

Via Email

9 April 2020

Attention: Petra Burns

Dear Petra

Section 92 Response for Notice of Requirement: Alteration to Designation 6766 for State Highway 16 (Stage 1) Huapai to Waimauku Safety Improvements

The following sets out our response to the Section 92 request (dated 18 December 2020), in relation to the Alteration to Designation 6766 for State Highway 16 (Stage 1) Huapai to Waimauku Safety Improvements, on behalf of the New Zealand Transport Agency ("Transport Agency").

The response is supported by the following attachments:

- Attachment 1 – Shapefile of proposed designation boundaries
- Attachment 2 – Updated Land Requirement Plans

General

- 1. Please provide a Shapefile of the proposed new designation boundaries (including both permanent and temporary land acquisition) to enable accurate assessment and plotting of the land to be acquired.**

Please find attached the shapefile of the proposed new designation boundaries.

As discussed, these new designation boundaries will not always align with the property boundaries shown on the on-line Unitary Plan maps. This is due to an identified error in the Unitary Plan maps, which we understand are based on Land Information New Zealand (LINZ) on-line data.

The Transport Agency and Auckland Council are currently investigating a solution to the mapping discrepancies with the LINZ property boundary data, separately from this NoR process. In the interim, we seek Council's advice on how this could be recorded on the Unitary Plan on-line maps at the notification stage.

- 2. Please explain the rationale for the easement proposed for the site at 623 State Highway 16, as opposed to temporary occupation or permanent take?**

An easement is proposed at 623 State Highway 16 as there is an existing Auckland Council owned stormwater culvert that extends into the private property. The proposed works on the site are required to tie into the existing stormwater network by installing a new head wall on the culvert pipe end due to the need to batter the widened carriageway down to the culvert. Therefore, the headwall is needed to provide support for the batter. An easement is proposed as Auckland Council will require access to the culvert for future maintenance of their asset within the private property.

- 3. Please explain why for the site at 23 Foster Road, Appendix C: Land Requirement Plans (drawing number SR-1003-01-GIS-7--20A) show the portion of temporary occupation as outside the proposed designation.**

This is an error and the drawing has been correctly updated to illustrate the portion of temporary occupation required within the proposed designation on 23 Foster Road. In addition to this, an error has been identified in the drawing numbers shown on the Land Requirement Plans, which are incorrect and not consistent. Please see Attachment 2 to this letter for an updated copy of Appendix C: Land Requirement Plans which include the corrected designation at 23 Foster Road and updated drawing numbers.

Noise

The following sets out our response to the additional Section 92 request relating to noise and vibration matters (received separately via email dated 24 February 2020). This response has been prepared as a result of detailed discussions between the Transport Agency's noise specialist (Marshall Day Acoustics) and Council's noise specialist (Bin Qu).

- 4. Please confirm if tree removal, concrete/rock breaking, road surface milling, work depot/yards at or adjacent to the designated areas has been included in the assessment.**

The assessment considers the acoustic effects of general construction activities/equipment including concrete drilling for barrier installation, and vibratory rollers for road widening/milling. Tree removal and milling have not been specifically addressed, but the loudest assessed noise level (108 dB LwA for concrete drilling) is similar to the milling level (110 dB LwA). Concrete drilling would occur closer to the houses, therefore the effects are similar.

The use of chainsaws to remove trees has not been included in the assessment, but would be of short duration (less than one day) in each location. The only receiver location where the use of chainsaws may have an effect is 407 State Highway 16, where the turning bay extends over an area of shrubbery. No significant trees appear to be required to be felled in the vicinity of dwellings, which means that vegetation removal noise levels are less than would be the case for tree felling and chipping.

Whilst the assessment doesn't make specific reference to any work depot/yard, these always generate lower noise levels than the construction noise sources assessed. Consideration was given to the typical activities associated with the proposed yard at Factory Road.

- 5. Please provide assessment of the extent of any noise exceedances, in particular – the site/dwellings where noise exceedance may occur, predicted noise levels at the affected receivers, assessment of the impact of the exceedances and the proposed mitigation**

A schedule of all relevant nearby noise sensitive receivers adjacent to the state highway alignment was included in Section 3.0, Table 1, with both property address and distance from alignment (m) included.

Most of the works will be undertaken within the existing state highway designation, which does not have any conditions relating to noise. In addition, all works in the road have exemptions provided through the Auckland Unitary Plan (AUP), Rule E25.6.29.

Between 7am and 10pm, E25.6.29(3) states that these Standards do not apply, where:

1. Exceedances are less than 10 days at any one receiver, or
2. Works cannot practicably comply, or
3. A works access permit is obtained from Auckland Transport or New Zealand Transport Agency, or
4. For planned works where the works will take more than 8 hours to complete and a construction noise and vibration management plan [CNVMP] is provided to Council no less than five days prior to the works commencing in accordance with the applicable provisions of Standard E25.6.29 (5).

