) decibels and does not exceed:
 - i. 0700-2200: one (1) period of up to two (2) consecutive weeks in any rolling 8-week period; or
 - ii. 2200-0700: one (1) period of up to two (2) consecutive nights in any rolling 10-day period.

Or;

- b. when construction vibration is either predicted or measured to exceed the Category B standards in Table A.

The objective of the Schedule is to set out the BPO for the minimisation of noise and / or vibration effects of the construction activity. The Schedule must, as a minimum set out:

- a. Construction activity location, timing and start and finish dates;
- b. The predicted noise and / or vibration level for the construction activity;
- c. The receivers affected by the works subject to the Schedule;
- d. Noise and limits to be complied with for the duration of the activity;
- e. The mitigation options that have been selected and the options that have been discounted as being impracticable;
- f. For vibration – the pre-condition surveys of buildings and pipe work which document their current condition and any existing damage;
- g. For vibration – an assessment of each building to determine susceptibility to damage from vibration and define acceptable vibration limits that the works must comply with to avoid damage;
- h. The proposed noise and / or vibration monitoring regime;
- i. The methods adopted to minimise amenity effects on buildings which remain occupied during the works
- j. The consultation undertaken with owners and occupiers of sites subject to the Schedule, and how consultation outcomes have and have not been taken into account.

The Schedule must be submitted to the Council for certification at least five (5) working days, (or as soon as practicable in unforeseen circumstances arise that make a five-day timeframe impracticable) in advance of Construction Works which are covered by the scope of the Schedule.

32. If any damage to buildings is shown to have occurred as a result of vibration from the construction of the Project, any such damage must be remedied by the Consent Holder as soon as reasonably practicable subject to any associated asset and/or owner agreement.

33. Construction noise shall be measured and assessed in accordance with New Zealand Standard NZS 6803:1999 'Acoustics – Construction Noise' (NZS6803:1999) and comply with the noise standards set out in the Tables 3 and 4 as far as practicable.

Table 1 Construction Noise Criteria – Residential Receivers (Irrespective of Zoning)

Time of week	Time Period	Maximum noise level (dBA) > 20 weeks	
		Leq	Lmax
Weekdays	0630 – 0730	55	75
	0730 – 1800	70	85
	1800 – 2000	65	80
	2000 – 0630	45	75
Saturdays	0630 – 0730	45	75
	0730 – 1800	70	85
	1800 – 2000	45	75
	2000 – 0630	45	75
Sundays and public holidays	0630 – 0730	45	75
	0730 – 1800	55	85
	1800 – 2000	45	75
	2000 – 0630	45	75

Table 2 Construction Noise Criteria – Commercial and Industrial Receivers

Time period	Maximum noise level LAeq dB > 20
07:30 – 18:00	70
18:00 – 07:30	75

34. Where compliance with the noise standards set out in Table 1 and Table 2 above is not practicable, and unless provided for in the Construction Noise Vibration Management Plan (CNVMP) as required by Condition 33, then the methodology in Condition 36 shall apply.

35. Construction vibration shall be measured in accordance with German Standard DIN 4150-3:1999 "Structural Vibration Part 3: Effects of vibration on structures", and shall comply with the vibration standards set out in Table 5 as far as practicable:

Table 3 Construction Vibration Criteria

Vibration Level	Time	Category A	Category B
Occupied — activities sensitive to noise	Night-time — 2000h — 0700h	0.3mm/s ppv	2mm/s ppv
	Daytime — 0700h — 2000h.	2mm/s ppv	5mm/s ppv
Other — occupied buildings	All other times	2mm/s ppv	5mm/s ppv
All other buildings	Daytime — 0630h — 2000h	Tables 1 and 3 of DIN4150-3:1999	

36. ~~The Category A criteria may be exceeded if the works generating vibration take place for three days or less between the hours of 7am to 6pm, provided that the Category B criteria are complied with, and:~~
- a. ~~All occupied buildings within 50m of the extent of the works generating vibration are advised in writing no less than three days prior to the vibration-generating works commencing; and~~
 - b. ~~The written advice must include details of the location of the works, the duration of the works, a phone number for complaints and the name of the site manager.~~
37. ~~Where compliance with the vibration standards set out in Table 5 above is not practicable, and unless otherwise provided for in the CNVMP as required by Condition 33, then the methodology in Condition 36 shall apply.~~
38. ~~The Consent Holder is required to implement and comply with the CNVMP listed in Condition 1, unless otherwise amended by the process in Conditions 11 to 16. The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option (BPO) to avoid, remedy or mitigate the adverse effects on receivers of noise and vibration resulting during construction of the Eastern Busway Project (Package EB3R).~~
39. ~~Any amendments to the CNVMP listed in Condition 1 that may result in a materially different outcome or to address unforeseen adverse effects arising from construction must comply with Conditions 35 and 36.~~
40. ~~The Consent Holder must submit the updated or revised CNVMP to Council for certification in accordance with Conditions 11 to 16 as soon as practicable following identification of the need for an update as a result of a material change.~~
41. ~~The purpose of the CNVMP is to set out a framework to avoid, remedy or mitigate the adverse effects on receivers of noise and vibration resulting during construction of the Eastern Busway Project (Package EB3R). To achieve this objective, the CNVMP shall be prepared in accordance with Annex E2 of (NZS6803:1999) and shall as a minimum, address the following:~~
- a. ~~Description of the works, machinery and equipment to be used;~~
 - b. ~~Hours of operation, including times and days when construction activities would~~

- occur;
 - ~~e. The construction noise and vibration standards;~~
 - ~~d. Identification of receivers where noise and vibration standards apply;~~
 - ~~e. Management and mitigation options, and identification of the Best Practicable Option;~~
 - ~~f. Methods and frequency for monitoring and reporting on construction noise and vibration;~~
 - ~~g. Procedures for communication as set out in the CCP with nearby residents and stakeholders, including:

 - ~~i. Notification of proposed construction activities;~~
 - ~~ii. The period of construction activities; and~~
 - ~~iii. Management of noise and vibration complaints.~~~~
 - ~~h. Contact details for the Communication and Consultation Manager;~~
 - ~~i. 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;~~
 - ~~j. Identification of areas where compliance with the noise (Condition 28) and/or vibration standards (Condition 30 Category A or Category B) will not be practicable.~~
 - ~~k. Procedures for:

 - ~~i. Communicating with affected receivers in accordance with the CCP, where measured or predicted noise or vibration from construction activities exceeds the noise criteria of Condition 28 or the vibration criteria of Condition 30; and~~
 - ~~ii. Assessing, mitigating and monitoring vibration where measured or predicted vibration from construction activities exceeds the Category B vibration criteria of Condition 30, including the requirement to undertake building consent surveys before and after works to determine whether any damage has occurred as a result of construction vibration; and~~
 - ~~iii. Requirements for review and update of the CNVMP.~~~~
42. ~~Unless otherwise provided for in the CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared in consultation with the owners and occupiers of sites subject to the Schedule, when:~~
- ~~a. Construction noise is either predicted or measured to exceed the noise standards in Condition 28, except where the exceedance of the LAeq criteria is no greater than 5 decibels and does not exceed:

 - ~~i. 0630 – 2000: 2 periods of up to 2 consecutive weeks in any 2 months; or~~
 - ~~ii. 2000 – 0630: 1 period of up to 2 consecutive nights in any 10 days;~~~~
 - ~~b. Construction vibration is either predicted or measured to exceed the Category B standard set out in Condition 30 at the receivers;~~
43. ~~The objective of the Schedule is to set out the BPO for the management of noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule must include but not be limited to details such as:~~
- ~~a. Construction activity and location plan, start and finish dates;~~
 - ~~b. the nearest owners and occupiers of the sites to the construction activity;~~
 - ~~c. the predicted noise and/or vibration level for all receivers where the levels are~~

