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Dear Cassandra,

Waihoehoe Precinct Residential Development – Auckland Transport Comments

1.0 Introduction

Oyster Capital Limited have engaged Styles Group to review the comments and recommendations provided by Auckland Transport (**AT**) for PPC 50. The comments are with respect to potential road traffic noise effects on the Waihoehoe Precinct Residential Development (**WPRD**) generated by the future Waihoehoe Road West and Ōpāheke North-South Frequent Transit Network (**FTN**) arterial roads.

2.0 Auckland Transport comments

This section summarises the position of AT with respect to PPC 50, their position during the NOR hearing for the Waihoehoe Road West and Ōpāheke North-South FTN Arterial Roads, and the difference between the respective approaches.

2.1 Summary of AT position for PPC 50

AT make the following general points regarding PPC 50:

- i. Noise generated by the future operation of the arterial roads may have potential health and amenity effects on the WPRD, and that reverse sensitivity effects may arise from PPC50.
- ii. All reasonable steps are being taken to mitigate traffic noise at the source, such as the use of a low noise road surface.
- iii. A 75 m setback will be required between the dwellings and the arterial roads to achieve suitable residential amenity. This includes the application of low noise road surfaces.
- iv. Any new dwellings within the 75 m setback distance are designed, constructed, and maintained so that an internal noise limit of 40 dB $L_{Aeq(24 \text{ hour})}$ is not exceeded within all habitable spaces.

2.2 Summary of AT position at NOR hearing

AT made the following points during the NOR process for the arterial roads:

- i. The arterial roads will only be constructed if the area is intensified.
- ii. An assessment in accordance with NZS 6806:2010 will be undertaken at the time of construction to determine the noise mitigation measures required for the arterial roads.
- iii. The assessment in (ii) will only consider any remaining PPFs that physically existed in 2020.

This approach will conclude that no noise mitigation is necessary if the 2020 PPFs have all been demolished or otherwise no longer exist at the time of the assessment. This could result in a noisy (but economical) chip seal surface being used for the arterial roads.

2.3 Difference in AT's approach between PPC 50 and the NOR

Under AT's proposed NOR conditions, a future NZS 6806:2010 assessment would be undertaken that only considers any remaining PPFs that physically existed in 2020. This could result in no effort being made to mitigate road traffic noise levels.

The PPC 50 comments assume that a low-noise surface will be applied to the arterial roads. However, this would not be required by the NOR conditions sought by AT so it cannot be relied on at this time.

Ats approach and proposed conditions through the NOR process could result in a noisy environment whereas their approach and comments on PPC 50 assumes there will be considerable efforts made to reduce the noise at the source.

These approaches are very different and make it impossible to determine what the noise levels are likely to be on the PPC 50 land.

3.0 Our comments and recommendations

The proposed AT approach for the NOR was to base the requirement for any noise mitigation measures on a future NZS 6806:2010 assessment. The assessment would be based on an historical receiving environment that is unlikely to still exist following intensification. Such an assessment would not address any potential health and amenity noise effects on the environment that the arterial roads are being designed to service. This approach will ignore the future intensified environment that is sensitive to noise. We see no purpose or value in this approach.

We do not agree with the approach of a standard 75 m setback for PPC 50 for the following reasons:

- i. A predefined setback distance does not consider any screening afforded by the dwellings nearest to the road. The screening by other dwellings can make a significant difference to the mitigation required to achieve acceptable internal noise levels within habitable rooms further separated from the road.

- ii. A standard setback distance does not provide any information on the level of noise at any point inside the setback. This makes it impossible to determine what acoustic treatment would be required for any dwelling inside the setback.

The proposed NOR approach would require an assessment to be undertaken in the future before the BPO could be determined. It is unclear how a setback distance could be defined, or the required mitigation for each dwelling could be determined before the final design and surfaces of the arterial roads have been confirmed.

There is no information provided on how the setback distance has been calculated or the assumptions that have been made. To model the noise and produce noise level predictions and contours will require the following information:

- i. Traffic flows (AADT) on the arterial roads and the percentage of heavy vehicles
- ii. Approximate speeds
- iii. Grade
- iv. Road surface
- v. Topography
- vi. Physical mitigation such as bunds and barriers.

We agree that it is likely that the traffic noise levels cannot be internalised inside the road corridor to the extent that the noise levels on the PPC 50 land are reasonable (i.e., PPFs would not need to be insulated).

On this basis, we agree that it is likely that the dwellings close to the arterial roads will need to be acoustically insulated. The degree of treatment will vary from very little to comprehensive depending on their exposure to the road traffic noise.

We consider that the approach for managing these issues on PPC 50 land requires certainty on the future noise environment.

Certainty on the future noise environment can be provided by either:

- i. AT providing the noise level at the edge of the road corridor (perhaps 10 m from the sealed shoulder) and the distance at which 55 dB $L_{Aeq(24 \text{ hour})}$ is expected.

Or

- ii. AT providing traffic flows (AADT) on the arterial roads and the percentage of heavy vehicles, approximate speeds, road surface and any physical mitigation such as bunds and barriers inside the road reserve.

Either of these options would allow Oyster Capital Limited to predict the propagation of noise over the land and specify acoustic treatment according to the actual level of noise that will be received on any given façade.

We consider that the information identified above is required from AT in order to determine the future transport environment to appropriately formulate conditions to satisfy AT's concerns. In the absence of the required information being provided by AT, we can prepare a recommended condition of consent which will appropriately manage interface issues based on a number of assumptions.

Please contact me if you require any further information.

Yours sincerely,



Jon Styles, MASNZ
Director and Principal