

9th November 9, 2023

Auckland Council
Private Bag 92300
Victoria Street West
Auckland 1142

Attention: Peter Reaburn – Consultant Planner for Auckland Council

By email: PeterR@catobolam.co.nz

Dear Warwick,

Re. Response to Council further information requests for the Notices of Requirement (EB3C and EB4L Packages)

The Eastern Busway Alliance (EBA) on behalf of Auckland Transport are writing in response to Auckland Council's (the Council) request for further information dated 20th October 2023 for the NoR's for Eastern Busway 3 Commercial (EB3C) and Eastern Busway 4 Link (EB4L).

The EBA provides the following responses in relation to Council's queries. To provide context we have included the Council's explanation for each question and then the question, both in *italics*. These responses are also supported by Attachments. This includes:

- Attachment 1: General traffic and bus travel time variability memo
- Attachment 2: EB3C & EB4L Lighting Plans
- Attachment 3: Proposed Section Plans

Acoustic

Construction Noise and Vibration

Explanation

The construction noise and vibration assessment provides some helpful detail on the way that the section of the busway between the approximate extents of Burswood Drive and the industrial area to the south. It appears that the construction noise and vibration effects for some of the closest receivers along that route could be significant, particularly during rock breaking, rock removal, compaction and paving. However, the construction noise and vibration assessment does not clearly describe the specific ways that the construction noise and vibration effects will be managed using tools such as temporary barriers, the permanent 2.4m high operational noise barrier (and the timing of its construction) and possible temporary relocation. The additional

assessment should set out the specific methods that are intended to be used, with plans showing the dwellings that will remain in place and the approximate level of noise and vibration effects that each of those dwellings and the closest commercial buildings will receive, based on the indicative construction program.

Request

A1 *Please provide a more detailed assessment of the construction noise and vibration effects for the dwellings and commercial receivers along the busway alignment between Chinatown and into the Burswood Esplanade Reserve.*

Response

Detail of the noise and vibration exposure is presented in Appendix D (Affected Receivers-Noise) and Appendix E (Affected Receivers Vibration) of the EB3C-EB4L Construction Noise and Vibration Effects Assessment (Appendix 15). A subset located between Chinatown and the Burswood Esplanade Reserve have been included in the tables below together with an indication of the corresponding effects. These represent the worst-case exposure which will only occur for a limited period of time as the works will progress along the corridor in a linear fashion. Modelling results (**without mitigation in place**) are presented for each of the key construction activities at each address.

The highest noise levels are predicted for a scenario where the excavator is used at the closest possible location to each individual receiver, in some locations this distance may be 2m or less. In reality, with effective noise barriers in place, noise levels are predicted to comply with the 70 dB LAeq noise criterion at surrounding receivers for the majority of the construction as works progress along the Project alignment. As indicated in table 10-1 of the Construction Noise and Vibration Effects Assessment, noise from the excavator **with mitigation** (ie a noise barrier) will be compliant with the 70dB LAeq daytime noise criterion at distance of 9 m or greater. Where the noise criteria are predicted to be exceeded, the effects will be further mitigated and managed through additional measures set out in the CNVMP required by the conditions.

A CNVMP is the most effective way to avoid, remedy or mitigate construction noise and vibration effects on receivers so that the Best Practicable Option (BPO) is implemented throughout the duration of construction.

Affected Receivers (Chinatown to Burswood Reserve) – Noise

The tables below present a worst-case exposure (**without mitigation**) which will only occur for a limited period of time. Where buildings are unoccupied there will be no effect.

EB3C Main Works – Excavator (Daytime)

Address	Residential/ Commercial	Noise Level, dB LAeq	Potential effect outdoors	Potential effect indoors (assuming 20 dB reduction)
28 Burswood Drive	Residential	89	Hearing protection would be required for prolonged exposure (8 hours at 85 dB) to prevent hearing loss.	Unlikely to be tolerated for any extent of time.
21 Dulwich Place	Residential	86		
198 Burswood Drive	Residential	82		
18 Heathridge Place	Residential	80		
203 Burswood Drive	Residential	79	Some people may choose protection for long periods of exposure. Conversation would be very difficult, even with raised voices.	Continuing office work would be extremely difficult and become unproductive. In a residential context, people would actively seek respite.
38 Heathridge Place	Residential	77		
201 Burswood Drive	Residential	75		
12 Tullis Place	Residential	74	Outside activities may experience considerable disruption.	Phone conversations would become difficult. Personal conversations would need slightly raised voices. Office work can generally continue, but 55 dB is considered by the experts to be a tipping point for offices. For residential activity, TV and radio sound levels would need to be raised.
25 Burswood Drive	Residential	73		
10 Heathridge Place	Residential	73		
6A Tullis Place	Residential	72		
27 Burswood Drive	Residential	72		
196 Burswood Drive	Residential	72		
2 Torrens Road	Residential	72		
34 Burswood Drive	Residential	72		
11 Tullis Place	Residential	71		
1/28 Torrens Road	Commercial	87		
3/28 Torrens Road	Commercial	81		
22 Torrens Road	Commercial	73	Businesses that involve substantial outdoor use would experience disruption.	Phone conversations would become difficult. Personal conversations would need slightly raised voices. Office work can generally continue, but 55 dB is considered by the experts to be a tipping point for offices.
16 Torrens Road	Commercial	72		
5/28 Torrens Road	Commercial	72		

EB3C Long Weekend Works – Concrete Saw (Night-time)

Address	Noise Level, dB LAeq	Potential effect indoors (assuming 20 dB reduction)
5 Tullis Place	46	Noise may be audible in bedrooms with windows closed but will be comparable to, or lower than, typical background noise levels. This may be tolerable provided that advance notice of works is provided and the duration of works is limited.
11 Tullis Place	46	
2 Torrens Road	46	

EB3C Pavement Works – Plate Compactor (Night-time)

Address	Noise Level, dB LAeq	Potential effect indoors (assuming 20 dB reduction)
28 Burswood Drive	48	Noise may be audible in bedrooms with windows closed but will be comparable to, or lower than, typical background noise levels. This may be tolerable provided that advance notice of works is provided and the duration of works is limited.
25 Burswood Drive	48	
27 Burswood Drive	46	
34 Burswood Drive	46	
36 Burswood Drive	46	
10 Heathridge Place	46	
6 Heathridge Place	46	
31 Burswood Drive	46	

Affected Receivers (Chinatown to Burswood Reserve) – Vibration

The vibration predictions set out below are conservative. Vibration levels measured on site tend to be much lower than those predicted in the early stages of a project. The table below present a worst-case exposure (**without mitigation**) which will only occur for a limited period of time as the works will progress along the corridor in a linear fashion.

Similar to noise, the EB3C-EB4L Construction Noise and Vibration Effects Assessment sets out a hierarchy of vibration mitigation measures which will be adopted through the CNVMP, and Schedules (where produced) as follows:

- Managing times of activities to avoid night works and other sensitive times where practicable
- Liaising with neighbours (including providing advance notice of works where the vibration criteria are predicted to be exceeded) so they can work around specific activities
- Operating vibration generating equipment as far from sensitive sites as possible
- Selecting equipment and methodologies to minimise vibration
- Offering neighbours temporary relocation
- In specific situations, a cut-off trench may be used as a vibration barrier if located close to the source.

In general, there are fewer options available to mitigate vibration propagation compared to noise. As above, mitigation will focus on avoiding, remedying and managing vibration effects

through appropriate scheduling of high-vibration activities, effective communication with neighbours, and selection of appropriate equipment and methods, where practicable.

The CNVMP will set out a procedure to provide advance notice of works to receivers where they are predicted to fall within the vibration emission radii for amenity.

Daytime pavement works in Burswood section (EB3C)

Address	Exceeds Cat B?	Exceeds Cat A?	Potential effects
21 Dulwich Place	Yes	Yes	Unlikely to be tolerable in a workplace. Highly unsettling for both workplaces and dwellings. If exposure is prolonged, some people may want to leave the building. Computer screens would shake and items could fall off shelves if they are not level. This is the threshold below which no cosmetic damage will occur in the DIN standard.
28 Burswood Drive	Yes	Yes	
18 Heathridge Place	Yes	Yes	
198 Burswood Drive	Yes	Yes	
203 Burswood Drive	Yes	Yes	
38 Heathridge Place	Yes	Yes	
25 Burswood Drive	Yes	Yes	
10 Heathridge Place	Yes	Yes	
201 Burswood Drive	Yes	Yes	
12 Tullis Place	Yes	Yes	
6a Tullis Place	Yes	Yes	
27 Burswood Drive	Yes	Yes	
7 Midvale Place	Yes	Yes	
11 Tullis Place	Yes	Yes	Vibration would clearly be felt. However, it can typically be tolerated in indoor environments such as offices, houses and retail if it occurs intermittently during the day and where there is effective prior engagement.
196 Burswood Drive	No	Yes	
34 Burswood Drive	No	Yes	
26 Dulwich Place	No	Yes	
2/203 Burswood Drive	No	Yes	
19 Dulwich Place	No	Yes	
5 Midvale Place	No	Yes	
53 Huntington Drive	No	Yes	
10 Tullis Place	No	Yes	
27 Heathridge Place	No	Yes	
194 Burswood Drive	No	Yes	
199 Burswood Drive	No	Yes	

A2 Please provide an indication of when the permanent noise barrier in the Burswood area will be constructed, and what (if any) phases of the construction work will it be able to screen effectively.

Response

The permanent noise barrier in the Burswood area has been scheduled for construction at the earliest practicable point in the programme; this is subsequent to:

- de-construction of houses (excavator, 6-Wheeler trucks, compactor, etc)
- earthworks (excavator with a rock breaker attachment, 6-Wheeler trucks, compactor, etc).

Later construction phases for which the permanent noise barrier will provide effective screening include:

- drainage works (excavator, 6-Wheeler truck, compactor, etc)
- pavement construction (compactor, Handheld concrete saw / chainsaw, Bitumen sprayer, chain saw, Concrete mixer truck, grader, etc)
- station construction (piling, 6-Wheeler trucks, concrete pouring, etc).

As stated in Section 9.3 of the construction noise and vibration assessment, additional mitigation will be developed through the CNVMP and Schedules (where required), this will consider:

- Managing times of activities to avoid night works and other sensitive times where practicable
- Liaising with neighbours (including providing advance notice of works where the noise criteria are predicted to be exceeded) so they can work around specific activities
- Selecting equipment and methodologies to restrict noise
- Using temporary screening/enclosures/barriers
- Offering neighbours temporary relocation.

Operational Noise

Explanation

The Operational Noise Assessment presents the results of a series of ambient noise measurements. Some of those measurements were undertaken during February and March when cicadas and crickets may have significantly increased the ambient noise levels. The Operational Noise Assessment does not state that cricket and cicada noise have been removed or adjusted for and given that NZS6801:2008 and NZS6802:2008 state that any such adjustments must be declared and quantified. It has therefore been assumed that here has been no adjustment. The noise from these insects is only present in the environment for a relatively short period of the year, and at other times the ambient noise level may be much lower. This is commonly achieved by filtering out the affected 1/3 octave bands – typically 3150-4000 but

sometimes higher. All presentations of ambient noise levels and all text referring to ambient noise levels will likely require consequential amendment.

