

Consulting Advice Note

Date	29 August 2024
From	Jon Styles
To	Victoria Woodbridge
Project	Gore Proposed District Plan
Re	Review of Waka Kotahi and KiwiRail submissions

Styles Group have been engaged by Gore District Council to review Waka Kotahi and KiwiRail's (the **Transport Authorities**') submissions to the Gore Proposed District Plan (**PDP**).

This advice provides a summary of the noise and vibration aspects of the submissions and our recommendations on the relief sought by the Transport Authorities'.

1.0 Waka Kotahi

1.1 Request for use of modelled State Highway Noise Control Overlay

Waka Kotahi seek to introduce a new modelled 'State Highway Noise Control Overlay', to replace the standard 40m wide 'State highway Noise Control Overlay' in the notified PDP. Waka Kotahi's submission confirms they will provide Council with the noise overlay geospatial files in due course.

Waka Kotahi's modelled overlay has been capped so that it does not exceed 100m in any case.

Waka Kotahi modelled contours are well known and used across New Zealand for forming the basis of land use controls adjacent to state highways. The most important aspects of the contours are:

- They are based on terrain and building data from 2021
- They are based on vehicle flows, road surfaces and speed limits taken from Waka Kotahi's RAMM database from 2021
- They are calculated using recognised computer software and the UK Calculation of Road Traffic Noise algorithms
- They do not include the effects of any purpose-built noise barriers
- They are capped at 100m from the road edge.

The inputs, methods and assumptions used in the noise modelling have been adopted in a growing number of District Plans around New Zealand.

Overall, we support controls that are informed by noise modelling. Noise modelling takes into account the factors that heavily influence the propagation of noise (including speed environment,

topography, permanent screening, noise barriers and other features) and ensures the mitigation response does not extend any further into the community than is necessary.

Using noise modelling ensures that only the parts of the community that are or will be affected by high levels of road traffic noise are captured by the controls, and the extent of affected land would be clearly visible on the District Plan maps. We support the relief sought.

1.2 Definition of Noise Sensitive Activity

Waka Kotahi's submission have requested the definition of noise sensitive activity is amended to include student or retirement accommodation, and the definition excludes spaces that are not noise sensitive:

Noise sensitive activity means any:

- (a) health care centre or hospital where overnight accommodation is provided.
- (b) educational facility, excluding trade and industrial training facility.
- (c) residential activity, including student or retirement accommodation.
- (d) visitor accommodation.
- (e) places of worship.
- (f) marae or Papatipu Rūnanga complex.
- (g) Graveyard or urupā.

Excludes those rooms used solely for the purposes of an entrance, passageway, toilet, bathroom, laundry, garage or storeroom.

We agree that residential care (such as student and retirement accommodation) are noise sensitive activities (**NSA**) and should therefore be captured by the acoustic treatment controls.

We note the PDP definition of "residential activity" means the "*use of land and building(s) for people's living accommodation*". We interpret this definition to include student or retirement accommodation. On this basis, we suggest that no amendment to the definition of NSA is required to achieve the relief sought by the submitter. We suggest this is confirmed by the planners.

Waka Kotahi have also requested that the definition includes additional wording to exclude specific rooms of NSA that are not noise sensitive. We note that the purpose of this definition is to identify all land use activities that are NSA, and is not intended to identify the specific building elements that are either sensitive or not sensitive to noise. The identification of specific noise sensitive spaces is typically dealt with through the definitions of "habitable rooms" or "noise sensitive space". In this case, the PDP acoustic treatment controls apply to "habitable rooms" of a noise sensitive activity. We therefore recommend that this aspect of the submission is considered by determining whether the definition of habitable room is robust for its intended application under NOISE-S3.

The PDP definition of "habitable room" includes:

"any room use for the purposes of teaching or used as a living room, dining room, sitting room, bedroom, office or other room specified in the Plan to be a similarly occupied room".

The spaces identified by the submitter (i.e. entrance, passageway, toilet, bathroom, laundry, garage or storeroom) are therefore already excluded from the definition of habitable room and therefore not

subject to the acoustic treatment controls. For this reason, we consider that no amendment to the definition of habitable room or NSA is required to achieve the relief sought by the submitter.