- ~~predicted or measured to exceed the applicable standards in Conditions 28 and/or 30~~
- ~~d. the proposed site-specific noise mitigation~~
- ~~e. the consultation and outcomes with owners and/or occupiers of properties identified in the Schedule; and~~
- ~~f. location, times, and types of monitoring.~~

~~44. The Schedule shall be submitted to the Council for certification at least 5 working days, except in unforeseen circumstances, in advance of construction works that are covered by the Schedule and shall form part of the CNVMP. If no response is provided from the Council, prior to the planned work date, the Schedule shall be deemed to be certified.~~

~~Building condition surveys [in the event environmental specialists identify building condition surveys are necessary]~~

~~45. Prior to construction, a building condition survey must be undertaken of any building or structure that has been identified and assessed as potentially affected by vibration damage arising from construction. The identification and assessment requirement must be determined by an independent and suitability qualified person appointed by the Consent Holder, and based on the criteria below, unless the relevant industry criteria applied at the time or heightened building sensitivity or other inherent building vulnerability requires it. Factors which may be considered in determining whether a building condition survey must be undertaken include:~~

- ~~a. Age of the building;~~
- ~~b. Construction types;~~
- ~~c. Foundation types;~~
- ~~d. General building condition;~~
- ~~e. Proximity to any excavation;~~
- ~~f. Whether the building is earthquake prone or where there is pre-existing damage; and~~
- ~~g. Whether any basements are present in the building.~~

~~46. Where it is determined by an independent and appropriately qualified person appointed by the Consent Holder prior to construction that a building condition survey is required:~~

- ~~a. The Consent Holder must employ an appropriately qualified person to undertake the building condition surveys and that person is required to be identified in the CEMP;~~
- ~~b. The Consent Holder must contact owners of those buildings and structures where a building condition survey is to be undertaken to confirm the timing and methodology for undertaking a pre-construction condition assessment;~~
- ~~c. Should written agreement from owners and occupiers to enter property and undertake a condition assessment not be obtained within three months from first contact, then the Consent Holder is not required to undertake these assessments;~~
- ~~d. During the building condition survey, the Consent Holder must determine whether the building is classified as a vibration sensitive structure;~~
- ~~e. The Consent Holder must provide the building condition survey report to the relevant property owner within 15 working days of the survey being undertaken, and additionally it must notify and provide Council with a copy of the completed survey~~

- report within 15 working days;
- f. ~~The Consent Holder must record all contact, correspondence and communication with owners and occupiers and this record is to be available on request for the Council;~~
 - g. ~~The Consent Holder must undertake a visual inspection when undertaking construction activities likely to generate high levels of vibration if requested by the building owner where a pre-construction condition assessment has been undertaken; and~~

47. ~~During construction:~~

- a. ~~The Consent Holder must implement procedures that will appropriately respond to the information received from any vibration monitors deployed by the acoustic specialist in accordance with the CNVMP. Where necessary this may include temporary cessation of works in close proximity to the relevant building until measures have been implemented to avoid further damage and/or compromising the structural integrity of the building; and~~
- b. ~~Any damage to buildings and structures resulting from the works must be recorded and repaired by the Consent Holder and costs associated with the repair will be met by the Consent Holder. Such repairs, and/or works to repair damage, are limited to what is reasonably required to restore the general condition of the building as described in the building condition survey. Such repairs must be undertaken as soon as reasonably practicable and in consultation with the owner and occupiers of the building.~~

48. ~~Following construction:~~

- a. ~~Within three months of the commencement of operation of the Eastern Busway Project (Package EB3R), the Consent Holder must contact owners of those buildings and structures where a building condition survey was undertaken to confirm the need to undertake a post-construction condition assessment;~~
- b. ~~Where a post-construction building condition survey confirms that the building has deteriorated as a direct result of construction works relating to the project, the Consent Holder must rectify the damage at its own cost. Such repairs, and/or works to repair damage, are limited to what is reasonably required to restore the general condition of the building as described in the building pre-condition survey.~~

URBAN DESIGN AND LANDSCAPING MITIGATION

33. At least 10 working days prior to the commencement of any construction activity the Consent Holder must submit an Urban Design and Landscape Plan (UDLP) to Council for certification in accordance with Conditions 11 to 16. The objective of the UDLP is to mitigate any landscape and visual effects of the Eastern Busway Project (Package EB3R). **The UDLP must focus design and landscaping on the future more intensively developed environment.**

34. The UDLP must include:

- a) Urban design details for works:
 - i. Edgewater Station
 - ii. Gossamer Station
 - iii. Ti Rakau Drive widening between Reeves Road and Pakuranga Creek.
 - iv. The proposed public carpark at 105 Ti Rakau Drive
- b) Landscape design details for works:
 - i. Riverhills Park;
 - ii. Within Ti Rakau Drive.
- c) A maintenance plan and establishment requirements over a three-year period for landscaping and five years for specimen trees following planting.
- d) Lighting, signage, fencing and street furniture details for Eastern Busway Project (Package EB3R) including that of the proposed public carpark at 105 Ti Rakau Drive;
- e) Measures to achieve a safe level of transition for cycling and walking modes, including providing advanced warning and signage to cyclists and pedestrians, and safe and convenient cycling transitions at the ends of the project;
- f) Design features and methods for cultural expression;
- g) A Crime Prevention Through Environmental Design Audit of the new walking and cycling networks
- h) Design features associated with the management of stormwater, including both hard and soft landscaping; and
- i) Measures to ensure additional street, park frontage and platform trees are provided:
 - as street trees on the north side of Ti Rakau Drive between Reeves Road and William Roberts
 - as large trees at the Ti Rakau Park frontage to Ti Rakau Drive (where the planting consented as part of the William Roberts Road Extension LUC60401706) must be identified)
 - as street trees on the north side of Ti Rakau Drive from Ti Rakau Park frontage along to Pakuranga Creek
 - as large trees at the frontage to Riverhills Park and
 - as large distinctive trees at the busway station platforms, being Edgewater and Gossamer Stations.

This will include showing the additional trees and their locations.
- j) The ULDP must provide for appropriate levels of replacement planting to account for the loss of environmental benefits and ecosystem services provided by the trees and vegetation being removed. [TBC as part of the hearing]
- k) Detailed streetscape landscaping plan(s) for all swales, street trees and street gardens for approval by the Parks Planning Team Leader. In particular, the plans must:
 - i. Be prepared by a suitably qualified landscape architect.
 - ii. Show all planting including details of intended species, location, plant sizes at time of planting and likely heights on maturity, tree pit specifications, the overall material palette, location of street lights and other service access points.
 - iii. Ensure that selected species can maintain appropriate separation distances from paths, roads, street lights and vehicle crossings in accordance with the

Auckland Transport Code of Practice.

iv. Include planting methodology.

l) Comply with the [Auckland Code of Practice for Land Development and Subdivision: Chapter 7: Landscaping](#)

35. The Consent Holder is required to carry out all works out in accordance with the certified UDLP, unless otherwise amended by the process in Conditions 11 to 16 above.
36. At least 1 month prior to the final handover to the Council for future care and maintenance of landscaping on Council land and reserves, the Consent Holder's representative is to arrange a site walkover with the Council to inspect the new planting areas, and to document any areas of plant health and maintenance that need to be rectified prior to handover.
37. The UDLP planting requirements must be implemented during the first planting season following the project being operational. If the weather in that planting season is unsuitable for planting, as determined by the Council, the landscaping must instead be implemented at the first practicable opportunity thereafter. The next practicable opportunity must be agreed to by the Council.

