

Memorandum

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| To | Jessica Pritchard, James Andrew | Page | 1 |
| CC | Juliet Spagnolo, Emma Boon | | |
| Subject | Transmission Gully noise barrier – modelling review based on as-built wall | | |
| From | Axel Montes de Oca | | |
| File/Ref No. | 60436069 | Date | 01-March-2022 |

1.0 Introduction

Upon inspection of the noise walls built at Linden for the Transmission Gully project, it was found that the height of the noise wall built was shorter in some areas than the minimum allowable height specified in the acoustic design.

AECOM has therefore been engaged to carry out additional noise modelling to determine the effect of the noise wall being built shorter than what was specified in the design.

The noise model has been updated with the “as-built” noise wall design, and the results have been compared to the noise predictions from the Detailed Design phase.

2.0 Documentation

The model was updated based on the documents provided by CPB HEB Joint Venture on 1 February 2022, summarised below:

- TG CPBH DRG F3 SV 5196
- TG CPBH DRG F3 SV 5196-A
- TG CPBH DRG F3 SV 5185 Dn wall asb
- TG CPBH DRG F3 SV 5185 D
- TG CPBH DRG F3 SV 5196-nwall abs
- TG CPBH DRG F3 SV 5185-D

3.0 Noise modelling exercise and methodology

The noise modelling was undertaken following the procedure set out in the original Noise Mitigation Plan, presented in the document “*Transmission Gully Noise Mitigation Plan TG-LHJV-MSP-ALL-EN-0001 Revision D*”

The updated modelling results have been compared with the predicted noise levels presented in Table 4-3 of the Noise Mitigation Plan.

4.0 Results

Where the noise barrier has been built lower than specified, the noise level difference at surrounding PPFs is predicted to be imperceptible (less than 1 dB), and therefore consistent with the Detailed Design phase predictions. No change of category was noted for any PPFs.

On the basis of the results, we consider that the noise barrier has been built in general accordance with the dimensions stated in Table 12-22 of the Acoustic Assessment, and therefore complies with Rule NZTA.73.

Should you have any questions, please feel free to contact me.

Kind regards,

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