Request

A3 *Please adjust the ambient noise measurements to remove the effects of crickets and cicada noise.*

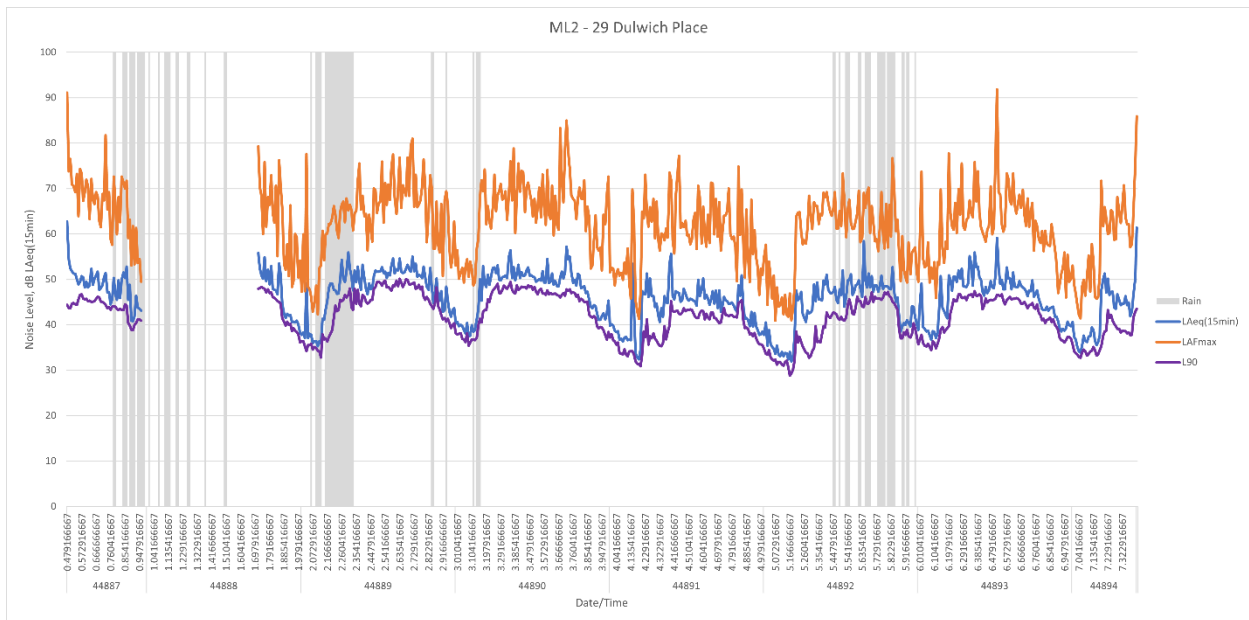
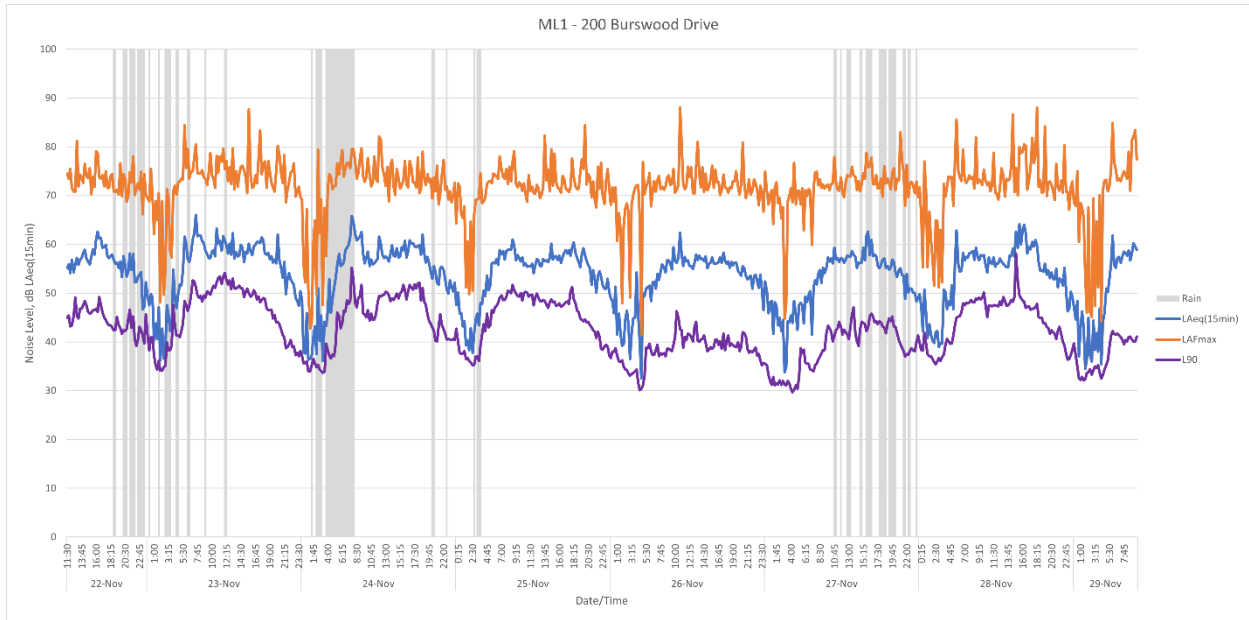
Response

Cicadas and crickets have not significantly increased the measured noise levels used in the assessment. Observations made during attended measurements confirmed that these are free from the influence of insect noise. Analysis of the unattended logging results at 200 Burswood Drive and 29 Dulwich Place indicate that these are not significantly affected by crickets and cicada noise as removal of the higher 1/3 octave bands results in a change in overall noise level of less than 1 dB.

Unattended logging results from Guys Reserve were not used for the assessment as these appeared to have been influenced by extraneous sources. This is referred to in Section 4.1.3 of the operational noise report by the following statement:

Note that the measurement results reported for Guys Reserve are from the attended measurement that was undertaken on the morning of the 7th of August 2023, as this survey obtained the most reliable noise data between the two surveys undertaken at this location.

Refer to the updated Noise Monitoring Results below at 200 Burswood Drive and 29 Dulwich Place.



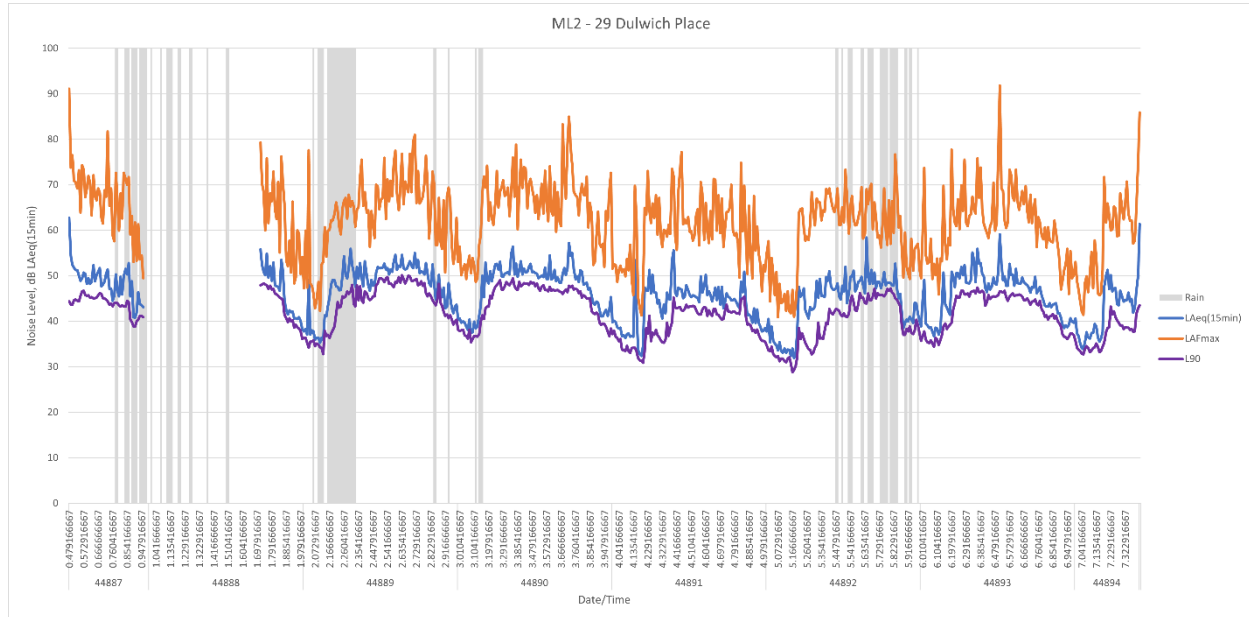
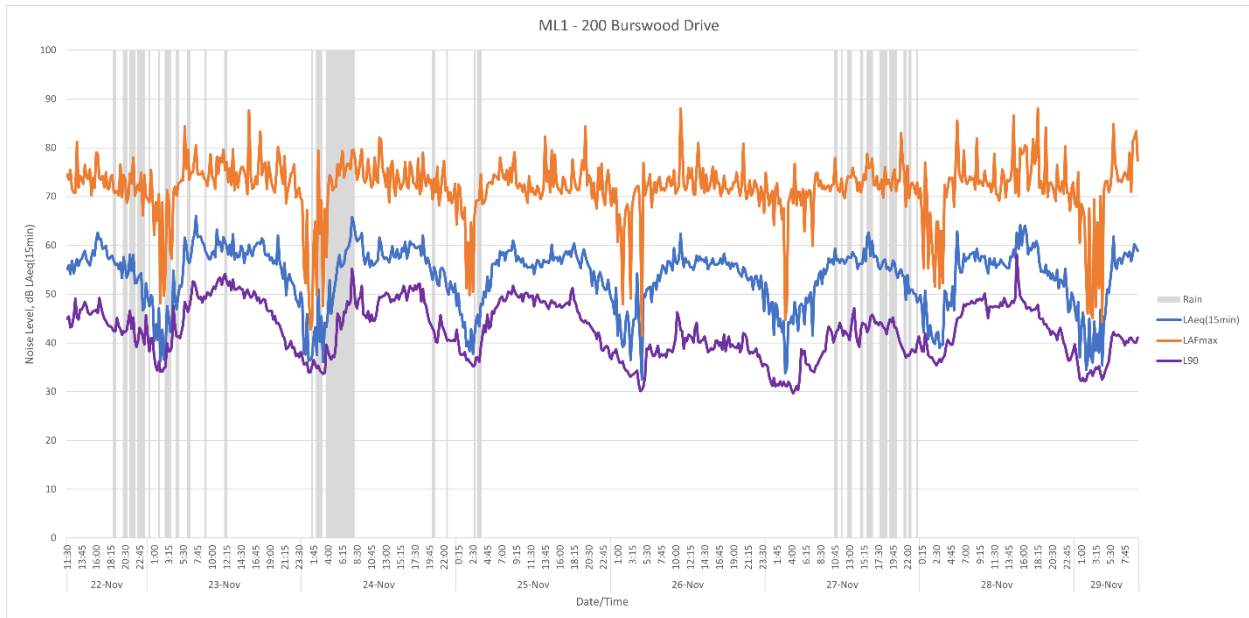
A4 Please include the LA90 noise levels in the summary of the averaged noise levels and the detailed time-trace of the ambient noise levels provided in the appendices to both the construction and Operational Noise Assessment.

Response

The noise metric LA90 is not required for the assessment of either construction or operational noise for the Project. However, updated time traces including LA90 are set out below.

The summary table 5-1 in the Construction Noise and Vibration Effects Assessment has not been modified to include LA90 data as it is not possible to derive representative values for longer measurement periods (eg 24 hours) using the logging results.