However, our review of the definition of habitable room has identified that the rooms covered by the definition only relate to spaces inside education or residential activity. The definition therefore excludes rooms typically found in treatment or care rooms of other listed NSA, including health care facilities, places of worship and marae or Papatipu Rūnanga complex. The current definition of “habitable room” will result in the acoustic treatment controls not applying to noise sensitive spaces inside health care facilities, places of worship and marae or Papatipu Rūnanga complex.

We recommend that the definition of habitable room is updated to address this and to provide the relief sought by Waka Kotahi.

This issue is discussed further in Section 1.7.2 below as it relates to relief sought by KiwiRail.

1.3 Noise-P3

Waka Kotahi request the following amendment to NOISE- P3:

Require acoustic treatment within new buildings and additions to and alterations to buildings used by noise sensitive activities in the following locations

The key question is whether additions and alterations of habitable rooms should be captured by the acoustic treatment controls, and if so, when. In our experience, the determination of the appropriate threshold for triggering the acoustic treatment controls is left to the planning experts. The threshold is based on evaluation of a range of matters, including noise.

From a noise perspective, we consider that the best outcome for the acoustic treatment controls to apply as often as possible. This is the best way to minimise the potential adverse health effects that will be likely to arise if the population is left exposed to high levels of noise. However, we accept that this approach is not necessarily practical or reasonable, and there needs to be some balance between minimising the potential effects as far as practicable and ensuring that the provisions are efficient and reasonable and will not unreasonably deter redevelopment.

In other processes where this issue has been debated, a minimum threshold has been applied to additions or alterations that would trigger the acoustic insulation provisions. This is often set at 5m² or 10m²¹ to the GFA of the noise sensitive space / habitable room. This would see the acoustic insulation provisions applied only to the new addition or room that is altered. In all cases, the acoustic treatment provisions should only be triggered by the addition or alteration to a noise sensitive space/ habitable room.

We agree in principle with the relief sought. We support applying a small (5-10m²) and objective trigger for the controls.

We note that the PDP definitions of “additions and alterations” may require attention depending on the proposed approach to this matter.

¹ For example, refer to Paragraph 283 in the Section 42A Report for Plan Change 29, Nelson

https://hdp-au-prod-app-nels-shape-files.s3.ap-southeast-2.amazonaws.com/2017/1920/0019/S42A_Report_-_City_Centre_Commercial_Infrastructure_FINAL_1_2.pdf

1.4 Rule- NOISE-R1

Waka Kotahi's submission requests the following amendment to NOISE-R1:

Amend this rule to ensure that clauses 1 and 2 refer to the correct Tables in the Noise chapter, and make any consequential changes to other provisions including the NOISE Tables as necessary. If Table 4 has been accidentally omitted from the notified Plan, Waka Kotahi would like the opportunity to review and comment on it given its potential to impact upon construction activities undertaken by Waka Kotahi.

We note that NOISE-R1 *Noise from construction activities* incorrectly refers to Table 3 and Table 4.

We have reviewed the NOISE Chapter and understand that:

- i. Table 1 relates to NOISE-R5 (noise from Temporary Military Training Activities). We recommend the table is clearly labelled to assist plan users.
- ii. Table 2 relates to Clause 1 of Noise-R1. We recommend the table is labelled to assist plan users.
- iii. Table 3 relates to Clause 2 of Noise-R1. We recommend the table is labelled to assist plan users.

We note that the relevant construction noise limits are contained in the NOISE Chapter, however the cross-referencing errors and lack of table labels means that submitters have been unable to identify which tables relate to which rules. However, we consider that the information in Tables 2 and 3 are readily identifiable as construction noise limits (provided that the submitter is generally familiar with construction noise limits).

We agree with Waka Kotahi and recommend that NOISE-R1 is amended to refer to Tables 2 and 3 and that the tables are clearly labelled to assist plan users.

1.5 Rule NOISE-R2

Waka Kotahi's submission seeks the following changes to NOISE-R2 (vibration from construction activities):

(b) Amenity limits - the limits in the table below when measured at any point on in the nearest corner of the floor of a habitable room within a building used for a any-storey within a multi-storey building, or within 500mm of ground level at the foundation of a single storey building containing any noise sensitive activity that is occupied during the construction activity

The reason for their submission is that:

"we consider that the location of the measurement of the amenity limits should not be restricted to the nearest corner of the floor of a habitable room within a building used for a noise sensitive activity, but instead should be changed to relate to where people might experience the adverse effect, which is potentially any location within the habitable room".

