

IN THE MATTER OF

the Resource Management Act 1991

AND

IN THE MATTER OF

Notices of requirement for designations under section 168 of the Act, in relation to Te Ahu a Turanga; Manawatū Tararua Highway Project

BY

NEW ZEALAND TRANSPORT AGENCY
Requiring Authority

**ADDENDUM TO STATEMENT OF EVIDENCE OF DR STEPHEN GORDON
CHILES (NOISE AND VIBRATION) ON BEHALF OF THE NEW ZEALAND
TRANSPORT AGENCY**

25 March 2019

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INTRODUCTION

1. My name is **Dr Stephen Gordon Chiles**.
2. I submitted a statement of expert evidence on Noise and Vibration ("**EIC**") on behalf of the New Zealand Transport Agency ("**Transport Agency**") dated 8 March 2019, in respect of Te Ahu a Turanga; Manawatū Tararua Highway Project ("**the Project**").
3. I have the qualifications and experience set out in my EIC.
4. I repeat the confirmation given in my EIC that I have read the 'Code of Conduct' for expert witnesses and that my evidence has been prepared in compliance with that Code.
5. In this addendum I use the same defined terms as in my EIC.
6. In this addendum to my EIC, I respond to points made in the expert evidence of:
 - (a) Michael Briggs on behalf of the Department of Conservation; and
 - (b) Christopher Jones on behalf of Meridian Energy Ltd ("**Meridian**").
7. In this addendum I will also comment on a response to the Hearing Panel's questions by Nigel Lloyd.

RESPONSE TO EXPERT EVIDENCE

Response to evidence of Michael Briggs

8. In paragraph 9.4 of his evidence Mr Briggs states that I have not provided any explanation as to my opinions with respect to noise effects at the Manawatū Gorge Scenic Reserve western car park and information area. I addressed this matter briefly in paragraph 109 of Technical Assessment 2, and subsequently provided more detailed explanation in paragraphs 64 to 68 of my EIC.
9. Mr Briggs goes on in paragraph 9.4 of his evidence to express his opinion that designation conditions should restrict construction and operational noise of the Project at the car park and information area, to below the operational road-traffic sound levels that existed before the Gorge closed. Mr Briggs does not explain how he formed this opinion and does not provide any technical foundation for adopting such noise limits.
10. I am not aware of any situations where construction noise has been required to be maintained below existing (or pre-existing) operational noise levels, and

I generally consider such a control to be impracticable and inappropriate. Temporary construction noise is inherently noisier than most other activities and NZS 6803¹ provides guideline noise limits that are higher than guideline limits in other standards for permanent operational noise sources.

11. The existing Manawatū Gorge Scenic Reserve western car park and information area is within the proposed designation, and most of the area is underneath the indicative earthworks. During construction of the Project, the car park and information area will need to be relocated and any access at the current location would only be possible by passing through an extensive construction site. In this context I consider it inappropriate to restrict construction noise to an arbitrary limit based on a previous situation that has no bearing on how visitors would be experiencing that temporary environment.
12. In terms of operational road-traffic noise, paragraph 67 of my EIC describes how sound levels in a reconfigured information (and picnic) area should be significantly lower than the situation before the Gorge closed. However, regardless of this likely improvement, in my opinion a roadside information and picnic area should not be unduly noise sensitive and does not warrant specific noise limits. Furthermore, while I consider there is an opportunity to improve amenity in the reconfigured area, I recommend the design be approached in a holistic manner considering all aspects of amenity, rather than setting noise limits as a blunt control for just one component. Requirements to achieve absolute noise limits can result in barriers or other structures that can have adverse visual, shading and urban design outcomes. Unnecessary constraints may also arise on the layout of the area.
13. Depending on the final design, the reconfigured car parking area may be exposed to higher sound levels than the reconfigured information and picnic area. Car parking areas are generally not noise sensitive. In the context of a site that has always had external access solely from the State highway network, the sound of road-traffic in a car parking area should not adversely affect amenity and in my opinion does not warrant any noise limits. I am not aware of noise limits being set at any other car parking areas.

Response to evidence of Christopher Jones

14. In paragraph 43 of his evidence Mr Jones recommends that the Construction Noise and Vibration Management Plan ("**CNVMP**") should specifically

¹ NZS 6803:1999 Acoustics – Construction noise

address the possible extent of construction vibration in the wind farm and should require consultation with Meridian. I agree. While wind turbines should not be unduly vibration sensitive, I recommend a precautionary approach in the same manner as proposed for Transpower's pylons in proposed designation condition 21.d.ix attached to the evidence of **Ainsley McLeod**. I recommend that an equivalent requirement be inserted in condition 21.d relating to wind turbines and consultation with Meridian. I understand Ms McLeod intends to provide an updated condition at the hearing.

RESPONSE TO HEARING PANEL QUESTIONS TO NIGEL LLOYD

15. Mr Lloyd discussed the Hearing Panel's questions with me before formulating his responses included in the collated response of the reporting officers dated 14 March 2019.

16. The Hearing Panel asked Mr Lloyd:

"In your opinion, is there a need to consider suppressing engine noise and exhaust noise, by utilising additional muffler noise suppression devices?"

17. Mr Lloyd's response included:

"From discussion with Dr Chiles I understand that all trucks involved in the construction works will have the engine brakes muffled. I also understand from Dr Chiles that this is standard practice for NZTA construction sites but a provision could be included in the CTMP to avoid any uncertainty. All construction vehicles must have effective noise suppression devices for engine brakes."

18. I agree with Mr Lloyd that all construction vehicles should have effective noise suppression devices for engine brakes, and I agree this should be a requirement in the Construction Traffic Management Plan ("**CTMP**"). This is not necessarily a standard requirement, but in any event I recommend this requirement be added to proposed condition 22 attached to the evidence of **Ms McLeod**. Again, I understand Ms McLeod intends to provide an updated condition at the hearing.

Dr Stephen Chiles

25 March 2019