Updated Noise Monitoring Results



Explanation

The Operational Noise Assessment includes predictions for the LAeq noise level over various time intervals for buses, but there is no prediction of the LAFMax noise levels (it is appreciated that

there is likely to be some variation between buses). The information should include the noise generated by buses accelerating away from intersections and from the bend near Chinatown.

Request

A5 *Please provide an assessment of the expected LAFMax noise levels at the residential receivers in the area between Chinatown and the Burswood Esplanade Reserve.*

Response

The LAFmax noise levels due to bus operation between Chinatown and Burswood Esplanade Reserve are not predicted to exceed the criteria of 75dB for any residential receiver. The highest levels are predicted to occur at 28 Burswood Drive (LAFmax 73 dB) and 203 Burswood Drive (LAFmax 68 dB).

Explanation

This aspect needs to be covered. The assessment should be conducted following the assessment of bus acceleration noise away from the bend behind Chinatown and the likely LAFMax noise levels arising at those houses. If a taller barrier is not practicable, it may be helpful to assess the effectiveness and practicability of installing a low (say 1.2m) high barrier immediately adjacent to the eastbound lane to screen the noise from the exhausts of buses accelerating east at the very minimum.

Request

A6 *Please provide an explanation of why a traffic noise barrier in the vicinity of 207 Burswood Drive is not considered to be the BPO.*

Response

It is proposed to demolish 207 Burswood Drive, as detailed in both the Notice of Requirement for EB3C and Section 6.5.1 of the AEE. As such, no operational noise mitigation for this property is required.

Consideration of the remaining properties is provided in Section 7.3.1 of the Operational Noise and Vibration Assessment. The assessment considers noise levels during the peak times. It should be noted that noise levels will be lower for the majority of the day and night (outside of the peak). The report states that:

'Where PPFs currently front towards Burswood Drive, noise levels from the busway are predicted to be similar or less than existing ambient noise levels. This is shown in Appendix F, where predicted noise levels at PPFs facing Burswood Drive are similar to those that were measured at 200 Burswood Drive. For example, noise levels at 28

Burswood Drive are predicted to reach 58 dB LAeq during the early morning period (the highest predicted noise level from the busway), which is only 1 dB higher than the noise level measured at 200 Burswood Drive. A noise level change of 1 dB would not be perceived. Noise levels at all other PPFs facing Burswood Drive are predicted to be 55 dB LAeq or below.'

'Where PPFs are set back from Burswood Drive, noise levels from the busway could be up to 3 dB higher than existing ambient noise levels as measured in the early morning at 29 Dulwich Place. For example, as shown in Appendix F, noise levels at 18 Heathridge Place and 21 Dulwich Place are predicted to reach 51 dB LAeq(15 min) in the AM peak. Note that these predicted noise levels are the highest of PPFs that do not already front towards Burswood Drive. Where there would be a predicted noise level increase, this is predicted to be in the order of only 3-4 dB at most, which would be perceived as only a slight increase in noise level.'

Explanation

The Operational Noise Assessment does not mention the possibility of noise from any PA system to be installed at the Burswood Station.

Request

A7 Please provide an assessment of the noise levels that from any PA system and the limits that it would design the system to comply with at the residential properties (if a PA system is proposed at all).

Response

The Public Address system will comprise an array of directional loudspeakers. In order to minimise the exposure of noise sensitive receivers, the loudspeakers will be located close to head height, orientated towards the intended listener positions, and set to the lowest practicable volume whilst considering requirements for Speech Intelligibility.

A detailed assessment of noise from the PA system is not possible at this early stage of the project. However, noise at surrounding receivers will not exceed the levels set out in Chapter E25 of the Auckland Unitary Plan Operative in Part (AUP(OP)).

Explanation

The noise from the proposed Busway will exceed the AUP noise limits for the residential zone at many residential receivers. While the proposed permanent noise barrier will assist in mitigating the effects at ground level receivers, it will do little or nothing for two or three-storey dwellings that are anticipated and that will likely overlook the noise barrier. There are no requirements in

the AUP for new residential dwellings to be acoustically treated to reduce road traffic noise however it is nevertheless expected that the noise from the busway has the potential to cause sleep disturbance effects and a high level of annoyance at the closest dwellings, particularly at night.

Request

A8 Please provide information on what measures are intended to be adopted for ‘alerting’ the receiving environment to the higher noise levels and the need for new development to be acoustically treated to avoid potentially significant or serious adverse sleep disturbance and annoyance / health effects.

Response

As detailed in Section 9.1 of the AEE and previous application documents for both EB2 and EB3R, an assessment under the RMA of the Project is required against the “existing environment”. The existing environment is formed by:

- The existing environment and the associated effects from lawfully established activities, these being the existing road network, commercial activities (e.g., big box retail) and residential
- The existing environment as modified by any resource consents granted and likely to be implemented
- The environment as likely to be modified by activities permitted by the AUP(OP).

Given this, any “new development” based on future plan changes or that requires resource consent (e.g., higher density residential development) would be unlawful when assessing the Project’s noise effects. It would also be difficult, in a practical sense, to determine what such “new development” would be. Given this, both the AEE and supporting technical assessments have taken into account an existing environment based on the factors listed above.

Within an existing environment context, the Project will have minor adverse effects as detailed in Sections 9.5.4 and 9.7.4 of the AEE, as well as the Operational Noise and Vibration Assessment (Appendix 12).

Social Impacts

Explanation

Whilst operation will see a vast positive improvement to pedestrian and cycling routes across Pakuranga Creek, current footpaths across the existing bridge are hazardous and in close

proximity to traffic lanes. The construction process may provide an additional distraction to drivers as well as pedestrians and cyclists which may create a safety risk. Burswood residents using the bridge to walk or cycle are really only able to use the northern footpath which is immediately adjacent to the bridge at construction works. Although engagement has identified the need for a safe pedestrian connection, particularly for primary school-aged children walking and cycling from the Burswood community to Riverhills School, the SIA does not appear to have considered the impacts of Bridge A construction on these existing users. It is important that the SIA consider this issue and provide further assessment or reference to improving pedestrian safety on the existing bridge during construction of Bridge A. to explain the potential social impacts that might be faced and what mitigation would be necessary.

Request

SI 1 *Please provide an assessment of pedestrian and cycling safety during construction of Bridge A.*

Response

The management of construction traffic and related effects is discussed in significant detail by the Integrated Transport Assessment (Appendix 14). This includes the discussion provided in Section 5.3 of the ITA (Temporary Effects on Pedestrians and Cyclists).

To summarise, the ITA states: *“The existing pedestrian crossings and shared paths, including in the Burswood Reserve and Esplanade Reserves will be maintained at all times during construction. Should this be unachievable in some places, safe temporary facilities will be provided to ensure pedestrian and cycling connectivity. This will be ensured through the CTMP’s required by consent conditions.”*

This approach has been incorporated into AT’s proposed conditions (Appendix 5), which include a requirement for AT to prepare a Construction Traffic Management Plan (CTMP) prior to works commencing (Conditions 14 to 15). The CTMP requires certification by Council and must include:

“Measures to ensure the safety of all transport users

- *Identification of detour routes and other methods to ensure the safe management and maintenance of traffic flows, including pedestrians and cyclists on existing roads*
- *Details on temporary facilities for pedestrians to ensure connectivity if the existing facilities cannot be safely and reasonably maintained*
- *Details of wayfinding signage for motor vehicle users, public transport users, cyclists and pedestrians.”*

Lastly, we note that Bridge A is an “offline” section of the Project and does not require any significant changes to pedestrian and cyclist access across Pakuranga Creek during construction. Any changes to pedestrian and cyclist access at Riverhills Park have already been assessed as part of Eastern Busway 3 Residential.

Explanation

The SIA has not identified or assessed the potential social impacts on immediately impacted properties and households, in particular the Wonderkids pre-school facility, regarding the location of construction support areas to be established between Burswood Drive West and East. Whilst it is noted that conditions stipulate construction workers will be requested to behave as ‘good neighbours’, construction staff and general site noise, amenity, privacy should be a key consideration. For example, these sites and their parking provisions should be located at a reasonable distance from the Wonderkids pre-school and residences to avoid noise and disruption. It would be beneficial if the SIA could list the potentially impacted properties along the route where these laydown/ site offices will likely be located and, in light of other assessments explicitly stipulate any identified mitigation or social impact management strategies that are relevant.

Request

SI 2 *Please provide an assessment of social impacts of the operation of construction laydown/ compound yards on Burswood residents.*

Response

As detailed in section 4.3 of the AEE, the construction support areas (CSAs) for EB3C will be subject to a range of measures to minimise and avoid adverse effects on Burswood residents and businesses. These measures include a robust construction noise and vibration management regime (Conditions 42 to 62), a construction environmental management plan (CEMP) (Conditions 12 to 13) and the CTMP (Conditions 14 to 15). All management plans for the Project will be subject to certification by Auckland Council prior to the related construction activities commencing. These management plans and other measures will be informed by the Communication and Consultation Plan (Conditions 10 to 11), which includes a requirement to engage with the Burswood community in regard to the management of the Project’s construction effects. This requirement forms part of Condition 11 as detailed below:

“The CCP must include:

(f) Methods for communicating with and notifying directly affected parties in advance of:

- i. *Proposed construction activities outside normal working hours (including night works);*
- ii. *Temporary traffic management measures for vehicles, cyclists and pedestrians during construction...*

(g) Details of specific communications proposed for updating stakeholders including affected parties on construction timeframes...

l) A Development Response Addendum including:

- i. *The measures to maximise existing opportunities for pedestrian and service access to businesses, residents and social services/facilities that will be maintained during construction, within the practical...*
- ii. *The measures to maximise existing opportunities for pedestrian and service access to businesses, residents and social services/facilities that will be maintained during construction, within the practical requirements of the CTMP;*
- iii. *The measures to mitigate potential severance and loss of business visibility issues by wayfinding and supporting signage for pedestrian detours required during construction;*
- iv. *The measures to promote a safe environment during construction;*
- v. *How loss of amenity for residents, community services and businesses as a result of construction activities will be or has been mitigated through the Eastern Busway Project's management plans; and*
- vi. *Identification of any other development response measures designed to support those businesses, residents and community services/facilities during construction.*

m) Details of engagement with the community to identify opportunities to minimise construction impacts."

Lastly, this effects management approach will be familiar to all parties and reflects the approach employed for EB2 and EB3R, both of which have been approved by Auckland Council this year.

Explanation

The SIA has not identified or assessed the potential social impacts on immediately impacted properties and households located in the proximity of the 42 residential and 3 commercial buildings to be demolished/ removed during the enabling works. Building demolition will likely cause noise and disruption to neighbouring properties and the removal of entire structures (if deemed appropriate) may or may not affect neighbours access, property and general noise of loading and removing. The timing and scale of which should be identified and assessed reference made to the relevant technical assessment where this has been addressed) and this process be subject to communication with these affected parties to understand how best to conduct this work with the least disruption and noise. It would be beneficial if the SIA could list the potentially

impacted properties that are in the immediate proximity of residences to be demolished and/or removed and, in light of other assessments and the required CEMP explicitly stipulate any identified mitigation or social impact management strategies that are relevant. Furthermore, information should be provided to identify and assess potential security/ safety/ vandalism issues that may occur if people gain access to these vacant properties.

Request

SI 3 Please provide an assessment of social impacts of acquired property removal and demolition.

Response

We note that the removal of dwellings is a permitted activity at sites located within EB3C’s designation footprint under the residential zone rules of the AUP (OP). This permitted activity status was also confirmed through the EB2 and EB3R approval process. Further detail regarding the communication and management of social impacts associated with land acquisition is detailed in Section 9.4 of the AEE.

