

## Narissa Armstrong

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**From:** Lea O'Sullivan <Lea.OSullivan@nzta.govt.nz>  
**Sent:** Friday, 17 June 2022 2:09 pm  
**To:** White, Nicole  
**Subject:** RE: 2021-1952: TDC Growth Plan Change - Waka Kotahi reverse sensitivity feedback for Brightwater

Hi again Nicole,

I got the following response from Stephen Chiles:

NZS 6806 sets out functional requirements for noise predictions for road-traffic noise. It's fairly light but that is probably the best reference. For one off development the Waka Kotahi web calculator could be used <https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/tools/road-traffic-noise-calculator/>, but for a subdivision a computer model would usually be appropriate.

Waka Kotahi does have more guidance for modelling but NZS 6806 is probably the best single reference. <https://nzta.govt.nz/assets/Highways-Information-Portal/Technical-disciplines/Noise-and-vibration/Standards/Guides/DRAFT-NZTA-guide-to-state-highway-noise-mapping-v1.0.pdf>

Sadly, Waka Kotahi does not collate noise measurements from state highways. Waka Kotahi commissions vast amounts of noise monitoring primarily in association with projects, but these are not collated. As such, I don't have a library of data I can point to. I think the question is seeking confirmation that 54dB regularly occurs at a distance of 100m. This is definitely the case, but for example numbers you would need to trawl through individual projects.

I've also snipped a close up shot of the noise modelling map relative to this site, with the legend – you should be able to see the breakdown of dB LAeq (24 hr):



Noise contour lines

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Noise contour areas

- 55 - 59 dB LAeq (24hr)
- 60 - 64 dB LAeq (24hr)
- 65 - 69 dB LAeq (24hr)
- >70 dB LAeq (24hr)

I hope this goes some way to answering your questions.

Kia pai tō mutunga wiki – have a good weekend!

Lea

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**From:** White, Nicole <[nicole.white@wsp.com](mailto:nicole.white@wsp.com)>  
**Sent:** Wednesday, 15 June 2022 4:42 pm  
**To:** Lea O'Sullivan <[Lea.OSullivan@nzta.govt.nz](mailto:Lea.OSullivan@nzta.govt.nz)>  
**Subject:** RE: 2021-1952: TDC Growth Plan Change - Waka Kotahi reverse sensitivity feedback for Brightwater

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Ahiahī mārie Lea

Thanks for this feedback – it's really helpful.

I'll pass this feedback onto our team. In the interim, I have a few follow up questions:

- Is there any standard criteria/ guidance around how the predicted noise level is to be determined?
- Do Waka Kotahi have any noise level readings near state highways that we could see? It would be helpful to be able to put the numbers into context i.e. what types of environment(s) would the noise level within 100m of the state highway be less than 57 dB  $L_{AVG}$  (or 54, factoring in the 3 dB)?

Ngā mihi nui



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**From:** Lea O'Sullivan <[Lea.OSullivan@nzta.govt.nz](mailto:Lea.OSullivan@nzta.govt.nz)>  
**Sent:** Tuesday, 14 June 2022 2:25 PM  
**To:** White, Nicole <[nicole.white@wsp.com](mailto:nicole.white@wsp.com)>  
**Subject:** RE: 2021-1952: TDC Growth Plan Change - Waka Kotahi reverse sensitivity feedback for Brightwater

Kia ora anō Nicole,

Thanks for providing the draft rules. I've sought input from our acoustic specialist who has provided the comments below and the 'marked up' version of the document you provided.

Yes - this is generally heading in the right direction with key issues being:

- Inclusion of a rule for subdivisions is good and the linking of acoustic reports to avoid unnecessary repetition makes sense
- Vibration is covered
- Ventilation is covered

The main points outstanding are:

- In terms of the mechanics of the rule, it should allow for prediction as an alternative to measurements
- For either measurement or prediction there should be a 3dB tolerance applied

- In the subdivision rule it should set out how 57 dB will be achieved in outdoor living spaces as far as practicable and it should explicitly require a barrier to be considered

I recommend refinement of the rules to pick up these points.

Happy to kōrero further, but I think this covers the Waka Kotahi view around suggested changes.

Mā te wā,

Lea

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**From:** White, Nicole <[nicole.white@wsp.com](mailto:nicole.white@wsp.com)>

**Sent:** Thursday, 9 June 2022 5:16 pm

**To:** Lea O'Sullivan <[Lea.OSullivan@nzta.govt.nz](mailto:Lea.OSullivan@nzta.govt.nz)>

**Subject:** 2021-1952: TDC Growth Plan Change - Waka Kotahi reverse sensitivity feedback for Brightwater

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Kia ora Lea

I hope you're doing well?

Following on from your conversation with Reuben, I've attached a copy of our draft reverse sensitivity provisions for the Brightwater Growth Plan Change.