We disagree with Waka Kotahi's submission.

The amendment would see the controls on construction vibration amenity being assessed on the floor of the receiving room, whereas the original text requires assessment in the corner of the

building. The amendments would see the vibration being measured in the floor of the room(s) where the occupants could experience it.

It is common for ground borne vibration being received in buildings to vary in level depending on where it is measured in the building. Mid-floor spans of buildings with raised floors (on piles and bearers for example) can experience an increase in vibration levels due to the flexibility of the floor system. In contrast, a position in the corner of a building with 500mm of the ground will typically experience a low level of vibration relative to other parts of the building.

Vibration measured in the corner position is also more closely related to the vibration level in the ground and is easier to predict than vibration at another position elsewhere on the floor of the building. Vibration elsewhere in the floor of a building is highly unpredictable, highly dependent on the way that the receiving building has been constructed, the furniture in the room, the number of people in the room, whether a person is affected in the room and if sitting or standing, and a range of other variables. The simple presence of a person in a room can significantly influence the mid-floor vibration levels.

We consider that it is unreasonable for the constructor to cater for the unpredictable and unknown response of the receiving structure and dynamic floor elements.

By contrast, measuring in the corner of the building within 500mm of the ground provides a comparatively predictable position that is less influenced (and often not influenced) by variables such as the building construction, span of the floor itself or the presence of people and furniture in the room. This means that the constructor is ultimately not having to cater for an adjust their construction activities according to a range of unknown and unpredictable variables in the receiving building that are outside their control.

We accept that controlling vibration only in the corner of the building within 500mm of the ground may mean that the vibration level in the floors elsewhere in the building may be higher, and that could have an effect on the amenity of the occupants. However, we consider that the difficulties associated with measuring in the floor are significant, and that the minor trade-off arising from measuring in the corner of the building outweigh the difficulties of measuring elsewhere in the floor.

We therefore disagree with the amendments sought by Waka Kotahi and recommend that the notified text be retained.

1.6 Rule- NOISE-R7

Waka Kotahi's submission requests clarification of whether relocated building used for noise sensitive activities are captured by the acoustic treatment controls. Waka Kotahi have proposed additional wording so that relocated buildings are captured by the controls, if necessary.

We agree that relocated buildings containing NSA should be captured by the acoustic treatment controls.

We understand that the acoustic treatment of relocated buildings via NOISE-R7 and NOISE-S3 would be required through the PDP definition of building². However, we note that the use of the term “new building” may give rise to ambiguity. We support any relief which clarifies that occupied relocated buildings are subject to the controls. We leave the mechanism to the planners.

1.7 Standard- NOISE-S3

Waka Kotahi request several changes to NOISE-S3. Each aspect is discussed below.

1.7.1 Additions and alterations

Waka Kotahi proposed to amend the wording of Clause 1 so that alternations and additions are captured by the rule:

1 The following internal noise levels shall be met for any new building, or alterations to or additions to any existing building, including relocated buildings, containing a noise sensitive activity:

We generally support the relief sought and have provided comments on additions, alterations and relocated buildings earlier in this advice.

1.7.2 Internal noise levels within buildings

Waka Kotahi request that Table 1 (taken from the Section 32 report attached as Attachment 3 to their submission) is inserted into NOISE-S3.

Waka Kotahi also seek that the wording of the standard is amended so that Table 1 is used to define internal noise levels within buildings used for noise sensitive activities located within the State Highway Noise Control Overlay.

The submission states:

“We also note that this standard uses noise metrics that should not be applied to road noise (those used are contrary to National Planning Standards) and it does not give criteria for other types of noise sensitive activities. We recommend that the noise limits from Table 1 of the Section 32 report, which is attached as Attachment 3 to this submission, is inserted into NOISE-S3 and used instead of the existing Table to define internal noise levels within buildings used for noise sensitive activities located within the State Highway Noise Control Overlay”.

The table below compares Table 1 (on the left) to NOISE-S3 on the right. The key difference is that Table 1 provides internal noise levels for various occupancies, whereas NOISE-S3 distinguishes only between:

- i. Bedrooms or rooms used for sleeping – where an internal noise level of 35 dB $L_{Aeq(15min)}$ must be achieved.