In addition, AT has acquired most sites within the Project’s proposed alignment. The remaining properties to be acquired and their acquisition status is summarised in the table below:

EB3C – Remaining property to be acquired – all residential properties required either have unconditional agreements in place or have settled		
Location	Acquisition type	Comments
262 Ti Rakau Drive	Partial Acquisition and Temporary Occupation	Awaiting valuation
272 Ti Rakau Drive	Temporary Occupation	Awaiting valuation
320 Ti Rakau Drive	Partial Acquisition and Temporary Occupation	Awaiting valuation
242 Ti Rakau Drive	Full acquisition of property and Gull business	\$ 18 PWA letter offers issued
28 Torrens Road	Easement Interest	

AT has actively sought to reuse and repurpose, where possible, materials salvaged from demolition sites. This has included the donation of items, like heat pumps, to community groups. This approach is also addressed through the Project’s ISCA reporting.

Lastly, we wish to recognise the benefits of the Project, specifically those associated with the increased capacity of the regional transport network. Further detail regarding these benefits is provided in Sections 9.3 and 11.5.2 of the AEE.

Explanation

It is clear in the AEE and supporting documentation that construction noise, vibration and depleted amenity will be quite significant, particularly for properties and sensitive receivers in proximity to the works. The social impacts of this, despite mitigation through a CNVMP and CCP, is considered by the SIA to be 'moderate adverse' (p.150). Whilst the noise effects assessment has identified 16 residences and 9 commercial receivers of noise and vibration during construction, there is limited evidence to justify these properties, and why other/ more receivers may not be included. Moreover, there is limited clarity provided by the SIA of the potential impacts on family life that are specific to who these receivers are, such as do babies, elderly, disabled or mental-health challenged or other vulnerable people occupy, live or work in these premises and what would the social impacts upon them specifically be. For example, in the post-pandemic period more and more people are working remotely from home and noise and disruption may affect their performance and mental health. Further information is required for the SIA, based on the engagement and consultation with these households and businesses in close proximity to noise and vibration effects, to illustrate that every effort has been made to identify sensitive receivers and assess the impacts upon them based on their current living and working situations. This information should precede and inform the requirement of the CNVMP to identify and list the directly impacted properties and sensitive receivers (within 100m of the construction noise, as recommended by the noise assessment) and establish measures such as adjusting construction times to avoid sensitive times where practicable. Furthermore, the indication that some nightwork construction may be likely and may require the relocation of households is a significant social impact that is not addressed by the SIA. Whilst it is acknowledged that it is difficult to anticipate this eventuality until the construction methodology is refined and detailed, it is important that the SIA make a comment about the potential impacts of such an issue and what mitigation or management measures should be required to ensure families are well-prepared, how they will be compensated and how potential stress and concerns will be identified and addressed in a suitable manner.

Request

SI 4 Please provide an assessment of the social impacts of construction noise and vibration.

Response

The effects of the Project's construction noise and vibration is detailed in both the AEE (Sections 9.4.2, 9.4.3, 9.6.2 and 9.6.3), as well as the Construction Noise and Vibration Assessment (Appendix 15). The Project's effects will be managed through AT's proposed conditions for EB3C (Conditions 42 to 62 of Appendix 5), which impose performance standards, a requirement for a Council certified CNVMP, the use of site-specific schedules, building surveys and blast

management provisions. The same conditions are also proposed for EB4L (31 to 44 of Appendix 6). These are all standard measures on large-scale construction projects in the Auckland Region.

It is also noted that an Outline Plan will be required for EB4L, which will provide Council with a further opportunity to review the Project's construction noise and vibration effects once detailed design for that Project package has been undertaken.

Explanation

Limited information is provided by the SIA regarding the visual amenity, safety and security of properties that will buttress the construction work along the proposed offline corridor – how their properties and fencing will be affected by the works, what temporary barriers will limit their view of the construction work and/ or prevent children from accessing the corridor whilst work is occurring and/ or ensure people do not enter their property from the corridor, attracted by the vacant properties and ongoing construction. A more visually pleasing barrier than temporary mesh fencing may be more suitable. It would be beneficial if the SIA addressed these access, security and safety issues by listing those properties directly buttressing the corridor construction site and an assessment provided that may inform the relevant management plan of mitigation and management of these social impacts.

Request

SI 5 Please provide an assessment of social impacts on Burswood residences adjacent to the working/ construction corridor.

Response

These effects are assessed in the AEE and supporting technical reports, including:

- Proposed EB3C NoR Conditions (Appendix 5)
- Proposed EB4L NoR Conditions (Appendix 6)
- Integrated Transport Assessment (Appendix 14)
- Construction Noise and Vibration Assessment (Appendix 15)
- Contaminated Land Assessment (Appendix 16)
- Natural Character, Landscape and Visual Effects Assessment (Appendix 22)
- Air Quality Assessment (Appendix 23)
- Social Impact Assessment (Appendix 26).

Furthermore, and as previously set out earlier in this response, the construction of the Project will be controlled via a range of measures that have been subject to previous approval by Auckland Council for EB2 and EB3R. These include management plans, such as the CEMP which is required 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.”

Furthermore, as detailed in the Construction Noise and Vibration Assessment, and the AEE (Sections 4.3.10, 4.5.3 and 9.4.10), no nightworks are planned adjacent to occupied residential sites. Any other nightworks will be controlled through the CNVMP and related site-specific schedules.

Lastly, the Project will be constructed in a linear manner. This means that while the Project as a whole will take several years to complete, construction activities beside any residential property will be limited to shorter periods as construction actively progresses along the Project corridor.

Explanation

The SIA has not identified or assessed any potential disruption to businesses and residences located at 22 and 28 Torrens Road during the construction of the access route to the bus station. It is not clear what the construction works will involve, their timing and duration or whether people working and living in these properties have been engaged to assess the impacts. Whilst it is likely that the new access way, once operational, will have a positive impact on business access and patronage, the potential social and business disruption impacts and the relevant mitigation strategies during construction should be identified by the SIA. It is also relevant to identify the potential safety issues of a shared access point for pedestrians and cyclists who may share the space with cars of the employees and delivery vehicles to these businesses at 22 and 28 Torrens Road when operational.

Request

SI 6 *Please provide a social impact assessment of the Torrens Road access to Burswood Bus station.*

Response

During construction potential disruption to businesses and residences located at 22 and 28 Torrens Road will be managed by a suite of management plans required by the consent conditions. These measures include a construction noise and vibration management regime (Conditions 42 to 62), a construction environmental management plan (CEMP) (Conditions 12 to 13) and the CTMP (Conditions 14 to 15). All management plans for the Project will be subject

to certification by Auckland Council prior to the related construction activities commencing. These management plans and other measures will be informed by the Communication and Consultation Plan (Conditions 10 to 11), which includes a requirement to engage with the community in regard to the management of the Project's construction effects.

Once constructed, the provision of access from Torrens Road to Burswood Bus Station will generate social benefits given the improved connectivity of business activities to public transport. This improved connectivity provides the opportunity for customers and employees to access economic opportunities within the East Tāmaki area, which is a significant business hub for the Auckland Region.

This new access will be designed in a manner which provides for the safe movement of pedestrians, cyclists and vehicles. The flat and open nature of the access provides adequate visibility for all users of the access, as well as for persons visiting or occupying the adjoining sites. The access design will be subject to a safety audit as part of the design development process. Condition 31 (h) of the EB3C conditions also requires preparation of a Crime Prevention through Environmental Design (CPTED) assessment of the Burswood Bus Station and new walking and cycling networks:

“(h) A Crime Prevention Through Environmental Design Assessment of the Burswood Bus Station and the new walking and cycling networks; “

The safety audit and CPTED assessment will ensure that the design is safe for users and for people visiting or occupying adjoining sites.

Explanation

Given that the Burswood Bus Station will improve intermodal connectivity for employees of the many businesses south of Ti Raukau Drive, the SIA should explain and assess the impacts of the proposed pedestrian crossings that will cater to these employees and businesses. A review of the documentation has not identified any assessment of this matter.

Request

SI 7 Please provide an assessment of social impacts of the operational pedestrian and cycling access and crossing of Ti Rakau Drive from the Burswood Bus Station.

Response

The provision of active transport infrastructure is an integral part of the Project. This has driven the development of new cycleways, shared paths and improved connections to existing land uses.

At present, there is no cycling infrastructure present within the Burswood area, which requires cyclists to share road space with heavy vehicles and associated high traffic flows. This current situation will be rectified by the Project, although cyclists will retain the ability to use the Ti Rakau Drive carriageway if they prefer.

It should be noted that walking infrastructure is also currently limited. The provision of improved walking facilities by the Project will support the accessibility of Burswood to the wider Project area, including to the southern side of Ti Rakau Drive both through new footpaths and safer road crossings. Please refer to the General Arrangement drawings provided at Appendix 7 to the application.

Explanation

It is noted in the EB3C and EB4L Construction Methodology documents that the construction methodology will be refined and developed during detailed design phases. It would be beneficial to understand if and how the SIA, particularly in light of ongoing CCP engagement and effects monitoring/ reporting in both of these areas of the Project, will inform this refined construction methodology.

Request

SI 8 *Please provide an assessment of what SIA inputs there will be into Construction methodology.*

Response

The CCP provides the opportunity for inputs from the SIA and community engagement to integrate into the Project's construction methodology, management plans and other proposed conditions. This is highlighted by the CCP related conditions (see Appendix 5 and 6) which require:

“e) Methods for identifying, communicating and engaging with people affected by the construction works for the project, including but not limited to:

- i. All residential owners and occupiers affected by construction works for the Project;*
- ii. All business property owners and occupiers affected by construction works for the Project;*
- iii. All social services/facilities including community, medical and education facilities affected by the construction works for the project, including methods to assist these facilities to consult with their customers/stakeholders/students;*
- iv. Key stakeholders (including the Council's Parks Department); and*
- v. Network utility operators.”*

The CCP (and other project conditions) align with the recommendations of the Social Impact Assessment as the project social impact specialists had input into the drafting of the proposed conditions.

The CCP will be provided to Council prior to construction for certification, which will ensure that appropriate measures are employed to address social impacts.

Explanation

On p.121 of the SIA it states “Social impacts in EB4L area will have the potential to be higher than other stages of the project as the community will not have benefitted from detailed and specific engagement”. This requires further clarification given that the process of consultation and engagement will be ongoing to determine potential social impacts of affected parties in this area. Clarification is required as to why this statement is relevant – what social effects, specifically - and the mitigation and mediation strategy required by the SIA to ensure ongoing engagement and consultation reduces these impacts or can potential generate improved outcomes for the community.

Request

SI 9 Please provide clarification of the potential for social impacts in EB4L area to be higher than other stages of the project.

Response

Section 6.4 of the Social Impact Assessment (EB4L consultation) is relevant as it acknowledges the different approaches to engagement on EB4L from EB3C (and earlier stages of the Project). EB4L engagement has focused on the broader project outcomes at a community-wide level, rather than localised and targeted engagement for the specific stage of the Project.

The reference to higher social impacts relates to the potential for the community to experience feelings of uncertainty and anxiety from not understanding the nature and timing of the Project, and how it will impact individual properties and the character of the community along the EB4L route. Section 6.4 recognises that the planned engagement would mitigate the effects of uncertainty for residents and that the route, via Whaka Maumahara Reserve, generally avoids property impacts on residential and commercial properties.