The key things to note are that:

- We have added a reverse sensitivity rule to the subdivision chapter, requiring an acoustic report to be prepared upfront at subdivision stage for lots within 100m of the state highway's white edgeline. This report can also be used at land use stage.
- We have added some criteria around how noise levels are to be measured.
- The rules include a 20m setback to mitigate vibration effects.
- We have used a 50m setback for the exception under the internal noise level land use rule, as per your feedback below.
- We have added that, where a dwelling has more than one floor, compliance with the internal noise level land use rule must be assessed separately for each floor.

I've left some notes in the margins, which state where reverse sensitivity provisions have been included.

Please let me know if you have any questions or comments. Happy to kōrero.

Ngā mihi



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**From:** Lea O'Sullivan <[Lea.OSullivan@nzta.govt.nz](mailto:Lea.OSullivan@nzta.govt.nz)>  
**Sent:** Tuesday, 24 May 2022 12:16 PM  
**To:** Peterson, Reuben <[reuben.peterson@wsp.com](mailto:reuben.peterson@wsp.com)>  
**Cc:** Daniel Winter <[daniel.winter@tasman.govt.nz](mailto:daniel.winter@tasman.govt.nz)>; White, Nicole <[nicole.white@wsp.com](mailto:nicole.white@wsp.com)>; Hutchings, Mitchell <[Mitchell.Hutchings@wsp.com](mailto:Mitchell.Hutchings@wsp.com)>  
**Subject:** RE: 2021-1952: TDC Growth Plan Change - Waka Kotahi reverse sensitivity feedback for Brightwater

Kia ora Reuben,

Sorry for the delay in my response. I've made some comment in red text below that I hope are helpful.

Happy to chat further.

Lea

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**From:** Peterson, Reuben <[reuben.peterson@wsp.com](mailto:reuben.peterson@wsp.com)>  
**Sent:** Tuesday, 3 May 2022 4:33 pm  
**To:** Lea O'Sullivan <[Lea.OSullivan@nzta.govt.nz](mailto:Lea.OSullivan@nzta.govt.nz)>  
**Cc:** Daniel Winter <[daniel.winter@tasman.govt.nz](mailto:daniel.winter@tasman.govt.nz)>; White, Nicole <[nicole.white@wsp.com](mailto:nicole.white@wsp.com)>  
**Subject:** RE: 2021-1952: TDC Growth Plan Change - Waka Kotahi reverse sensitivity feedback

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Hi Lea,

Thanks for the feedback on the proposed rules. I'm pleased to see we are mostly in agreement.

I have a couple of questions / comments you or Stephen should be able to help on.

- 1) What is the purpose of the 3dB addition to measured or predicted levels? To provide for traffic growth, change in acoustic performance? Some more context on this item would be useful. (Note I am happy with the requirement to determine requirements for upper and lower floors separately) **yes – I believe that this is to take into account future growth and peaks in road noise directly after resurfacing (before it 'beds in')**

- 2) What are the reasons for the change from 40 – 50m, I believe 40m was from the draft Waka Kotahi rule. (Note I am happy with the density requirement for fences, with no gaps). **I believe this is site specific, with the noise contour lines in the map provided extending to around 50m.**
- 3) Ventilation, I will consider a more detailed rule regarding ventilation along the lines suggested. **Thanks.**
- 4) Vibration, has there been any evidence of complaint or effect in this area? I agree vibration needs to be considered district wide as part of the TEP process but unless I can point to an RM issue applying to this area specifically then there may not be scope to add it here. **We did have noise complaints from Katania Heights after resealing a few years ago but we don't have a record of any vibration complaints at this specific site. However it's not surprising given that there are only two existing houses that appear to be within 20m of the highway.**
- 5) Outdoor noise – As you say the developer can installed a physical noise barrier as this may have the advantage of meaning less, or no action is then required to further reduce indoor noise to the level required. By default this would result in a reduced outdoor noise level. Similar to vibration, this is a new item for the TRMP and I believe would be better considered as part of the TEP process. The change to the fence specification does assist in this area. **A barrier is definitely the preferred option for Waka Kotahi**

I'm happy to meet up to discuss this if that would be easier.

Cheers



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**From:** Lea O'Sullivan <[Lea.OSullivan@nzta.govt.nz](mailto:Lea.OSullivan@nzta.govt.nz)>  
**Sent:** Monday, 4 April 2022 1:00 pm  
**To:** White, Nicole <[nicole.white@wsp.com](mailto:nicole.white@wsp.com)>  
**Cc:** Peterson, Reuben <[reuben.peterson@wsp.com](mailto:reuben.peterson@wsp.com)>  
**Subject:** 2021-1952: TDC Growth Plan Change - Waka Kotahi reverse sensitivity feedback

Kia ora Nicole,

Sorry for the delay in getting back to you on this!