TREE WORKS

38. The Consent Holder is required to carry out all works in accordance with the Tree Protection and Management Plan (TPMP) listed in Condition 1, unless otherwise amended by the process in Conditions 12 and 16 above. The objective of the TPMP is to avoid, remedy or mitigate any adverse construction effects of the Eastern Busway Project (Package EB3R) on those trees to be retained as far as reasonably practicable.
39. Any amendments to the TPMP listed in Condition 1 that may result in a materially different outcome or to address unforeseen adverse effects arising from construction must comply with Conditions 47 and 48.
40. The Consent Holder must submit the updated or revised TPMP to Council for certification in accordance with Conditions 11 to 16 as soon as practicable following identification of the need for an update as a result of a material change. The purpose of the TPMP is to avoid, remedy or mitigate any adverse construction effects on those trees to be retained as part of the Eastern Busway Project (Package EB3R) as far as reasonably practicable.
41. To achieve its objective, the TPMP is to include:
 - a) Tree protection measures for trees to be retained;
 - b) Tree pruning measures;
 - c) Demarcation of temporary construction access and storage areas, outside the permeable dripline and / or rootzone areas of retained trees;
 - d) Use of protective barrier fencing;
 - e) Procedures for working within the dripline/rootzone of any retained tree, including appointment of a qualified Council approved arborist ("appointed arborist") to oversee directly all works within the dripline and rootzone of the trees located in the designated areas of work for the duration of the site works, until the route is considered completed, and including any reinstatement works;
 - f) Specific bio-security removal restrictions that will apply to all elms (*Ulmus* sp.) and

- kauri (*Agathis australis*), to avoid the risk of spread of Dutch Elm Disease or kauri dieback, including vetting and approving the methodology and treatment of the Elm and kauri material by the Council's arboricultural specialist responsible for handling and treatment of all Elm/kauri material controlled under the Biosecurity Act, prior to any works taking place; and
- g) Measures to provide for clear marking of all tree removals prior to implementation of each stage of the works, with verification of the removals by the Consent Holder's arborist in consultation with the Council's arboricultural specialist.
42. If the design of the project is modified so that it becomes apparent that trees protected by the provisions of the AUP(OP) identified as being retained in the approved Tree Plans appended to the Arboricultural Effects Assessment in Condition 1 are required to be removed, then the removal of the trees is appropriate if:
- a) The design modification results in retention of a tree that was identified to be removed (i.e. no net loss of protected trees); or
 - b) If the design modification will result in a net loss of protected trees, a suitable replacement specimen tree is provided in the project corridor (in addition to the proposed planting shown on the approved Tree Plans appended to the Arboricultural Effects Assessment in Condition 1).

Advice Note: *Protected trees refers to trees within the road reserve and Council reserves that more than 4m in height and/or more than 400mm in girth. It also includes any trees listed in Schedule 10 "Notable Trees" in the AUP(OP).*

PUBLIC CARPARK – 105 TI RAKAU DRIVE

43. Detailed plans must be submitted for approval to Council of the 22 at-grade public carpark at the above address. These plans must include the following information:
- a) Reduce the vehicle crossing width to 6m
 - b) Undertake amendment to the internal layout to achieve full compliance in accordance with Table E27.6.3.1.1 (T120), e.g., shifting the manoeuvring space between western rows to make room for the eastern row
 - c) Include appropriate lighting provisions in a manner that complies with the rules in E24 of AUP-OP
 - d) Provide at least one assessable parking space in accordance with NZS:4121-2001.

HERITAGE

44. To achieve RMA Historic heritage outcomes, an addendum to the Archaeological Management Plan (AMP) must be provided and certified by the Manager Heritage Unit (heritageconsents@aucklandcouncil.govt.nz) at least two weeks prior to earthworks commencing on site.
45. Matters to be included in the addendum must include (but not be limited to):
- a) Provision in the methodology for circa 1900 and post 1900 sites and artefacts to be recorded, and for the potential for retention of artefacts for reuse in the road reserve area (or similar) near where they are found. This reuse is to be developed between the Consent Holder and representatives from the Heritage Unit.
 - b) Final reports submitted to comply with external requirements (archaeological authority) should also be shared with the schools¹, and similar, in the area. This is to enable institutions to develop an understanding of NZ history in their community.
46. In the event that any unrecorded historic heritage sites are identified as a result of the Eastern Busway Project (Package EB3R), then these sites must be recorded by the Consent Holder for inclusion in the Council's Cultural Heritage Inventory. The Consent Holder's historic heritage expert must prepare documentation suitable for inclusion in the Inventory and forward that information to the Manager: Heritage Unit, heritageconsents@aucklandcouncil.govt.nz within one calendar month of completion of work on the route.
47. Electronic copies of all historic heritage reports relating to historic heritage investigations of whatever form (i.e. evaluation, monitoring and excavation) in regard to the works, are to be submitted by the Consent Holder's project historic heritage expert to the Monitoring officer(s) within 12 months of completion of the Eastern Busway Project (Package EB3R).

LAND DISTURBANCE

Advanced notification that earthworks will be beginning on site

48. The Council must be notified at least five (5) working days prior to earthwork activities commencing on the subject site.
49. All works must be in accordance with the Erosion and Sediment Control Plan (ESCP) listed in Condition 1, unless otherwise modified by the process in Conditions 11 to 14 above. Conditions 52 below, or a relevant higher standard as referred to through the conditions below. The purpose of the ESCP is to provide overarching principles and procedures to manage the environmental impacts associated with erosion and sediment control (ESC) during construction of the Eastern Busway Project (Package EB3R).
50. ~~Prior to the commencement of earthworks within a given area or stage, a Site Specific Erosion and Sediment Control Plan (SSESCP) must be prepared in accordance with Auckland Council's Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region Guideline Document 2016/005 ("GD05") and submitted to Council for certification. No earthworks activity within the specific area or stage must commence until the Council has certified that the SSESCP satisfactorily meets the requirements of GD05.~~

¹ The Ministry of Education website lists 25 schools in the area. Both primary and secondary schools should receive a digital copy of any reporting. Also, larger institutions like Metlifecare, should receive a copy too.

The SSES CPs must contain sufficient detail to address the following matters:

- a) Contour information;
- b) ESC measures for the works being undertaken within a particular construction area;
- c) Chemical treatment design and details;
- d) Catchment boundaries of works and devices installed;
- e) Location of the work;
- f) Details of construction methods;
- g) Design criteria, typical and site-specific details of erosion and sediment control; and
- h) Design details for managing the treatment, disposal and/or discharge of contaminants (e.g. concrete wash water).

51. The erosion and sediment control measures must be constructed and maintained in general accordance with the Council's GD05 and any amendments to that document, except where a higher standard is detailed in the documents listed in these consent conditions, in which case the higher standard is to apply.

50. Prior to the commencement of earthworks, an indicative staging plan must be submitted to the Council. The purpose of the staging plan is to identify the works areas that will correspond with the final site specific erosion and sediment control plans required by condition 52.

51. Prior to commencement of each stage of earthworks, a final contours plan and cut / fill plan must be prepared and submitted to Council with the finalised Site Specific Erosion and Sediment Control Plans required by Condition 52. The plans must include, but not limited to, details of the existing levels, design levels and cut / fill depths of the earthworks across the entire stage of works.

52. Prior to the commencement of earthworks within a given area or stage, a Site Specific Erosion and Sediment Control Plan (SSES CP) must be prepared in accordance with Auckland Council's *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region Guideline Document 2016/005* ("GD05") and submitted to Council for certification in accordance with Condition 9. No earthworks activity within the specific area or stage must commence until the Council has certified that the SSES CP satisfactorily meets the requirements of GD05.