Section 6.4 should therefore be read as an acknowledgement of the difference in engagement approach, recognition of the potential for uncertainty within the community and confirmation that further engagement, that will address the feelings of uncertainty, is planned.

An engagement strategy has been prepared to inform neighbouring residents and business owners/tenants of the proposed alignment and designation boundary for EB4L. The engagement strategy includes:

- Face-to-face meeting with property owners in 'the Hub' commercial development
- Letter drop to residents and businesses in the area
- Information session held at 'the Hub' commercial development for business owners
- Pop-in information sessions for the wider community held in the local area
- One-on-one meetings as requested by stakeholders.

Specific engagement for the local community study area for EB4L in accordance with the engagement strategy in relation to the requirements and impacts of this community is well underway.

Further engagement will be detailed in the Community Consultation Plan (CCP) and the CCP will include measures to support proactive and timely engagement with businesses, residents and community infrastructure close to or likely to be impacted by construction works or the wider project. The content of the CCP is detailed in Conditions 11 and 12 of the proposed conditions for EB4L's Notice of Requirement (Appendix 6).

The above considerations have been taken into account within Section 8 of the Assessment of Social Effects in relation to EB4L. This includes the social impact rating for the relevant social impact categories.

Explanation

It is acknowledged that the community and neighbours in proximity to the construction and operation of EB4L will be engaged in more detailed consultation in the coming months. However, the SIA should provide further information about this methodology and process. Whilst potential impacts have been preliminary identified and assessed, SIA engagement is required to further identify, test and assess these and any other impacts with the affected community of residences and businesses. Further detail of how the SIA will inform and be informed by the proposed engagement strategy and how emerging impacts will be assessed and mitigated by the relevant management plans (CEMP, CTMP, CNVMP) is required.

Request

SI 10 Please clarify proposed inputs of SIA and SIA team into CCP and other management plans.

Response

The SIA for EB4L acknowledges that direct engagement with the affected community had not occurred at the time of writing the SIA, and this has resulted in a conservative approach being adopted to the impact rating along the corridor. As with all specialists on this project, the SIA and communication teams have been integral to the development and drafting of the Project's proposed conditions, management plans and technical reporting. In particular, the SIA Assessors reviewed the CCP condition to ensure that this appropriately provides for engagement with the EB4L community on both the construction works and mitigation of effects. This includes:

- a requirement to identify, communicate and engage with residents, businesses and community facilities affected by the construction works for the project,
- details of the engagement with the community to identify opportunities to minimise construction impacts,
- methods for consulting with the local community in regard to open space mitigation,
- a requirement for community feedback and complaints to be reviewed annually and actions / mitigation outcomes in response to feedback / complaints to be listed in the CCP.

The SIA Assessors alongside the Planning Team have briefed the Engagement Team on the need for further engagement with the EB4L community, the community profile and the types of impacts that the community will face through to completion of the project. Engagement with the EB4L affected community is now underway but has not advanced to a stage where an update can be provided as part of the S92 response.

Key themes from the ongoing community feedback and/or public notification submissions for EB4L will be updated and summarised in the Hearing evidence alongside Social Impact commentary on the feedback/submissions.

SIA Assessors for the project will undertake a review of the EB4L management plans (required by the proposed conditions) to ensure that the identified social impacts and the impacts raised by the community are addressed, prior to their lodgement with Council.

Explanation

Whilst privacy (in operation) and amenity and construction noise (in construction) impacts upon Piccolo Park ECE are noted by the SIA, with reference to mitigation by the UDLP, there is a need for further information regarding the potential impacts of the presence of the construction laydown compound yard that will be located immediately adjacent to the ECE. The close proximity of construction workers, general noise of the site, particularly as the ECE has a glass perimeter, may not be suitable for young children without further mitigation. Whilst it is

acknowledged that young children would be interested in the machinery, there is a child safety aspect at potential issue here. This should be considered by the SIA and part of further impact assessment with the ECE and parents.

Request

SI 11 *Please provide an assessment of social impacts of the operational Piccolo Park ECE.*

Response

AT has engaged with the operators of Piccolo Park ECE to address the potential effects of EB4L. These effects will be primarily addressed through:

- The CEMP
- The CTMP
- The CNVMP.

It is anticipated that the CSA at Guys Reserve will be used by a maximum of 30 staff at any one time.

We have also received generally positive feedback from Piccolo Park and will continue to work with them through the delivery of the Project. During construction, children at the facility will be able to observe activities as an educational experience. In the longer-term, the Project will provide improved walking and cycling connections to Piccolo Park, facilitating safe and sustainable transport choices for parents and their children.

Lastly, we can confirm that the EBA has strict drug and alcohol policies for all staff, while staff also undergo Ministry of Justice checks. These measures will also ensure that child safety for Piccolo Park is maintained throughout the Project's construction.

Explanation

Whilst it is acknowledged that residences in direct proximity to the works on Guys Reserve and Whaka Maumahara (notably 47 Huntington Dr, Saidia Pl, Cottessmore Pl, Kiriki Ln, Waihi Way) are yet to be engaged specifically, the SIA needs to provide further information regarding the consideration of potential social impacts of construction noise. For example, the construction methodology notes vegetation removal, earthworks, bridge building and other noisy works that need more consideration by the SIA.

Request

SI 12 *Please provide an assessment of the operational construction noise for residences.*

Response

In responding to this question, we have assumed that reference to “operational” in the question is a typo given that the explanation relates purely to construction noise.

The effects of the Project’s construction noise and vibration is detailed in both the AEE (Sections 9.4.2, 9.4.3, 9.6.2 and 9.6.3), as well as the Construction Noise and Vibration Assessment (Appendix 15). The Project’s effects will be managed through AT’s proposed conditions for EB4L (31 to 44 of Appendix 6), which impose performance standards, a requirement for a Council certified CNVMP and the use of site-specific schedules. These are all standard measures on large-scale construction projects in the Auckland Region.

It is also noted that an Outline Plan will be required for EB4L, which will provide Council with a further opportunity to review the Project’s construction noise and vibration effects once a detailed design for that Project package has been undertaken.

Parks

Explanation

The provision of the wall makes sense from a noise management point of view/amenity for residents. Condition 31 for EB3 will look at CEPTED matters for the bus stop, but passive surveillance/visibility into the bus stop area appears to be compromised by the proposed wall.

It is noted (although not an RFI) that the noise wall is positioned north of a stormwater swale (which is understood to be for stormwater treatment/management). From an amenity and ease of maintenance perspective, a noise wall directly adjacent to the busway could be more appropriate and may also support art/mural opportunities being provided on the walls around the station.

Request

P1 *In relation to the 2.4m noise wall proposed along part of EB3C route between the two legs of Burswood Drive please outline if there are any CEPTED effects that may be generated on future open space areas and the new pedestrian and cycling facilities as a result of the wall.*

Response

We note that, for the purpose of an assessment of effects under the RMA, that effects should be considered against the “existing environment” rather than a speculative future environment. This matter is further detailed above regarding operational noise effects. On this basis it was determined that the effects of the noise wall will be minimal.

In addition, the CPTED aspects of the Project will be further addressed by the proposed conditions (Appendix 5 for EB3C). In particular, the conditions associated with the submission of the Urban Design and Landscape Plan (UDLP) under Condition 31, which states:

“The UDLP must include:

(h) ...A Crime Prevention Through Environmental Design Assessment of the Burswood Bus Station and the new walking and cycling networks...”

It is our view that the UDLP is the appropriate mechanism to manage the Project’s CPTED related design elements, including walking and cycling facilities, with the UDLP requiring certification by Auckland Council within three months of construction commencing.

Lastly, Eastern Busway will continue to engage with Auckland Council Parks regarding the occupation and use of Council reserves and Council’s role as asset owner.

Explanation

It is noted that the conditions for EB3C (10-11) and EB4L (11-12) include a Communication and Consultation Plan which will cover the consultation with the community to establish what they want in the various parks, but it is not clear how this can be built into an ‘implementation’ condition. It is agreed that it makes sense to deliver upgrades ahead of the main works.

Request

P2 *In respect of the implementation of open space mitigation package identified in Section 8 of Appendix 10, please explain how the conditions will provide certainty of outcome and timing for delivery of the identified outcomes.*

Response

The project is committed to delivering the open space mitigation as set out in the application. Conditions are not required in this instance as progress towards implementation of this mitigation is already well advanced. A request for Land Owner Approval to undertake the mitigation works within the parks has already been submitted to Auckland Council Parks team. This includes ‘front loading’ any agreed mitigation works at Burswood Park, (i.e., providing improvements during the construction period) given the length of time the EB3C Park will be needed for construction purposes and ‘front loading’ any agreed mitigation works at Huntington Park given the length of time the EB4L Reserve will be needed for construction purposes.

Further Note

Explanation

Parks' landscape advisor Daniel Chong has recommended the following: "I would recommend a separate large and small tree schedule for the cycleway. Some tree species on that schedule would not be fit for purpose if planted in the cycleway areas. For example, karakas, this tree could cause safety issues to pedestrians and cyclists when they drop their seed. I would also recommend more diversity in the tree selection, the use of non-natives can also be incorporated into the tree selection of the cycleway."

Response

A series of Landscape, Ecological & Arboricultural Mitigation plans (LEAM Plans) have been provided as part of the application (Appendix 9). This series of plans depicts the anticipated level of mitigation planting across EB3C and EB4L. The design and landscaping for EB3C and EB4L will continue to be refined throughout the detailed design process and incorporated into the ULDP (condition 31 for EB3C and condition 20 for EB4L) for certification by Auckland Council. This will include incorporating mana whenua input to the landscaping including plant selection and provides for the opportunity to address the diversity of tree selection within the project.

Traffic

Explanation

As discussed broadly in the Executive Summary and in some detail in Section 1.2 (Scope) of the ITA, the NOR and supporting ITA does not propose or consider a Transport Interchange (and connecting with services via the Airport to Botany ("A2B") project) at the Botany Town Centre. Rather there is a proposed modified signalised intersection with the Botany Town Centre at the southern end of EB4L at Te Irirangi Road. The EB4L elements of the project via both NOR (and associated consents) provides for a proposed connection/termination of the general EB4 route into the Town Centre intersection at Te Irirangi Road with modifications to turning lanes and rearrangement of walking and cycling features. The proposed western connection point of the EB4 route to both the current road/public transport infrastructure/service as well as the potential for future onward connections to other parts of the Auckland public transport network, is a critical location in the overall transport network. It is especially important in terms of delivering the overall Project Objectives (see Section 1.1.2 of the ITA) which refer to:

"Provide a multimodal transport corridor that connects Pakuranga and Botany to the wider network and increases choice of transport options"

There is both implicit and explicit reliance with many parts of the ITA on the whole busway and onward connection to the A2B project/route to deliver the benefits of the whole Eastern Busway project but no assessment of the detailed implications of the EB4 on the Botany Town Centre location. The framing of the ITA in general and especially at Section 1.2, refers to the cumulative effect of the Eastern Busway project overall (including earlier EB1, EB2, EB3R phases and referenced in part by the inclusion of nearly the full extent of the previous EB2/3R ITA as an appendix to this current EB3C/4L ITA). While the recent Commissioner recommendation to approve EB2/EB3R is positive, there is similarly no certainty that either the EB2/3R section or A2B will be delivered in the manner that will deliver on the Project Objectives (especially if funding delays or reallocations occur). It is necessary to understand the full effect of the NOR's being sought to test the transportation assessment outcomes against a scenario if A2B (and especially the Transport Interchange at Botany Town Centre) is not delivered/approved. This should be both in terms of public transport passenger modelling/assessment as well as general transport operations.