² means a temporary or permanent movable or immovable physical construction that is: (a) partially or fully roofed; and (b) fixed or located on or in land; but excludes any motorised vehicle or other mode of transport that could be moved under its own power

- ii. Other habitable rooms, where an internal noise level of 40 dB $L_{Aeq(15min)}$ must be achieved.

NOISE-S3 prescribes an internal noise limit using the $L_{Aeq(15min)}$ descriptor. This descriptor is suitable for controlling noise generated from business noise, but not road or rail noise. We agree with Waka Kotahi that road noise should be assessed using the $L_{Aeq24hr}$ descriptor.

Waka Kotahi's Table 1 addresses the "gap" (discussed earlier in this advice) relating to the definition of "habitable room" and application of the acoustic treatment controls to noise sensitive rooms inside health care facilities, places of worship and marae or Papatipu Rūnanga complex.

We agree that the NOISE-S3 will require amendment so that the acoustic treatment controls can be applied to all noise sensitive spaces inside various land use activities using the correct descriptor. The correct descriptors are as follows:

- Road noise to be assessed using the $L_{Aeq24hr}$ descriptor
- Rail noise to be assessed using the $L_{Aeq(1hr)}$ descriptor
- General commercial noise to be assessed using the $L_{Aeq(15min)}$ descriptor.

Because the descriptors change for each noise source, so to do the internal design noise levels. We expect that the easiest way to achieve the right outcome is to have a table (or column in a table) that is specific to each noise source, descriptor and design level.

We discuss the need for modifications to NOISE-S3 in Section 2.5 of this advice given this matter also relates to relief sought by KiwiRail.

Table 1

Occupancy/activity	Maximum road noise level ^{Note 1} L _{Aeq} (24h)
Building type: Residential	
Sleeping spaces	40 dB
All other habitable rooms	40 dB
Building type: Education	
Lecture rooms/theatres, music studios, assembly halls	35 dB
Teaching areas, conference rooms, drama studios, sleeping areas	40 dB
Libraries	45 dB
Building type: Health	
Overnight medical care, wards	40 dB
Clinics, consulting rooms, theatres, nurses' stations	45 dB
Building type: Cultural	

Places of worship, marae	35 dB
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NOISE-S3	Acoustic Treatment for noise sensitive activities		
All Zones	1. The following internal <i>noise</i> levels shall be met for any new building containing a <i>noise sensitive activity</i> :		
	Room	Time	Internal design noise level
	Bedrooms or rooms used for sleeping	10.00pm – 7.00am	35dB LAeq(15min)

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All other habitable rooms	At all times	40dB L _{Aeq} (15min)
The internal noise levels in the table above must be achieved based on the maximum level of noise permitted in the zone or from any adjacent zone, when measured and assessed at the exterior wall of the building. Road noise shall be calculated based on measured or predicted noise levels plus 3dB. 2. Where external windows and / or doors are required to be closed to meet the internal design noise levels in (1), a mechanical ventilation and cooling system shall be installed that complies with the following requirements. (a) Mechanical cooling to achieve an internal temperature no greater than 25 degrees celsius based on external design conditions of dry bulb 25.1 degrees celsius and wet bulb 20.1 degrees celsius; (b) Mechanical ventilation to enable compliance with clause G4 of the New Zealand Building Code (c) All mechanical ventilation and/or cooling systems must generate a noise level no greater than 35 dB L_{Aeq} when measured 2m from the diffuser at the minimum air flows required to maintain the design temperatures and air flows above once the room temperature has been achieved. Notes: 1. Mechanical cooling must be provided for all habitable rooms (excluding bedrooms) provided that at least one mechanical cooling system must service every level of a		

Table 1 from Waka Kotahi S32 Report

NOISE-S3

Figure 2- Comparison of Table 1 and NOISE-S3

1.7.3 Mechanical cooling and ventilation performance standards

Waka Kotahi request the following amendments to clause 2 in order to:

- Include a lower limit of 18 degrees Celsius into (a); and
- Add a minimum air flow of 1 change per hour into (b); and
- Change (c) so that the noise limit applies at 1 metre and not 2 metres, and delete the following text from (c) “once the room temperature has been achieved”; and
- Change the three notes so that they become explicitly part of the standard rather than potentially being advice.