The SSES CP and earthworks methodology must contain sufficient detail to address the following matters:

- a) Contour information;
- b) Specific erosion and sediment control works for all earthworks activities in accordance with the site Erosion and Sediment Control Plan and Sediment Control Effects Assessment referenced in Condition 1 and in general accordance with Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05), including confirmation of:
 - i. decanting earth bund design to meet GD05, or a relevant higher standard as referred to through the conditions below;
 - ii. that all earthworks and erosion and sediment control measures will be located a minimum of 10m from the edge of all natural inland wetlands;
 - iii. finalised Dewatering Procedures to ensure discharges from trenches, excavations or any discharges that will enter the stormwater reticulation or

- directly to the receiving environment will achieve a minimum of 100mm depth of clarity prior to discharge;
- iv. management of water during concrete pours;
 - v. finalised controls and methodology for MSC and retaining wall construction.
- c) Identify the extent of all natural wetlands and the 10m setback;
 - d) chemical treatment design and details including bench testing results and confirmation of rainfall activated methodology where possible;
 - e) catchment boundaries of works and devices installed;
 - f) location of the work;
 - g) details of construction methods;
 - h) design criteria, typical and site-specific details of erosion and sediment control;
 - i) design details for managing the treatment, disposal and/or discharge of contaminants (e.g. concrete wash water);
 - j) monitoring and maintenance requirements;
 - k) details relating to the management of exposed areas (e.g. grassing, mulching).

Advice Note: *In the event that minor amendments to the ESCP are required, any such amendments should be limited to the scope of this consent. Any amendments which may affect the performance of the ESCP or the total area of earthworks may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to Council, prior to implementation to confirm that they are within the scope of this consent.*

53. Prior to the commencement of earthworks for the EB3R site, the Consent Holder must hold a pre-start meeting that:
- is located on the subject site;
 - is scheduled **not less than five days** before the anticipated commencement of earthworks;
 - includes representation from Auckland Council compliance monitoring officer[s]; and
 - includes representation from the contractors who will undertake the works.

The meeting must discuss the erosion and sediment control measures, the works methodologies and monitoring regime, and must ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.

The following information must be made available at the pre-start meeting:

- Timeframes for key stages of the works authorised under this consent;
- Resource consent conditions;
- The finalised Site Specific Erosion and Sediment Control Plan and methodology; and
- The Chemical Treatment Management Plan.

A pre-start meeting must be held prior to the commencement of the earthworks activity in each period between October 1 and April 30 that this consent is exercised.

Advice Note: *To arrange the pre-start meeting required by Condition (50) please contact the Council on monitoring@aucklandcouncil.govt.nz, or 09 301 01 01. The conditions of consent should be discussed at this meeting. All additional information required by the Council should be provided 2 days prior to the meeting.*

54. Within ten (10) working days following implementation and completion of the specific erosion and sediment controls required by the certified Site Specific Erosion and Sediment Control Plan (SSESCP) and condition 52, and prior to commencement of the earthwork activity within the subject area or stage referred to in the SSESCP, the Consent Holder must provide to Council written certification prepared by a suitably qualified and experienced person confirming that the erosion and sediment control measures have been constructed and completed in accordance with the SSESCP for that particular area or stage, the Erosion and Sediment Control Plan, Auckland Council's Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05) and any higher standard referred to through the conditions below.

Certified controls must include the decanting earth bunds, any other impoundment device dewatering measures (including design of intake structures), clean and dirty water diversions, silt fences, and stabilised construction entranceways. Information supplied, if applicable, must include:

- Details on the contributing catchment area;
- Size of structure;
- Retention volume of structure (dead storage and live storage measured to the top of the primary spillway);
- Dimensions and shape of structure;
- Position of inlets/outlets; and
- Stabilisation of the structure.

Advice Note: Suitable documentation for certification of erosion and sediment control devices, can be obtained in Appendix C of Guidance Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 1 (GD05): Erosion and Sediment Control construction quality checklists.

Seasonal Restriction and abandonment of works

55. Earthworks on the subject site must not be undertaken between 01 May and 30 September in any year, without the submission of a 'Request for winter works' for approval to Council. All requests must be renewed annually prior to the approval expiring and no works must occur until written approval has been received from Council. All winter works will be re-assessed monthly or as required to ensure that adverse effects are not occurring in the receiving environment and approval may be revoked by Council upon written notice to the Consent Holder.

Advice Note: Any request for winter works outside these periods will require information addressing the level of risk, contingency methods to manage the risk, including demonstrating that the selected contractor has established experience and record of compliance with the resource consent conditions. Any request for 'winter works' (excluding any period to protect fish spawning habitat), should include:

- Description of scope of works proposed for the period outside 1 May to 30 September
- Measures to prevent sediment discharge from the specific works, especially during periods of heavy rainfall
- Details of the area(s) that are already stabilised
- Amended stream management plan and methodology/ or erosion sediment control plan detailing stabilisation to date and time / staging boundaries with proposed progression of stabilisation / re-vegetation (and integration between any stream management plan and erosion sediment control measures);

- Contact details of the contractor who will undertake stabilisation of the site (including dates expected on site);
- Contingencies proposed if contractor above becomes unavailable
- Details of site responsibilities, specifically for erosion and sediment controls and stabilisation processes over period.

56. Immediately upon completion or abandonment of earthworks on the subject site, all areas of bare earth must be permanently stabilised to the satisfaction of the Council.

Advice Note: Should the any earthworks be completed or abandoned, bare areas of earth associated with the works must be permanently stabilised against erosion. Measures may include:

- The use of mulching or natural fibre matting.
- Top-soiling, grassing and mulching of otherwise bare areas of earth.
- Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.

The on-going monitoring of these measures is the responsibility of the Consent Holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Alternatively, please refer to Auckland Council Guidance Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 1 (GD05).

Wetland Set Back Requirements

57. All earthworks, including all erosion and sediment controls, must be setback a minimum of 10m from the edge of the natural wetland as identified in the report titled "Eastern Busway EB2 and EB3 Residential, Terrestrial and Freshwater Ecological Effects Assessment", dated 18 July 2022. Prior to the commencement of earthworks, including construction of reticulation and outfalls authorised by this consent, a suitably qualified and experienced ecologist must identify the 10m setback from all natural inland wetlands and a sturdy, framed, protection fence must be erected along the 10m setback. The fence must remain in place until the completion of all works on the site and no work must be carried out, or materials stored, within the protected wetland area.

Advice Note: A 'day-glow' barrier mesh or 'pigtail' fence/wire or rope would be sufficient for this purpose.

During Earthworks

58. The erosion and sediment control measures must be constructed and maintained in general accordance with the Council's GD05 and any amendments to that document, except where a higher standard is detailed in the documents listed in these consent conditions, in which case the higher standard is to apply. A record of any maintenance work must be kept and be supplied to the Council on request.

59. All perimeter controls must be operational before earthworks commence. All 'clean water' runoff from stabilised surfaces including catchment areas above the site itself must be diverted away from earthworks areas via a stabilised system, so as to prevent surface erosion.

60. All Decanting Earth Bunds utilised during earthworks must be designed and constructed in accordance with GD05, including having a 3:1 length to width ratio. For DEBs that will be used for treatment of dewatering or with a catchment greater than 3,000m², the DEB must be constructed with an additional 10% capacity forebay that is a minimum of 1m deep, and extended the entire width of the device, with a geotextile lined Spreader Bar.

61. The decanting earth bunds and any other authorised impoundment device utilised as part of the earthworks must be chemically treated in accordance with the approved Chemical Treatment Management Plan (ChTMP) listed in condition 1, and the finalised chemical treatment details as certified by condition 52 above.

Advice Note: *In the event that minor amendments to the ChTMP are required, any such amendments must be limited to the scope of this consent. Any amendments which affect the performance of the ChTMP may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to the Council prior to implementation to confirm that they are within the scope of this consent.*

62. All dewatering from the EB3R project area must be undertaken in accordance with the Dewatering Management Plan, and any updates to this plan certified by the Site Specific Erosion and Sediment Control Plans. All discharges from the EB3R project area must achieve a minimum of 100mm depth of clarity prior to discharge in accordance with Auckland Council's Guideline Document 2016/005 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05).