Request

***T1** Please confirm the findings of the ITA and overall transport assessment for the NOR on the basis that the Botany Transport Interchange is not delivered. On the basis of this sensitivity test (or equivalent assessment approach) could EBA also confirm whether there is reliance upon the provision of A2B and Botany Transport Interchange and whether there is need to tie together EB4 with A2B/Botany Transport Interchange by way of possible condition or other wider network integration condition such as used in the A2B and Northwest NOR processes.*

Response

Consideration of separate transport interchange at Botany Town Centre and A2B Project

The ITA does not rely on the future delivery of a major transport interchange at Botany Town Centre or other infrastructure/bus services associated with the A2B Notices of Requirement.

Although the Botany Town Centre is anticipated to become the location for a future major interchange when funding becomes available, the ITA lodged in support of the EB3C EB4L Applications is based on assessing the effects of developing EB3C, EB4i and EB4L in reliance on utilising the existing Town Centre Bus Station located in Town Centre Drive within the Botany Town Centre (refer snip below showing location). The ITA assumed that bus services would access the existing Botany Town Centre bus station via the new offline busway through EB4L, or in the interim (EB4i), by travelling along Ti Rakau Drive and then along Te Irirangi Drive. The ITA does not rely on the future delivery or use of the anticipated major interchange.



As part of the ITA, it was assumed that A2B bus services would operate into the Botany Town Centre bus station located in Town Centre Drive until such time that a future major interchange facility is constructed. Bus service frequencies are consistent with expected service levels in 2028. The impact of the increased volume of buses into Town Centre Drive is consistent with expected bus frequencies and has been assessed in the traffic modelling completed as part of the assessment. To clarify, the effects of A2B bus services were considered as part of the ITA to understand cumulative effects on the transport network. The anticipated A2B services and infrastructure were not relied on as part of the existing environment for the purposes of assessing the effects of EB3C EB4L stages of the Eastern Busway Project. This pragmatic approach to understanding future effects on the transport network was also adopted for the EB2 EB3R Applications and confirmed as a relevant “other” matter in the Commissioners’ decisions on EB2 EB3R.

In assessing operational effects of the EB3C EB4i and EB4L stages, it was assumed that A2B buses would run along Te Irirangi Drive and into/out from Town Centre Drive as they stop to pick up and drop off passengers at the existing Botany Town Centre bus station.

The terms ‘major’ and ‘intermediate’ were used in the ITA to differentiate between the anticipated stations and their general size as this relates to the number of platforms they would provide.

However, as clearly stated in the ITA, the future major station at Botany Town Centre was NOT relied on to inform the assessment of EB3C EB4i and EB4L. The effects of the major station would need to be assessed in a future ITA as part of a separate application under the RMA. As noted in Section [6.4.1.2](#) of the ITA:

“As stated in Section 1.2, the proposed Botany Town Centre major interchange bus station will be assessed in a separate report and application and is outside the scope of this ITA.”

EB3C and EB4L have been designed to meet the Eastern Busway Project Objectives

For completeness, the EBA confirms that the EB3C and EB4L stages of works will meet the Project objectives irrespective of whether the future major bus interchange or A2B Notices of Requirement proceed. In particular, in terms of the objective “Provide a multimodal transport corridor that connects Pakuranga and Botany to the wider network and increases choice of transport options” EB3C and EB4L will improve connectivity to the existing network by providing a connection between the existing transport network in Botany (accessed by the existing bus stops on Town Centre Drive) to Pakuranga, Panmure and into the CBD.

A network integration management plan is not necessary or appropriate

The EBA considers that a condition requiring the imposition of a network integration management plan or similar to tie together EB4 with A2B/Botany Transport Interchange is not required for the Project. Construction of a future interchange would require securing RMA authorisation either by way of a Notice of Requirement, an alteration to a designation or resource consent. Such an application would be required to demonstrate how the interchange would integrate with the transport network (which would include EB3C and EB4L). The circumstances of this Application differ to the Northwest example, which aimed to deliver transport infrastructure (via multiple projects) in the future in a greenfields location. The EB3C EB4L applications will deliver regional transport infrastructure within a developed (brownfields) environment. It is not appropriate to require integration with future transport infrastructure via

a network integration management plan, given the likelihood that implementation of any such plan could not be achieved without alterations to the EB3C/EB4L designations.

In terms of the second example cited, A2B, as far as the EBA is aware that project included a land use integration management plan rather than a network integration management plan.

Comments on assessment approach

Furthermore, and as stated previously, the assessment of the current NoR and consents for EB4L must be considered against the existing environment rather than speculative development in accordance with case law and accepted RMA practice. That is also consistent with the approach approved by the Commissioners in the EB2/EB3R decisions.

Explanation

Section 2.4 refers to the EBA's adoption of the previous modelling approach using a cascading range of transport and traffic models and a review of the 2018 Base Model undertaken by Beca in 2019. It is appreciated that the structure of the modelling including various assumptions and modelling parameters is generally relevant, however it is relevant to continue to review and confirm the appropriateness of the modelling approach through each successive stage of the Eastern Busway project, especially in relation to future development and growth surrounding the busway corridor, and the representation of that activity within future year land-use and traffic models.

Request

T2 Please provide a statement and/or update as to whether and how the 2019 Beca model review/update is still relevant for the assessment of transport considerations going forward especially in light of the recent Medium Density Residential Standards (and possible further changes to the AUP) applicable to residential development within the catchment areas adjacent to and surrounding the NOR area.

Response

The project has undertaken an assessment under known demographics, land use data and forecasts, namely the Auckland Council's Scenario I Modified Version 11.5.

The status of the Medium Density Residential Standards (MDRS), under Plan Change 78, is currently on hold pending Auckland Council's completion of investigations into flooding/hazard risks in Auckland. Therefore, we cannot rely on anticipated intensification that would be provided for by PC78 to inform the baseline of the ITA assessment. This is because the 'existing environment' is defined under case-law and only includes certain aspects of the future

environment (e.g., approved consents that are likely to be implemented and the exercise of rights that are permitted under the operative plan).

However, should there be increased population and employment growth in the project area, and given the current levels of congestion, the proposed busway would provide significant growth capacity to meet this demand.

Explanation

In the earlier section of describing the current environment (Table 3, Sec 3.4.2) there is information provided on the variability of current (via a modelled scenario) of 2018 bus travel times. Later analysis and modelling of the effect of the project on bus travel times does not include any assessment of variability or “reliability”. One of the Project Objectives (Objective 4, Section 1.1.2) refers to improving reliability and the assessment more broadly pointing to avoiding the need for buses to share the roadway with general traffic. The assessment of bus travel time reliability should therefore be a key metric in supporting the project.

Request

T3 *Traffic and Travel Variability Assessment. Please provide further information as to the assessment of future bus travel time reliability and comparison with the base/existing scenario (per Section 3.4.2).*

Response

Assessment of general traffic and bus travel time variability, during construction and upon completion, is attached as **Attachment 1**.

Explanation

The ITA adopts a base date for modelling and assessment of base data using 2017 traffic counts included in Section 3.4.1. Here the ITA authors state that there are a combination of methods used to assemble the traffic counts (e.g. SCATS traffic count loops, RAMM database, One Network Road Classification (ONRC) database). For a project of this importance it is important for there to be a consistent method of traffic counting to ensure consistency throughout the routes and for different parts of the routes (e.g. cycling counts, intersection traffic movement counts).

Request

T4 *Please provide a further information as to the validity/consistency of the different traffic counting and data collection methods adopted in Section 3.4.*

Response

Different traffic counting and data collection methods were adopted to cover deficiencies in each data set. Sydney Coordinated Adaptive Traffic System (SCATS) data is collected at signalised intersections through in-pavement sensors at each approach. Traffic data from the RAMM database is commonly collected through manual counts and sensor cables installed across the width of the road between intersections (i.e., midblock). The volumes from these surveys are inputted into the RAMM database which is used in the One Network Road Classification (ONRC) to estimate the Average Annual Daily Traffic (AADT).

These counts (AADTs) provide long term information about demand on the network over time. We have selected data that represents the Average Annual Daily Traffic taking into account seasonal variations, instead of spot counts on single select days which may not be representative of AADTs.

Request

T5 Please provide data for cyclist and pedestrian movements (to align with understanding of the vehicular traffic and bus passenger volumes) within the network to give an appreciation of the potential impacts of construction works (and to a lesser degree permanent situation) on these active mode users.

Response

During construction, the EBA will maintain the current provision of footpaths in the project areas, therefore current levels of capacity and connectivity for pedestrians and cyclists will be maintained.

A large proportion of the physical works that will be undertaken, will be offline (i.e., not adjacent to the road corridor), with the exception of the works along Ti Rakau Drive between Burswood Drive east and Guys Reserve.

Upon completion, significantly improved walking and cycling facilities will be provided, including a dedicated cycleway tying into EB3R in the west and Botany Town Centre in the east.

Explanation

As identified in the pre-lodgment comments, there was limited assessment within the ITA from a specific transportation point of view as to the justification for the “dog leg” in the route via Burswood. During the site walkover undertaken on Friday 15 September EBA personnel confirmed a significant amount of detail was provided within the Assessment of Alternatives (Appendix 19 EB3C Options Assessment). It is appreciated that within the multi-criteria assessment prepared by EBA and its technical specialists included transport planning input (per Section 13.2.1 of Appendix 19), however the depth of this analysis and consideration is not

particularly detailed. In order to assess the appropriateness of the option selection it is recommended that further specific consideration is given, especially of the deviation and diversion of walking and/or cycling from the Ti Rakau Drive route via the selected Burswood option.

Request

T6 Alignment of Burswood Section of Route. Please provide a further detailed assessment and consideration of the “diversion” effects on walking and cycling along Ti Rakau Drive (i.e. will there be a significant number of pedestrians and cyclists who wish to carry on in a straight line along Ti Rakau Drive without having to deviate around the “Burswood loop” and also around the bus depot.

Response

Current pedestrian and cycle access arrangements through the Burswood section of the project will not be changed as part of the project.

Further, a dedicated separated off-road cycling and pedestrian facility will be provided largely adjacent the proposed busway offering pedestrians and cyclists an alternative path should they wish to avoid the heavily trafficked section of Ti Rakau Drive and the many driveways/accesses along the stretch of Ti Rakau Drive between Burswood Drive (east) and Burswood Drive (west). This off-road facility provides a safer facility for users of all abilities.

Also, the provision of the dedicated separated off-road cycling and pedestrian facility provides residents of the Burswood ‘peninsula’ a safer and more convenient connection with the wider cycling and pedestrian facilities being developed as part of the project linking to Pakuranga Town Centre and beyond and ultimately to Botany Town Centre.

Request

T7 Alignment of Burswood Section of Route. Please provide clarification/confirmation of the ability for “through” cyclists (i.e. those travelling along Ti Rakau Drive and not originating or destined for activity within the Burswood Drive area) to continue along Ti Rakau Drive. On some plans (e.g. EB3C Consent Plan Sheet 6 of 8, Drawing Number EB-2-R-4-PL-DG-000114) there is connection between the “footpath” along Ti Rakau Drive and the “bi-directional cycleway” (to the rear of the bus depot).

Response

Please refer to our response to the Traffic Question 6 above.