The new noise contour mapping for Waka Kotahi has not yet been released, but it shouldn't be too long now. Regardless, the old contours (see snip below) do show that 100 metres is an appropriate distance for reverse sensitivity effects:



I've been in touch with Stephen Chiles (our reverse sensitivity specialist) and have collated the following comments regarding the proposed reverse sensitivity rules for the growth area directly adjacent to SH6 in Brightwater:

- Apply to new dwellings or those with altered habitable spaces (as per Building Code definition) and which are within 100m of the white edge line **Yes**
- Require a maximum internal noise level within habitable spaces of 40dB LAeq (24h) **Yes**
- Rule does not apply where areas have outdoor noise of less than 57dB LAeq (24h) **Yes - subject to inclusion of a 3dB addition to measured or predicted levels (also for the internal criterion), and clarification so that levels are determined separately for upper floors**
- Rule does not apply where dwelling is at least 40m from the white edge line of the state highway and there is a solid building, fence, wall or landform that blocks the line-of-sight from all parts of all windows and doors of the new or altered dwelling to any part of the state highway road surface. **Yes - although 40m should be 50m, and fence potentially should be removed or qualified as having a density of at least 10kg/m<sup>2</sup> with no gaps**
- Ventilation would need to achieve Building Code requirements. **No - this is insufficient and residents would have to open windows. Ventilation should be as per standard Waka Kotahi provisions.**
- Design report to be submitted prior to construction or alteration being undertaken. **Yes**

Please note that consideration also needs to be given to vibration effects on future residents here. If TDC do not want a vibration control rule, then a 20m "no build" (or rather "no sensitive build" i.e. a garage or non-habitable structure would be ok) setback would be fine.

The big thing missing from the proposed rule is protection from outdoor noise. This development lends itself to a substantial continuous noise barrier along the highway. That would reduce outdoor noise (generally to below 57 dB), and then avoid the need for indoor controls for ground floor rooms, as well as protecting outdoor areas. The proposed controls do not preclude this outcome, but they do not require it. Waka Kotahi would strongly recommend outdoor noise controls of 57 dB LAeq(24h), which then should result in a noise barrier along the highway. I know that TDC is well aware of this issue following the decline of the fast-track subdivision in Hope ('The Vines'), partly on state highway noise grounds.

I'm happy to discuss this further once you've had a chance to talk to your team about the feedback above.

Thanks for continuing open discussions with Waka Kotahi through this process.

Ka kite anō,

Lea

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**From:** White, Nicole <[nicole.white@wsp.com](mailto:nicole.white@wsp.com)>

**Sent:** Thursday, 24 March 2022 5:11 pm

**To:** Lea O'Sullivan <[Lea.OSullivan@nzta.govt.nz](mailto:Lea.OSullivan@nzta.govt.nz)>

**Cc:** Anna McKenzie <[anna.mckenzie@tasman.govt.nz](mailto:anna.mckenzie@tasman.govt.nz)>; Peterson, Reuben <[reuben.peterson@wsp.com](mailto:reuben.peterson@wsp.com)>

**Subject:** TDC Growth Plan Change - Update for Waka Kotahi

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Kia ora Lea

I hope you're keeping well.

Following on from our earlier correspondence regarding Tasman District Council's growth plan change – We have now refined the growth plan change areas, and have developed our thinking around intensification of the sites, based on the early feedback received and the available infrastructure and constraints information. You can see the latest growth plan change areas, and what is proposed for each site, on Council's website –

<https://www.tasman.govt.nz/my-council/public-consultation/current-consultations/growth-plan-change-feedback/>

We are undertaking a second round of informal consultation on this plan change until 14 April 2022, before entering the formal process of notification, submissions, hearings and decision making. I've included our indicative timeframe below for your reference.



You have previously advised that reverse sensitivity needs to be considered for the Brightwater site. We have taken this into consideration and are looking at applying site-specific noise mitigation rules. This is currently just the staff



position and we need to take into account feedback received from landowners, and discuss this approach with Councillors prior to any formal decision to include the provisions in a notified plan change.

The draft rules are based on Waka Kotahi's standard reverse sensitivity requirements, however, are slightly less onerous – this is to account for the fact that reverse sensitivity rules do not apply to most of Tasman's Residential Zoning, and that a balance needs to be achieved here. Consideration of how to implement more of Waka Kotahi's reverse sensitivity requirements is better done on a region-wide scale, through the TEP.

The key components of the current draft rule are:

- Apply to new dwellings or those with altered habitable spaces (as per Building Code definition) and which are within 100m of the white edge line
- Require a maximum internal noise level within habitable spaces of 40dB L<sub>Aeq</sub> (24h)
- Rule does not apply where areas have outdoor noise of less than 57dB L<sub>Aeq</sub> (24h)
- Rule does not apply where dwelling is at least 40m from the white edge line of the state highway and there is a solid building, fence, wall or landform that blocks the line-of-sight from all parts of all windows and doors of the new or altered dwelling to any part of the state highway road surface.
- Ventilation would need to achieve Building Code requirements.
- Design report to be submitted prior to construction or alteration being undertaken.

I can circulate the draft provisions once these have been reviewed internally.

Please let me know if you have any questions or comments. We are happy to meet via Teams to discuss.

Ngā mihi



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