63. Prior to the removal of any erosion and sediment control device required as a condition of resource consent, written certification must be provided to the Council by a suitably qualified and experienced person to confirm that all areas of bare earth have been permanently stabilised against erosion in accordance with GD05 and can be directed to a Clean Water Diversion.

64. Notice must be provided to the Council at least (2) working days prior to the removal of any erosion and sediment control works specifically required as a condition of resource consent or by the certified Erosion and Sediment Control Plan.

65. The operational effectiveness and efficiency of all erosion and sediment control measures specifically required as a condition of resource or by the Erosion and Sediment Control Plans must be maintained throughout the duration of earthworks activity, or until the site is permanently stabilised against erosion.

Advice Note: *As a guide, maintenance of the erosion and sediment control measures should seek to ensure that the accumulated sediment be removed from sediment retention devices prior to reaching 20% storage live storage capacity. Sediment removed from treatment devices should be placed on stable ground where it cannot re-enter the device or be washed into any watercourse.*

Where maintenance work is required to ensure the effectiveness of these erosion and sediment control measures, the record should include the date, time and details on the nature of any maintenance. The site manager (or equivalent) will need to ensure regular inspections of these measures, and particularly within 24 hours after any rainstorm event. Where it is identified that erosion and sediment control measure have become ineffective and maintenance is required, Council should be contacted (email monitoring@aucklandcouncil.govt.nz).

66. The Consent Holder must take all practical measures to prevent deposition of soil, mud, dirt or other debris on roads and footpaths outside the works area of Eastern Busway Project (Package EB3R). In the event that deposition of earth, mud, dirt or other debris on any road or footpath outside the works area resulting from earthworks activity on the project area occurs, it is to be removed immediately. In no instance must roads and/or footpaths to be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses and/or receiving waters.

Advice Note: *In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent, or address discharges should they occur:*

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces using street-sweepers*
- *silt and sediment traps*
- *catchpit protection*

In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned. It is recommended that you discuss any potential measures with Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact Council for more details. Alternatively, please refer to Auckland Council Guideline Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016 (GD05).

67. The site must be progressively stabilised against erosion at all stages of the earthworks activities, and must be sequenced to minimise the discharge of contaminants to surface water in accordance with the approved Erosion and Sediment Control Plan.

Advice Note: *Stabilisation measures may include:*

- *the use of waterproof covers, geotextiles, or mulching*
- *top-soiling, grassing and hay mulching of otherwise bare areas of earth*
- *aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

It is recommended that you discuss any potential measures with Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact Council for more details. Alternatively, please refer to Auckland Council Guideline Document 005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016 (GD05).

68. The sediment and erosion controls at the site of the works are to be inspected on a regular basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the erosion and sediment controls. A record is to be maintained of the date, time and any maintenance undertaken in association with this condition, in accordance with the certified Erosion and Sediment Control Plan, which is to be forwarded to the Council on request.

Ensure dust does not cause adverse effects

69. Discharges of dust must not cause offensive or objectionable effects at any location beyond the boundary of the Site, in the opinion of an enforcement officer when assessed in accordance with the Good Practice Guide for Assessing and Managing Dust (Ministry for the Environment, 2016). The Consent Holder must ensure that dust management during the works generally complies with the recommendations of this Good Practice Guide and minimises dust generation as far as practicable. This includes having sufficient water to dampen exposed soil and unsealed areas, and/or other dust suppressing measures detailed by the ESCP, available as necessary.

Advice Notes: *In accordance with the above condition in order to manage dust on the site consideration should be given to adopting the following management techniques:*

- *stopping of works during high winds*
- *In assessing whether the effects are noxious, offensive, or objectionable, the following factors will form important considerations:*
- *The frequency of dust nuisance events*
- *The intensity of events, as indicated by dust quantity and the degree of nuisance*
- *The duration of each dust nuisance event*
- *The offensiveness of the discharge, having regard to the nature of the dust*
- *The location of the dust nuisance, having regard to the sensitivity of the receiving environment.*

It is recommended that potential measures as discussed with the council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring South at monitoring@aucklandcouncil.govt.nz for more details. Alternatively, please refer to the Ministry for the Environment publication "Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions."

Ensure supervision and certification of geotechnical works.

70. The construction of the road must be in accordance with the Geotechnical Interpretive Report EB2 and EB3 prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000004 Rev 0 dated 20 April 2022 and Geotechnical Factual Report EB2 and EB3 prepared by Eastern Busway referenced no. EB-2-D-0-GT-RP-000003 dated 9 September 2022 and must be supervised by a suitably qualified engineering professional. In supervising the works, the suitably qualified engineering professional must ensure that they are constructed and otherwise completed in accordance with the approved plans.

Certification from a suitably qualified engineering professional responsible for supervising the works must be provided to Council, confirming that the works have been completed in accordance with the above condition 6 within ten (10) working days following completion. Geotechnical Completion Report must be submitted to the council.

Ensure stability of the site/neighbouring sites.

71. All earthworks must be managed to ensure that they do not lead to any uncontrolled instability or collapse either affecting the site or adversely affecting any neighbouring properties. In the event that such collapse or instability does occur, it must immediately be rectified.

72. Within 10 working days following implementation and completion of the specific erosion and sediment control works referred to in a SSES CP required by Condition 54, and prior to the commencement of earthworks activity within the subject area or stage referred to in the SSES CP, a suitably qualified and experienced person must provide written certification that the erosion and sediment controls have been constructed and completed in accordance with the SSES CP for that particular area of stage.

Advice Note: *The certified controls are to include the decanting earth bunds, sediment retention ponds, clean and dirty water diversions, silt fences, and stabilised construction should contain sufficient details to address the following matters:*

- a) *Details on the contributing catchment area*
- b) *Retention volume of structure (dead storage and live storage measured to the top of the primary spillway)*
- c) *Dimensions and shape of structure(s)*
- d) *Position of inlets/outlets and*
- e) *Stabilisation of the structure(s)*

73. The operational effectiveness and efficiency of all erosion and sediment control measures specifically required in Condition 72 and 74 must be maintained throughout the duration / each stage of earthworks activity, or until the site is permanently stabilised against erosion.

74. The Consent Holder must take all practical measures to prevent deposition of soil on roads and footpaths outside the works area of Eastern Busway Project (Package EB3R). In the event that deposition of earth, mud, dirt or other debris on any road or footpath outside the works area resulting from earthworks activity on the project area occurs, it is to be removed immediately. In no instance are roads and/or footpaths to be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses and/or receiving waters.

Advice Note: *The following methods may be adopted to prevent or address discharges should they occur:*

- a) *Provision of a stabilised entry and exit(s) point for vehicles*
- b) *Provision of wheel wash facilities*
- c) *Ceasing vehicle movements until materials are removed*
- d) *Cleaning road surfaces using street-sweepers*
- e) *Silt and sediment traps and*
- f) *Catchpits.*

In no circumstances should washing deposited materials into drains be advised or otherwise condoned. It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take.

Please contact the Council for more details. Alternatively, please refer to GD05.

75. On completion or abandonment of earthworks, all areas of bare earth must be permanently stabilised against erosion as defined by GD05.

Advice Note: *Stabilisation measures may include:*

- a) *Use of mulch*
- b) *Top-soiling and grassing otherwise bare areas of earth*
- c) *Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

76. The sediment and erosion controls at the site of the works are to be inspected on a regular basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the erosion and sediment controls. A record is to be maintained of the date, time and any maintenance undertaken in association with this condition which is to be forwarded to the Council on request.

CONTAMINATED LAND

77. Discharges from disturbance of contaminated soil must be carried out in accordance with the Contaminated Land Management Plan (CLMP) listed in Condition 1 unless otherwise modified by the conditions below or in accordance with Conditions 11 to 14 above.