Similarly to daytime, the AUP provides for planned works in a road to have night-time exceedances between 10pm and 7am. E25.6.29(2) states that these Standards do not apply at any one receiver for up to 3 nights, where:

1. Works cannot practicably be undertaken during the day, or
2. Works cannot practicably comply, or
3. A works access permit is obtained from Auckland Transport or New Zealand Transport Agency, or
4. For minor planned works a construction noise and vibration management plan is provided to Council no less than five days prior to the works commencing in accordance with the applicable provisions of Standard E25.6.29 (5).

Where works are proposed outside of the existing designation, the AUP construction rules have been used as the basis for the assessment. The construction noise standards are set out in Section 4.2.1, Table 2.

The indicative sound power level for equipment are listed in Section 5.2.1, Table 3.

As per the construction noise assessment in Section 5.2.1, the noise level of most day-time works would comply with the noise standards. Yet dwellings located closer than 25m from works outside the designation (being 405 SH16, 407 SH16, 779 SH16) may experience daytime noise exceedance.

Irrespective of the location of the works (inside or outside the designation) noise management and mitigation would be expected to be implemented through a Construction Noise and Vibration Management Plan ("CNVMP"), as Section 16 of the Resource Management Act 1991 ("RMA") applies.

Works within a transport corridor are often time constrained and require weekend and night-time works. As noted in Section 4.2.1, paragraphs 4 and 5, these works cannot always practicably comply with the noise standards, and the noise limit for these periods are unlikely to be complied with. Therefore, a CNVMP will be prepared. This will include a range of management and mitigation measures (as set out in Section 5.3; management of night-time works is specifically discussed in Section 5.3.4) and will consider the Best Practicable Option ("BPO").

In terms of effects, the following can be expected:

External noise level	Potential daytime effects outdoors	Internal noise level	Potential daytime effects indoors
Up to 65 dB LAeq	Conversation becomes strained, particularly over longer distances	Up to 45 dB LAeq	Noise levels would be noticeable but unlikely to interfere with residential or office daily activities.
65 to 70 dB LAeq	People may avoid spending sustained periods outside, except when necessary through workplace requirements	45 to 50 dB LAeq	Concentration would start to be affected. TV and telephone conversations would begin to be affected.
70 to 75 dB LAeq	Businesses that involve substantial outdoor use would experience disruption as people avoid the area	50 to 55 dB LAeq	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.

The predicted noise levels are commonly experienced adjacent to road construction works that can be (and is) undertaken as of right across Auckland. The duration outside each building will be limited, and we consider that the predicted noise levels and construction noise effects can be mitigated or specifically managed to have less than minor effects.

6. In terms of night works, it is noted detailed construction method may not be available, but to help determine the noise effect at night the following information is required:

Details about

- **Time:**

Due it being a linear state highway improvement project, the works will have a rolling nature (i.e. works will travel along the length progressively).

- **Duration (number of nights)**

Each dwelling will be affected for a limited time when night-works are in the vicinity; most works should be complete within 3 nights outside each dwelling.

- **Location**

Likely night-time works will include resurfacing along the shoulder/edges, where this would affect traffic movements on the road. Therefore, most of the alignment may experience night-time works, however, this has not been confirmed yet.

- **Work detail and equipment used for the proposed night work**

Potential for asphalt trucks and road rollers.

- **noise and vibration predictions on receivers**

- **and any surveys on ambient noise level at night.**

Please refer to Section 4.2.1 Noise paragraph 4 for noise standards, Section 4.2.1 Noise paragraph 5 for an assessment of night-time non-compliance of noise standards and Section 5.3 for Mitigation.

Specifically, Section 5.3.4 discusses potential work/equipment and noise management methods.

7. It seems that the MDA report has not assessed the noise/vibration effect on some buildings/dwellings what are located within 14m from the proposed work. For example – 677 and 779 State Highway 16. Please review and provide assessment.

As outlined in Section 3.0 Existing Environment, these properties (at 677 and 799 SH16) are 23m and 16m away respectively. The construction works outside 677 SH16 do not require high vibration activities within 14 m of either building on the site. The construction works outside SH16 are more than 14 m away.

Section 5.2.2 Vibration paragraphs 1 and 2 note that these specific properties are beyond the safe setback distance for vibration (i.e. they are more than 14m away).

Yet with respect to amenity, per paragraph 4, MDA recommends all receivers within 40m of alignment are notified before vibration works.

We trust that the above information is sufficient to respond to all the Section 92 questions. However, should you require any further explanation, please do not hesitate to contact the undersigned.

Yours sincerely



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Planner

on behalf of

Beca Limited

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Attachment 1 – Shapefile for proposed designation boundary (electronic file)

Attachment 2 – Updated Land Requirement Plans