Explanation

Within Section 7 of the ITA there is a summarised discussion regarding the community engagement and public information mitigation measures to be adopted to assist with the reduction of effects to peak period travel especially throughout the construction periods. At Sections 7.1.3 (Construction Vehicles and Routes) and Section 7.1.4 (Road Traffic) the authors of the ITA recommend that “strategic public communication” be undertaken to inform and provide alternative routes and general travel recommendations. This approach is similar to that put forward within the EB2/EB3R section of the busway, however it remains unknown as to the scale and success rate of such measures within the Auckland context for projects of this scale, extent and duration.

Request

T8 Mitigation-Drive Behaviour Change and Community Engagement. *Please provide commentary and if possible quantitative evaluation of the likely success of such “strategic [or non-strategic] public consultation” within the Auckland context in delivering appropriate diversion of peak period travel, retiming of traffic or overall commuter/general travel demand suppression as a means of mitigation of the Project’s construction transport effects.*

Response

Community engagement and information campaigns including use of variable message signs at different locations around the network, radio announcements, individual transport plans have been successfully used on projects in New Zealand, Australia and other countries to advise and influence travel behaviour. It is viewed as best practice across the road construction industry. While the success of these programs is difficult to determine it is known that people will change their travel behaviour if they are provided sufficient and timely information which is the intent of the community engagement and information dissemination program.

All practicable measures will be undertaken by EBA to ensure as many people as possible are enabled to make informed choices about how they would like to travel, alternative travel planning and real time understanding of available routes to travel during the construction period.

The EBA Customer and Community team work to the below strategy when producing communications to inform local residents, road users and other potentially affected stakeholders of major construction activities and its effects on traffic:

Audience	Action
All	Preparation of key messages and collateral
Auckland Transport	Executive Leadership briefing
Auckland Transport	Briefing of media, communications and marketing leads

Eastern Busway Alliance	Project Alliance Board and Alliance Leadership Team briefing
ATOC – Smales Farm	Briefing with AT operational leads
Media, community news publications, and community and ethnic radio	Media release (2x prior) and radio advertisements
Road users	Info (text and map/graphic) on AT's and project website
Road users / wider community	<ul style="list-style-type: none"> • Provide key information in the monthly project update • Social media ad about website every two months
Road users	Print ads including a link to project website in The Times, Pokutukawa Coast Times, Mandarin Times, Chinese Herald, Indian Weekender. Chinese Herald – also online + WeChat, Skykiwi.com – print & online + WeChat
Road users	Geo-targeted social media ads
Road users	Radio / timesaver traffic and accurate traffic
Mana whenua	Hui
Howick Local Board and Elected Representatives	<ul style="list-style-type: none"> • Howick Local Board meeting • Elected Representatives' meeting
Call centres	Provide updated information to the AT call centre, Answer Services and the C&C team phone rostered person
Residents / businesses	<ul style="list-style-type: none"> • Communication with directly affected residents and businesses • Posters at community contact points
Commuters/general road users	<ul style="list-style-type: none"> • Motorway gantry boards (coordinate with ATOC – Smales Farm) • Mobile VMS in Pakūranga locations to be defined.
Social media followers	<ul style="list-style-type: none"> • Twitter (140 characters), Facebook (event) text, • Instagram text and AT App travel alerts in the lead up to and during closure. • Digital signage: Google and Apple Maps
Key stakeholders includes: <ul style="list-style-type: none"> • Howick Local Board • Waka Kotahi, AT, AC, ASA • Any other projects in the area • Event venues, faith-based organisations, businesses, and education sector 	Email educational information and reminder about the work

<ul style="list-style-type: none"> • BET and other business associations • Emergency services, Community police and hospitals • AT and other AKL Bus Services • Heavy Haulage Assn, National Road Carriers, Auckland Airport, Uber and taxi companies • Courier and delivery companies • Bike Auckland and Bike East Auckland • Local residents of Pakūranga 	
During implementation – real-time updates to ALT and key stakeholders	Brief email at milestone intervals advising of progress, traffic challenges
Alliance team	Slides to be added to weekly all-team update
All internal and external audiences	Stills photographer, video journalism story

Urban Design

Explanation

This information in detail has not been found within the submitted documents for review. Partial summaries and high level opinions are found at some points but not which gives detailed analysis. (eg options assessment Section 11 and 12) Please highlight if this is provided elsewhere). The Urban Design document’s aim should be to ensure the project is responsive to its unique context, explains opportunities and constraints, identifies outcomes and mechanisms to combat adverse effects, and preferably highlights best practice design thinking on the issues presented.

Request

UD1 *Please provide a separate detailed Urban Design statement which provides design analysis and rationale, underpinning the thinking behind the design of the proposed scheme*

Response

The EBA has not prepared a separate Urban Design Statement. This is because Urban design has been and will continue to be an integral part of the design process for the Eastern Busway Project. However, in response to the question the following information is supplied to provide details on how Urban Design has been incorporated into the project.

The scope for the Eastern Busway urban and landscape design team input into the project has included all aspects of the project including (but not limited to):

- Optioneering phase – input into route selection and MCA process. Urban design was a criterion used to assess various project options, as detailed in Sections 5.5.1, 5.9 and 5.10 of the AEE.
- Safety - incorporation of sightlines into the design, inclusion of pedestrian fencing at stations to ensure people cross the busway and roads safely, Safety in Design (SiD), Safe System Audit (SSA). The urban design and landscape team participates in project wide safety in design workshops and follow the design guidance and specifications that determine planting setbacks for maintenance access. A further CPTED Audit of the detailed design for this section of the project will also be undertaken (refer ULDP condition 31 for EB3C and condition 20 for EB4L).
- Design Phase - input into design elements, planting, pavement finish and design elements at Burswood Station, pedestrian safety fencing, planting within medians and berms. The urban design and landscape team has attended weekly design team design coordination meetings as well as specific meetings with all disciplines to address design changes and to review the design as it develops. The EBA design team have developed a 3D integrated Federated Model (BIM360) that is used for clash detection and interdisciplinary review.
- Pre-implementation phase - Coordination with the planning team over Assessment of Environmental Effects (AEE) incorporating mitigation for landscape, arboriculture, parks and ecology has also been a key interface for the urban design team at the EBA.

Throughout the design phases of the project, the urban and landscape design team has collaborated with various design disciplines within the Eastern Busway Alliance including over the following design elements:

- Station design
- Retaining walls
- Embankments
- ITS
- Traffic signals
- Lighting
- Pavements
- Geometrics

- Road design detailing
- Bridge A and Bridge B
- Shared paths
- Miscellaneous structures
- stormwater & drainage
- utility clashes & relocations
- Landscaping
- Ecological mitigation

The objective for the urban and landscape design package inputs into the Project has been to integrate the project into the context of the environment. The philosophy has been to build on the cultural narratives and mana whenua aspirations to create a “Living Legacy” and to build on the natural qualities and ecological values of the area by providing trees and shrubs that enhance habitat and create a better environment than currently exists.

Opportunities to incorporate cultural narratives into the design include on the outer face of the barriers and for the Burswood noise wall. These cultural narratives are currently being developed in co-design workshops with Ruben Kirkwood, a mana whenua approved iwi art specialist. Ruben is also the iwi art specialist for EB1 and EB2. The provision of patterns that respond to cultural narratives on bridge barriers and noise walls together with bus station markers and the naming of bus stations by mana whenua will make the corridor and each bus station respond to the local cultural and environmental context.

Integration into the context of the environment has also considered the finish of design elements such as retaining walls, footpaths and raised pedestrian platforms which will consist of an exposed aggregate finish with black oxide in the concrete to ensure the hard surfaces, in particular retaining walls, are recessive, i.e. don't stand out (and that are also less prone to graffiti).

Stormwater from the busway is to flow through split kerbs (also known as Dolphin Kerbs) in Ti Rakau Drive medians, where the road geometrics and overland flow enable it, helping to water the planting (passive irrigation) and reduce peak flows.

Stormwater outfalls have been designed to integrate into the coastal marine and riparian environments by utilising rip rap and planting rather than concrete wing walls.

The EBA urban design and landscape team are also working with iwi planting specialists to ensure the planting design incorporates mana whenua's values. These include only using plants that come from the area (whakapapa to this whenua) and relate to the original vegetation of the area. Selecting species that can handle the environmental conditions that will prevail in the location in which they are being planted.

The selection of plant material will consider the specific conditions of planting environments, particularly the harsh conditions of medians surrounded by road pavements and the technical requirements and constraints of sightlines, underground utilities, street lighting, buses passing and maintenance.

Urban Design will continue to be a key consideration as the project progresses. Condition 31 in the EB3C Conditions (Appendix 5) and condition 20 in the EB4L Conditions (Appendix 6) of the NoRs require an Urban Design and Landscape Plan (UDLP) to be submitted to Council for certification. These proposed conditions specify what must be included in the UDLP which is as follows:

“Within 3 (three) months of commencing construction activity the Requiring Authority shall submit an Urban Design and Landscape Plan (UDLP) to Council for certification in accordance with Condition 6 above. The objective of the UDLP is to mitigate any landscape and visual effects of the Eastern Busway Project (EB3C Package).”

The UDLP must include:

- a) Urban design details for works:
 - i. Bridge A;*
 - ii. Bridge B; and*
 - iii. Burswood Station.**
- b) Landscape design details for works at:
 - i. Burswood Esplanade Reserve;*
 - ii. Bard Place Reserve; and*
 - iii. Burswood Reserve.**
- c) A maintenance plan and establishment requirements over a (3) three-year period for landscaping and (5) five years for specimen trees following planting.*
- d) Removal/treat exotic pest vegetation species and replacement with native species (including repeating annually for (3) three years post construction);*
- e) Lighting, signage and street furniture details for Eastern Busway Project (Package EB3C);*
- f) 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 Eastern Busway Project (Package EB3C);*
- g) Design features and methods for cultural expression;*

- h) *A Crime Prevention Through Environmental Design Assessment of the Burswood Bus Station and the new walking and cycling networks;*
- i) *Design features associated with the management of stormwater, including both hard and soft landscaping;*
- j) *Detailed streetscape landscaping plan(s) for all swales, street trees and street gardens that have been submitted for approval or approved by the Parks Planning Team Leader. In particular, the plans must have the following information to obtain the Parks Planning Team Leader approval:*
 - iv. *Be prepared by a suitably qualified landscape architect;*
 - v. *Show all planting including details of intended species, location, plant sizes at time of planting, the overall material palette, location of street lights and other service access points;*
 - vi. *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; and*
 - vii. *Include planting methodology.”*

Explanation

A high-level summary appears to only be provided for most of the options.

Request

UD2 *Please provide a detailed analysis and design rationale of all the different options for line position and bus stop numbers/locations.*

Response

Please refer to the detailed options assessments provided at Appendix 19, 31, 34 of the NoR lodgement package. Appendix 19 contains the options assessment for EB3C. Refer to Sections 10-13 of Appendix 19 which specifically details the consideration of the Burswood station locations by the EBA as well as an assessment from the EBA’s Urban Design specialist.

As outlined in the options assessment reports (the process of which is described at section 3 of the Options Assessment report), the EBA has robustly considered the station locations described in the NoR through consideration of alternatives followed by design refinement and further testing of options.

Further to the above, we note that section 5 of the AEE also outlines this phase of the Project. Section 7 of the AEE also notes that bus stops and their positioning within the road corridor is a permitted activity under Chapter E26 of the AUP (OP).

Explanation

This is to understand and identify the level of impact, visibility and security implications of the new bus stop area and access to it.