78. An appropriately qualified and experienced contaminated land specialist must be engaged to oversee the earthworks in areas of potential contamination. All sampling and testing of contamination on the site must be overseen by the appropriately qualified and experienced contaminated land practitioner. All sampling is to be undertaken in accordance with the Contaminated Land Management Guidelines, No-5 - Site Investigation and Analysis of Soils, Ministry for the Environment, revised 2021.

Advice Note: *All testing and analysis should be undertaken in a laboratory with appropriate experience and ability to carry out the analysis. For more details on how to confirm the suitability of the laboratory please refer to Part 4: Laboratory Analysis, of Contaminated Land Management Guidelines No.5*

79. The Council is to be informed in writing about the commencement of the Eastern Busway Project (Package EB3R) works at least 2 working days prior to commencement.

Advice Note: *Discharge from the site includes the disposal of water (e.g. perched groundwater or collected surface water) from the remediation area.*

80. Any soils and/or fill material identified as contaminated and requiring off-site disposal are to be loaded directly into trucks and covered during transportation off site in accordance with the CLMP. All soil removed from the land disturbance area must be deposited at a suitably certified facility.

81. All imported fill:

- a) must comply with the definition of 'cleanfill', in accordance with 'A Guide to the Management of Cleanfills', Ministry for the Environment (2002).
- b) be solid material of a stable, inert nature and
- c) not contain hazardous substances or contaminants above recorded natural background levels of the receiving site.

Advice Note: *Background levels for the Auckland region can be found in the Council's technical publication TP153 "Background concentrations of inorganic elements in soils from the Auckland Region" (2001).*

Certification of Imported Fill

82. Within 10 working days following the completion of earthworks, the suitably qualified engineering professional responsible for supervising the works must provide to Council, written evidence that all fill used on the subject site has the characteristics set out in condition of this consent. Written evidence must be in the form of a receipt, compaction certificate(s) or similar.

83. Within three months of the completion of the soil disturbance activities within the project area, a Site Completion Report (SCR) must be provided to the Council.

84. The SCR must contain sufficient detail to address the following matters:

- a) A summary of the works undertaken, including a statement confirming whether the excavation of the site has been completed in accordance with the CLMP
- b) A summary of inspections and oversight completed by the SQEP.
- c) The location and dimensions of the excavations carried out, including a site plan.
- d) A summary of testing undertaken (if applicable) including tabulated analytical results.
- e) Records of any unexpected contamination encountered during the works and contingency measures undertaken (if applicable).
- f) Details of any validation soil sampling completed in areas of unexpected soil contamination and vicinity of fill material previously identified as exceeding the adopted soil acceptance criteria (if applicable).
- g) Copies of the disposal dockets for the contaminated fill and 'cleanfill' material removed from the site.
- h) Copies of the SQEP site inspection documentation.
- i) Details regarding any complaints and/or breaches of the procedures set out in the certified CLMP, and how any incidents or complaints were addressed.
- j) Results of testing, if required, of any spoil disposed offsite.
- k) Results of testing of any imported fill material.
- l) Identification of any areas which need on-going monitoring and management.

85. Where contaminants are identified that have not been anticipated by the application, the unexpected discovery procedures in the CLMP as identified in Condition 1 must be employed, including notifying the Council. Any unexpected contamination and contingency measures must be documented in the SCR.

Advice Note: *Unexpected contamination may include contaminated soil, perched water or groundwater. The Consent Holder is advised that where unexpected contamination is significantly different in extent and concentration from that anticipated by the original site*

investigations, handling the contamination may be outside the scope of this consent. Advice should be sought from the Council as to whether carrying out any further work in the area of the unexpected contamination is within scope of this consent.

CONTAMINATED LAND – ENVIRONMENTAL HEALTH (LUC60407123)

86. All works are to be in accordance with the CLMP listed in Condition 1, unless otherwise amended by the process in Conditions 11 to 14 above. The CLMP must be prepared, implemented and reported in accordance with Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 ('NES: Soil') by an appropriately qualified and experienced professional.
87. An appropriately qualified and experienced contaminated land specialist must be engaged to oversee the earthworks in areas of potential contamination.
88. Works must cease in the vicinity of any contamination not previously identified and the Council must be advised immediately. Works can recommence once the unexpected discovery protocols noted in the section for 'Unexpected Discovery of Land Contamination' in the certified CLMP have been satisfied.

Advice Note: *If you are demolishing any building/structures that may have asbestos containing materials (ACM) in it:*

- *You have obligations under the relevant regulations for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.*
- *Work may have to be carried out under the control of person holding a WorkSafe NZ Certificate of Competence (CoC) for restricted works.*
- *If any ACM is found, removal or demolition will have to meet the Health and Safety at Work (Asbestos) Regulations 2016.*
- *Information on asbestos containing materials and your obligations can be found at www.worksafe.govt.nz.*
- *If ACM is found on site following the demolition or removal of the existing buildings/structure, you may be required to further remediate the site and carry out validation sampling. Dependent on the amount of soil disturbance, a further consent application may be required.*

CONTAMINATED LAND – DISCHARGE CONSENT (DIS60407493)

89. Potentially contaminated soils and material identified for off-site disposal must primarily be loaded directly into trucks and must be covered during transportation off site. If required, temporary stockpiles of soils free from separate phase hydrocarbons or odorous petroleum hydrocarbons must be located on an impermeable surface within an area protected by erosion and sediment controls and be covered with tarpaulins anchored at the edges outside working hours and during periods of heavy rain. Stockpiling of material containing separate phase hydrocarbons or odorous petroleum hydrocarbons must not take place.

90. The disturbance of soils containing elevated levels of contaminants must be managed in accordance with the CLMP to minimise the discharge of contaminants (including debris, soil, silt, sediment or sediment-laden water) from the subject site to either land, stormwater drainage systems, watercourses or receiving waters:

- a) Erosion and sediment controls must be installed along the boundaries of the disturbance areas in accordance with the CLMP and Auckland Council guidance document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region;
- b) The excavation areas must be maintained in a damp state while works are occurring to suppress the generation of dust during the works;
- c) Filter cloths or cover mats must be installed over the stormwater cesspits in the vicinity of the excavation areas;
- d) Vehicles must be inspected prior to leaving the works area and wheels brushed/cleaned as required to avoid the potential for sediment to leave the site on vehicle tyres and enter the stormwater system; and
- e) Any truck-loads of excess excavated material leaving the site must be covered during transportation.

Advice Note: *Contaminant discharges - Discharges from the site include the disposal of water (including groundwater or collected surface water) from the land-disturbance area.*

91. Any perched groundwater or surface run-off water encountered within the excavation area requiring removal must be considered potentially contaminated, and must either:

- a) Be disposed of by a licensed liquid waste contractor; or
- b) Pumped to sewer, providing the relevant permits are obtained; or
- c) Discharged to the stormwater system or surface waters provided a SQEP verifies that the contaminant levels are likely to comply with the Australian and New Zealand Environment Conservation Council (ANZECC) Guidelines for Fresh and Marine Water Quality (2000) for the protection of 80 percent of freshwater species, with the exception of benzene where the 95 percent protection level must apply.

ECOLOGY

92. An Ecological Management Plan must be submitted for certification by the Council that includes:

- a) Updated Lizard Management Plan development and implementation
- b) Habitat Restoration Plan development and implementation
- c) Vegetation Clearance Protocols for avifauna protection
- d) Stream Restoration Plan
- e) Biodiversity Compensation implementation

93. The Consent Holder must implement the Lizard Management Plan (LMP) listed in Condition 95, unless otherwise amended by the process in Conditions 11 to 14 above. The purpose of the LMP is to avoid, remedy or mitigate adverse effects on native lizards associated with vegetation and site clearance, as far as is reasonably practicable.

Advice Note: *A permit under the Wildlife Act 1953 will be required from the Department of Conservation to enable lizard salvage to occur.*

94. Any amendments to the LMP listed in Condition 1 that may result in a materially different outcome or to address unforeseen adverse effects arising from construction must comply with Conditions 95 and 96.
95. The Consent Holder must submit the updated or revised LMP to Council for certification in accordance with Conditions 11 to 16 as soon as practicable following identification of the need for an update as a result of a material change.
- a) The LMP must address the following (as appropriate): Credentials and contact details of the ecologist/herpetologist who will implement the plan;
 - b) Timing of the implementation of the LMP.
 - c) A description of methodology for survey, salvaging and relocation of lizards rescued including but not limited to:
 - i. Salvage protocols;
 - ii. Relocation protocols (including method used to identify suitable relocation site(s));
 - iii. Diurnal capture protocols;
 - iv. Supervised habitat clearance/transfer protocols;
 - v. Artificial cover object protocols; and
 - vi. Opportunistic relocation protocols.
 - d) A description of the relocation site(s) (refer also Condition 76) including discussion of:
 - vii. Provision for additional refugia, if required (e.g. depositing salvaged logs, wood or debris for newly released skinks that have been rescued);
 - viii. Any protection mechanisms (if required) to ensure the relocation site is maintained (e.g.) covenants, consent notices etc; and
 - ix. Any weed and pest management to ensure the relocation site is maintained as appropriate habitat.
 - e) Monitoring methods, including but not limited to the following:
 - x. Ongoing surveys to evaluate translocation success pre- and post-translocation surveys for 3 years; and
 - xi. Monitoring of effectiveness of pest control and/or any potential adverse effects on lizards associated with pest control.
 - f) A post vegetation clearance for remaining lizards;
 - g) A suitably qualified and experienced ecologist/herpetologist approved to oversee the implementation of the LMP must certify that the lizard related works have been carried out according to the certified LMP within two weeks of completion of the vegetation clearance works; and
 - h) Upon completion of works, all findings resulting from the implementation of the LMP must be recorded by a suitably qualified and experienced ecologist/herpetologist approved by the Council on an Amphibian/Reptile Distribution Scheme (ARDS) Card (or similar form that provides the same information) which must be sent to Council.

96. At least 10 working days prior to the commencement of any construction activity, the Consent Holder must submit a Habitat Restoration Plan (HRP) to Council for certification in accordance with Conditions 11 to 14.

Advice Note: *Riparian and coastal margins are defined by Chapter E26 (Infrastructure) and Chapter J (Definitions) of the AUP(OP).*

97. The purpose of the HRP is to detail the site specific lizard habitat restoration measures which addresses the impacts of the Eastern Busway Project (Package EB3R) on lizard habitat as identified within the 'Eastern Busway: Ecological Impact Assessment report'.

- a. The HRP should be developed in accordance with the conditions of the LMP (Condition 79), in order to ensure the habitat(s) that lizards are relocated to will support viable native lizard populations for all species present pre-development.
- b. The HRP **must** include:
 - i. Identification of areas to be restored as lizard habitat to the quantum of 0.3ha as identified in 'Eastern Busway: Ecological Impact Assessment report';
 - ii. Detail of the restoration required at each site to replace and enhance lizard habitat including the planting design (including vegetation to be retained), and supplementary refuges;
 - iii. All plantings must be demarcated and protected by fencing (where appropriate);
 - iv. A programme of establishment and post establishment protection and maintenance of plants (fertilising, weed removal/spraying, replacement of dead/poorly performing plants, watering to maintain soil moisture, maintenance programme). All plantings must be maintained for a minimum of the 3 years; and
 - v. Details of the proposed plant species, plant sourcing (locally EcoSourced native pioneer species that are adapted to the Auckland environment are preferred in the first instance), plant sizes at time of planting, plan of the planted area within the planting area required, density of planting, and timing of planting.

98. The HRP planting requirements must be implemented during the first planting season following the Eastern Busway Project (Package EB3R) being operational. If the weather in that planting season is unsuitable for planting, as determined by the Council, the landscaping must instead be implemented at the first practicable opportunity thereafter. ~~The next practicable opportunity must be agreed to by the Council.~~

99. The Consent Holder must undertake works in accordance with the approved Ecological Management Plan required under condition 92.

COASTAL PERMIT CST60408460 (occupation) and CST60408461 (disturbance)

General

100. For the duration of the construction activities, including the reinstatement/rehabilitation of the site post construction activities, the Consent Holder must maintain the site in good order.

101. The Consent Holder must notify the Council in writing of the date of the proposed commencement of works, at least 10 working days prior to the proposed start date.

Construction Management Plan

102. A minimum of 20 working days prior to the proposed commencement of works within the CMA, a finalised Construction Management Plan (CMP) must be submitted for certification by the Council.

The CMP must specify the following:

- a) a construction timetable including mangrove removal.
- b) The final construction methodology including details of:
 - i. installation of temporary structures in the CMA;
 - ii. the route to be used for accessing the site for construction purposes and any mitigation measures to avoid more than minor adverse effects on the environment.
 - iii. A removal methodology for the temporary platform/staging and piles extraction, mangrove removal, and disposal for cleared mangrove plants, and spoil from drilling for piles.
 - iv. Methods to maintain a safe navigation channel past the works site, detailing periods during when there maybe restrictions on navigation past the site.
- c) a construction methodology that minimises mangrove removal/pruning as far as reasonably practicable.
- d) Identification of all access points to the CMA, and the intended location of stockpiles of cleared vegetation.
- e) general site management, including details of:
 - i. site access, including methods to clearly identify and delineate all entry and exit points to the coastal marine area.
 - ii. the bunding or containment of fuels and lubricants to prevent the discharge of contaminants.
 - iii. a spill contingency plan in the event that there is any discharge of contaminants to the coastal marine area.
 - iv. restrictions and methods necessary to maintain public health and safety, including means for restricting and notifying the public of any restrictions on public access to and along the coastal marine area.
 - v. management of public access to and along the coastal marine area while the activities are being carried out.
 - vi. removal of all spoils from the CMA.
- f) site reinstatement upon completion of the construction activities.

103. The Consent Holder must undertake works in accordance with the approved Construction Management Plan required under condition 102.

Occupation

104. The occupation of the common marine and coastal area by the authorised pathway is not an exclusive right of occupancy. The general public or any person(s) must not be excluded from the area(s) or any part of the area(s) to which this consent applies, unless necessary for the primary purpose of the structure(s), and only to the extent necessary to enable the primary purpose of the structure(s).

Post construction

105. All mangroves removed under this permit must be disposed of outside the coastal marine area (CMA) at the completion of each week of work, or as agreed by the Council.

106. Within one month of the completion of the consented construction activities a complete set of "as built" plans must be supplied to the Council.

107. A copy of the "as built" plans must be provided to the Hydrographic Office (Chief Hydrographer, National Topo/Hydro Authority, Land Information New Zealand, Private Box 5501, Wellington) within one month of the completion of the construction activities.

Maintenance Requirements

108. The stormwater infrastructure structures must be maintained in a good and sound condition, and any repairs that are necessary must be made, subject to obtaining any necessary resource consents.

Review Condition

109. Under section 128 of the RMA the conditions of these coastal permit consents may be reviewed by the Manager Resource Consents at the Consent Holder's cost on a five (5) yearly basis to deal with any adverse effect on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage, in particular adverse effects on coastal environment or surrounding structures.

110. Prior to any works in the Coastal Marine Area (CMA) commencing, a final construction methodology should be included within the relevant SSES CP required in accordance with Condition 102. Details to be provided should include, but should not be limited to timing, staging and sequencing of coastal works, and the erosion sediment control measures to be employed to mitigate the effects on the receiving environment.

SOCIAL EFFECTS

111. The Consent Holder must submit a Development Response Plan for approval in accordance with condition 8. The objective of the Development Response Plan is to mitigate the impacts of construction activity on people, in particular businesses.

112. The Consent Holder must undertake works in accordance with the approved Development Response Plan required under condition 111.