Request

UD3 *Please provide perspective views (inclusive of landscaping and elevations) to understand the visibility of the bus stop platforms from the cul-de-sacs of Dulwich Pl. and Heathridge Pl.*

Response

Please see the figures below which have been extracted from the Developing Design Model. These figures are a work in progress and further images can be provided as the detailed design of the project progresses. These images have been provided to provide an indication of the perspectives requested. It is noted that these images do not include noise walls. An artistic rendition has also been provided to show a representation of what Burswood station will look like.

View Southeast from Dulwich Place



View from Dulwich Place



View Southwest from Heathridge Place



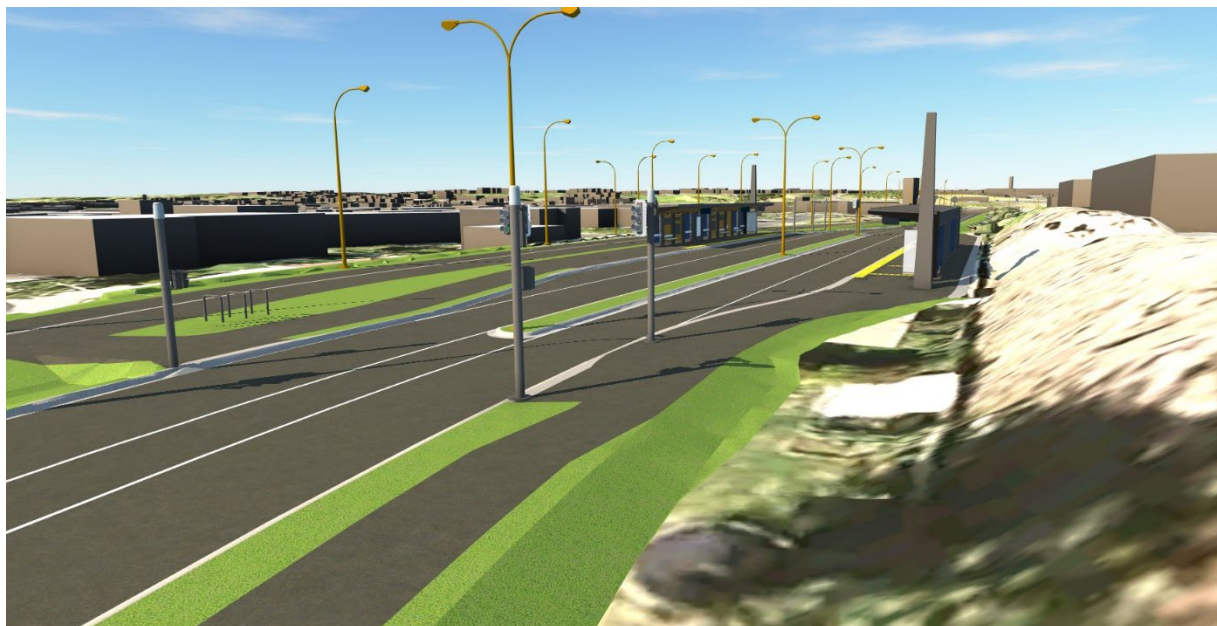
Request

UD4 Please provide perspective views (inclusive of landscaping and elevations) at the end of the retail strip No.22 towards the bus stop platforms.

Response

As above this perspective has been extracted from the Developing Design Model. These figures are a work in progress and further images can be provided as the detailed design of the project progresses.

View Northeast from 22 Torrens (on top of the bund)



Explanation

The Information requested has not been found within the proposal. Please ensure that the above design statement addresses the design quality, amenity and safety for the proposed connection between the central bus stop and Torrens Road.

Request

UD5 Please provide a separate and consolidated CPTED analysis of the proposed development.

Response

Safety has been an integral part of the Project's design process and a CPTED assessment of EB3C and EB4L is required as part of the UDLP conditions for both packages. Refer to the conditions,

specifically condition 31 for EB3C and condition 20 for EB4L which includes a requirement for a CPTED analysis.

Also please refer to response provided in Parks Question 1 above, which provides further detail on the CPTED requirements for EB3C and EB4L as outlined in the UDLP conditions.

Explanation

No plan is provided or any indication of the areas to be illuminated, only that it will be addressed at a later stage.

Request

UD6 Please provide an indicative lighting plan.

Response

Lighting plans are provided at **Attachment 2**.

In addition, the conditions associated with the UDLP require it to provide lighting detail. Refer to the NoR conditions sets (Appendix 5 EB3C Conditions, Appendix 6 EB4L Conditions) specifically condition 31(e) for EB3C and condition 20 (e) for EB4, which are also replicated below;

Condition 31 for EB3C

“The UDLP must include:

*(e) **lighting**, signage, and street furniture details for EB3C*

Condition 20 for EB4L

“The UDLP must include:

*(e) **lighting**, signage, and street furniture details for EB4L*

Explanation

This will allow for an understanding of effects of the interface and visibility of the proposal from public locations.

Request

UD7 Please provide some rationale for not providing a pedestrian path extension around the rear of the bus depot alongside the bike path.

Response

A pedestrian connection to the rear of the Howick and Eastern Bus Depot is considered unnecessary by the EBA given that the pedestrian connection adjacent to Ti Rakau Drive and next to the front of the bus depot will continue to be provided. In addition, the provision of a pedestrian path to the rear of the Bus Depot would require additional width encompassing additional retaining works within a recreation reserve.

In addition, CPTED is a potential issue with a path located within Burswood Esplanade Reserve, behind the bus depot given the limited passive surveillance and potential entrapment issues. Conversely, the existing footpath along Ti Rakau Drive is more direct and safer. Similar issues do not exist for cyclists, noting that cyclists will still be able to travel directly along Ti Rakau Drive's carriageway. Lastly, a pedestrian path through the reserves would also involve the Project occupying more public open space for limited utility.

Request

UD8 Please provide proposed section plans as indicated by red lines in image below.

Response

Proposed section plans are attached (refer to **Attachment 3**).

Arborist

Explanation

There is no provisioning of canopy cover within or over the cycle path. This has been identified as an issue with the AMETI project. A canopy will mitigate the heat island effect from extensive concreting for the cycleway and associated footpath or busway.

Request

Ar 1 Please advise whether consideration has been given to providing a canopy cover within or over the cycle path.

Response

As with the other aspects of the Project, the proposed landscaping has been subject to a lengthy design process that has sought to integrate it with other design elements. A key outcome sought by the various design elements has been to provide a safe environment for all members of the community. Given this, the landscaping species and plant sizes have been selected to avoid generating CPTED issues, as well as generating excessive overshadowing of footpaths, cycleways and shared paths. AT considers that the proposed Landscape Ecology and Arboricultural Plans

(Appendix 9) strikes an appropriate balance between providing canopy cover and achieving other design outcomes.

Furthermore, it should be noted that the final landscaping layout for both packages will be subject to a UDLP to be certified by Auckland Council. The UDLP will provide a final step to confirm landscaping layouts, species and sizes following further engagement with Auckland Council Parks, mana whenua and the community. Requiring larger or more canopy trees would pre-empt the further conversations needed with key stakeholders or could result in outcomes contrary to other design disciplines.

We note that the exploratory note also raises the “heat island effect” due to widespread use of concrete. However, as noted above, the proposed landscaping has taken into consideration a range of design outcomes and criteria. This is an appropriate response to developing new infrastructure in a brownfield location, while it is also recognised that heat island effects are not raised by the AUP (OP) as a matter of interest for infrastructure projects.

Lastly, as detailed in Section 9.3 of the AEE, the Project will deliver significant benefits, including those associated with mitigating climate change given the modal shift that will be supported through improved public and active transport infrastructure.

Explanation

Section 7.2 of the Arboricultural Effects Assessment notes the quantity of plantings for mitigation, but not specifically which ones are for mitigation for existing trees lost to the project versus ‘other’ trees proposed to mitigate the project. To accurately assess mitigation value (as much as possible at this stage) an assessment of canopy loss caused by the removal of existing trees and a ‘worst case scenario’ of canopy loss for the failure or unsuitability of transplanted trees is required.

Request

Ar 2 *Please provide an assessment of canopy loss and clarify what new trees are proposed as mitigation for existing trees lost.*

Response

The canopy loss anticipated by the project is described in the ‘Terrestrial and Freshwater Ecological Effects Assessment’ (Appendix 27 of the application). Specifically, section 3.2 discusses vegetation clearance, both permanent and temporary. Table 3-1 (EB3C) and Table 3-2 (EB4L) from this assessment are replicated below:

Location	Area of Permanent Vegetation Loss (m ²)	Area of Temporary Vegetation Clearance (m ²)
EB3C		
EB3C Alignment (including Bridge A and Bridge B works and cycleway within Burswood Reserve)	3,643	3,910
Stormwater Infrastructure		
Upgrade to existing outfall MCC_108482 (SAP ID 2000380606)	25	75
Removal of existing outfall MCC_496129 (SAP ID 2000507038) and construct new outfall 53-1	25	75
Upgrade to existing outfall MCC_988531 (SAP ID 2000295186)	25	75
New network (pipeline 36) to connect to the existing upstream manhole (MCC_71866)	0	75
Total vegetation clearance (m²)	3,718	4,210

*Includes areas of rank grass within the understory of vegetation and along edges

Location	Area of Permanent Vegetation Loss (m ²)	Area of Temporary Vegetation Clearance (m ²)
EB4L		
EB4L Alignment (including Bridge C and Botany Town Centre/Te Irirangi Drive Intersection)	5,491	3478
Stormwater Infrastructure		
New outfall (1-1), riprap (including rip rap and pipeline)	25	75
New Pipeline (37-3) proposed connection to the existing manhole	0	0
Total vegetation clearance (m²)	5,516	3,553

*Includes areas of rank grass within the understory of vegetation and along edges

With regards to the 'worst case scenario' for the instance that transplanted trees do not survive, this has been estimated at approximate 175m² of canopy for trees that would ordinarily require resource consent to remove (trees located within road reserve or open space zoned land). This has been estimated utilising GIS software.

It is considered that all the planting undertaken as part of the project should be considered as mitigation of adverse effects resulting from the required tree removal. While the planting within the Revegetation Planting areas and the Lizard Habitat areas provides the mitigation required for ecological purposes, they also serve other purposes such as amenity values and carbon sequestration. The Project Arborist (Leon Saxon) has been directly involved in the preparation of the LEAM plans that accompanied the application (Appendix 9). Leon is satisfied that the planting shown within those plans appropriately addresses loss of trees arising from the project.

Further Note

Explanation

80L and 160L trees are highly susceptible to failure without irrigation and intensive management for no less than 5-years. Substitution with more 45L trees will be more beneficial in the long-term, require shorter maintenance periods (3-years) and easier incorporate into the cycleway/pathway design than large trees.

Response

Landscaping for EB3C and EB4L will continue to be refined throughout the detailed design process and incorporated into the ULDP (condition 31 for EB3C and condition 20 for EB4L) for certification by Auckland Council. This will include incorporating mana whenua input to the landscaping including plant selection and provides for the opportunity to address plant sizing within the project.

Based on the above points and the attached documents, AT considers that Council can proceed with the public notification of the EB3C and EB4L Notices of Requirements. This is based both on the significant volume of application material previously provided to Council, as well as the additional material provided with this response letter.

We would be happy to meet to answer any questions or queries that either yourself or your specialist team have on the application or supplied material.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Matt Zame', with a long horizontal flourish extending to the right.

Matt Zame
Alliance Project Director
Eastern Busway Alliance