OPERATIONAL TRAFFIC NOISE

~~113. Noise walls of 1.8m in height above ground level constructed from materials compliant with the mitigation requirements of New Zealand Standard NZS 6806:2010 'Acoustics—Road traffic noise—New and altered roads, as shown on the approved plans listed in Condition 1, shall be installed at 2 Wheatley Avenue and 4 Edgewater Drive, Pakuranga prior to Eastern Busway Package EB3R being operational so far as is reasonably practicable.~~

Operational Noise and Verification

113. Subject to condition 1, the Consent Holder must design and construct the Project to ensure that the predicted noise levels for the Proposed Design in the design year of 2048 are not exceeded by more than 2dB at any PPF.

Advice Note: The predicted noise levels for the Proposed Design are contained in the Section 92 response package and are shown as "Mitigation 4"

114. The Consent Holder must ensure that the solid barriers proposed along both sides of the Reeves Road Flyover are maintained at the height and extent as shown on Plan EB-2-D-2-RD-DG-000422 Rev A and are maintained as acoustically effective barriers.

115. The Consent Holder must ensure that all roads are paved with Dense-Graded 10mm asphalt (or other low-noise road surface(s) with equal or better noise reduction performance) on all sections of the Project except where a higher friction (for safety) or stronger surface is required.

In the event that the Consent Holder proposes a different pavement at any time, it must provide documentation from a suitably qualified and experienced acoustics specialist to the Council demonstrating that condition 113 will continue to be complied with.

116. Within twelve months of completion of construction of the Project, the Consent Holder must prepare and submit a report to the Council which demonstrates compliance with condition 113. The report must be prepared by a suitably qualified and experienced acoustics specialist and must contain a description of, and the results from, a computer noise model of the Project as constructed.

The report must include the results of field measurements at a minimum of four representative PPFs within the Project. The results of the noise level monitoring must be used to verify the computer noise model.

Field measurements must be in accordance with NZS 6806.

117. The noise barriers required by these conditions must be maintained so that they retain their designed noise reduction performance.

118. The road surfaces must be maintained so that they retain their noise reduction performance as far as practicable.

Building-Modification Mitigation

119. Prior to construction of each stage of the Project, a suitably qualified acoustics specialist approved by the Council must identify those PPFs where, following implementation of the Structural Mitigation measures, either:

a. Both of the following occur:

i. A noise level increase of more than 2dB will occur due to road-traffic noise from the Project (determined by comparing the predicted noise levels for the as-built design (determined in Condition 116) with the predicted noise levels for the Do-nothing option (as set out in the S92 response package); and

ii. Habitable spaces are expected to receive in excess of 45dB LAeq(24hr) from road traffic noise with windows closed, in the Design Year;

or

b. Noise levels are greater than 67dB LAeq(24hr) (assessed in accordance with NZS6806).

For those PPFs that (a) or (b) apply to, the Consent Holder must set out options as to what Building Modification Mitigation are available to achieve 40 dB LAeq(24hr) for habitable spaces using the process set out in Conditions 120 to 123.

120. Prior to Major Construction Activity in the relevant Work Area, the Consent Holder must write to the owner of that PPF requesting entry to assess the noise reduction performance of the existing building envelope. If the owner agrees to entry within three months of the date of the Consent Holder's letter, the Consent Holder must instruct a suitably qualified acoustics specialist to visit the building and assess the noise reduction performance of the existing building envelope, and determine what Building- Modification measures are required to achieve an operational noise level of 40 dB LAeq(24h) for habitable spaces.

121. For each PPF identified under condition 119, the Consent Holder is deemed to have complied with condition 120 if:

a. The Consent Holder's acoustics specialist has visited and assessed the PPF; or

b. The owner agreed to entry, but the Consent Holder could not gain entry for some reason (such as entry denied by a tenant); or

c. The owner did not agree to entry within three months of the date of a Consent Holder letter seeking entry for assessment purposes (including where the owner did not respond within that period); or

d. The owner cannot, after reasonable enquiry, be found prior to completion of construction of the Project or after reasonable time has not responded.

If any of (b) to (d) above applies to a PPF identified under condition 119, the Consent Holder is not required to implement Building-Modification Mitigation to that PPF.

122. Subject to condition 121, within three months of the assessment required by condition 120, the Consent Holder must write to the owner of each PPF identified under condition 119 advising:

a. If Building-Modification Mitigation is required to achieve 40 dB LAeq(24h) inside habitable spaces; and

b. The options for Building-Modification Mitigation to the building, if required; and

c. That the owner has twelve 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 Consent Holder has advised that more than one option is available.

123. Once an owner has confirmed which Building-Modification Mitigation option is preferred, the mitigation must be implemented by the Consent Holder, including obtaining any Council consents, within a mutually agreeable and reasonable timeframe, and where practicable, prior to a Major Construction Activity commencing in the relevant Work Area.

124. Where Building-Modification Mitigation is required, the Consent Holder is deemed to have complied with condition 123 if:

a. The Consent Holder has completed Building-Modification Mitigation to the PPF; or

b. An alternative agreement for mitigation is reached between the Consent Holder and the owner, and that mitigation option has been completed; or

c. The owner did not accept the Consent Holder's offer to implement Building- Modification Mitigation within three months of the date of the Consent Holder's letter sent in accordance with condition 120 (including where the owner did not respond within that period).

Definitions applying to Condition 113 to 124 above.

BPO – means the Best Practicable Option in accordance with s16 of the RMA;

NZS 6806 – means New Zealand Standard NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads (“NZS 6806”);

Building-Modification Mitigation – has the same meaning as in NZS 6806

Habitable Space – has the same meaning as in NZS 6806;

Major Construction Activity - means any construction activity that would result in an exceedance of the Construction Noise Standards

PPFs – means Protected Premises and Facilities as in NZS 6806.

Structural Mitigation – has the same meaning as in NZS 6806. For the purpose of these conditions the structural mitigation measures are low noise road surface materials and noise barriers;

Work Area - means any area where construction works associated with the Project are undertaken (e.g. all active works areas and construction support areas)

Advice Notes

1. *Any reference to a number of days in this decision refers to working days as defined in section 2 of the RMA.*
2. *For the purpose of compliance with the conditions of consent, “the Council” refers to the Team Leader Compliance Monitoring – Southern or their delegated representative unless otherwise specified.*
3. *The Consent Holder is responsible for obtaining all other necessary consents, permits, and licences, including those required under the Building Act 2004 and the Heritage New Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable statutes (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant bylaws, and rules of law. This consent does not constitute a building consent approval. Please check whether a building consent is required under the Building Act.*
4. *An Accidental Discovery Protocol for areas of the Project not covered by an Archaeological Authority granted under the Heritage New Zealand Pouhere Taonga Act 2014 must be developed in consultation with mana whenua.*
5. *The Accidental Discovery Protocol for areas of the Project not covered by an Archaeological Authority granted under the Heritage New Zealand Pouhere Taonga Act 2014 must be consistent with the Accidental Discovery rules (Chapter E11) of the Auckland Unitary Plan Operative in Part or any subsequent version.*

ATTACHMENT A

APPLICATION DOCUMENTS

This attachment has not been re-produced in this agenda due to its size. The documents can be found at:

<https://www.aucklandcouncil.govt.nz/have-your-say/have-your-say-notified-resource-consent/notified-resource-consent-applications-open-submissions/Pages/ResourceConsentApplication.aspx?itemId=546&applNum=BUN60407121>

ATTACHMENT B

SECTION 92 REQUESTS AND RESPONSES

This attachment has not been re-produced in this agenda due to its size. The documents can be found at:

<https://www.aucklandcouncil.govt.nz/have-your-say/have-your-say-notified-resource-consent/notified-resource-consent-applications-open-submissions/Pages/ResourceConsentApplication.aspx?itemId=546&applNum=BUN60407121>