We comment on each aspect of Waka Kotahi's requested relief below:

Include a lower limit of 18 degrees Celsius into (a)

We consider that this modification is not related to acoustics, but in our experience it does help to ensure that a minimum temperature is maintained in habitable rooms in colder weather when the system required by the rules is also required to introduce fresh air. Whilst this is strictly outside our expertise, we have seen the minimum temperature requirement be introduced in other plan reviews and changes and agree with the relief sought on this basis.

Add a minimum air flow of 1 change per hour into (b)

Strictly this is a mechanical engineering consideration that we do not have expertise in. However, it is our experience that including a minimum flow rate of one air change per hour is sensible and common, and has been supported by evidence of suitably qualified experts in other processes.

Change (c) so that the noise limit applies at 1 metre and not 2 metres, and delete the following text from (c) "once the room temperature has been achieved"

We agree with the change to 1m (from 2m).

We disagree with the removal of the words "*once the room temperature has been achieved*". We consider that this text is important as the initial cooling phase (when the occupant gets home from work, for example) is often short and the potentially higher noise generated in this phase is unlikely to create an amenity or sleep disturbance issue. Accordingly, we consider that it is unnecessary to have a design a system that meets the relatively low internal noise limit for all phases of operation, and especially during the initial cooling.

Change the three notes so that they become explicitly part of the standard rather than potentially being advice

We agree.

2.0 KiwiRail's submission

2.1 Request for a 100m Rail Noise Overlay

We understand that the notified PDP proposes a 70m wide rail noise control overlay adjacent to the designated corridor of the Main South Line (**MSL**). KiwiRail's submission request that the extent of the overlay is increased to 100m.

We understand that KiwiRail's 100m provisions are based on the noise generated by two freight trains passing in a period of one hour.

We understand that the MSL is used for freight. KiwiRail's submission does not provide any information regarding the frequency of movements.

We consider that KiwiRail should demonstrate the number of freight trains that could reasonably be expected on the MSL in one hour, for the life of the District Plan. This should not be the absolute maximum number of trains that could be expected, but the number of trains per hours that could be reasonably expected on a regular or semi-regular basis.

When the number of trains per hour is known, the extent of the overlay can be determined. We suggest leaving the extent at 70m for now.

2.2 Request to amend the definition of Noise Sensitive Activity

KiwiRail seek to amend the definition of NSA as follows:

Noise sensitive activity means any lawfully established:

- (a) Residential activity including activity in visitor accommodation or retirement accommodation, including boarding houses, residential visitor accommodation and papakainga;
- (b) Educational activity;
- (c) Health care activity, including hospitals;
- (d) Congregation within any place of worship; and
- (e) Activity at a marae.
- ~~(b) Educational facility, excluding trade and industrial training facility.~~
- ~~(c) Residential activity.~~
- ~~(d) Visitor accommodation.~~
- ~~(e) Places of worship.~~
- ~~(f) Marae or Papatipu Runanga complex~~
- ~~(g) Grave yard or urupa~~

We address each aspect of the requested relief below:

PDP Noise Chapter	KiwiRail	Styles Group Comment
a	Health care centre or hospital where overnight accommodation is provided.	Health care activity, including hospitals; The PDP definition of NSA only captures health care facilities that include an overnight stay component. KiwiRail propose to expand the definition so that all health care facilities are included. We note that the PDP definition of “healthcare activity” means “land and or buildings used for the provision of services relating to the physical and mental health of people, excluding the overnight accommodation of patients”. The PDP definition of healthcare activity would require attention if KiwiRail’s use of the term “health care activity” is adopted. We do not agree with the relief sought by KiwiRail. We consider that the scope of ‘healthcare activity’ is very wide and could capture a significant range of activities that should not be captured. We consider that limiting the scope to only where there is an overnight stay will be effective in excluding activities that should not be captured.

PDP Noise Chapter	KiwiRail	Styles Group Comment
b	Educational facility, excluding trade and industrial training facility.	Educational facility
		KiwiRail propose to remove the exclusion that applies to trade and industrial training facilities. The exclusion is designed to avoid acoustic treatment of learning spaces that are inherently noisy (i.e. workshop training involving the use of tools and machinery). In our experience, it is very common for District Plans to exclude trade and industrial training from acoustic treatment controls (given that they are often located in industrial areas and involve use of machinery). We consider that the definition could refer to “classrooms in education facilities” to provide greater clarity.
c	residential activity.	Residential activity including activity in visitor accommodation or retirement accommodation, including boarding houses, residential visitor accommodation and papakainga;
		We agree that the activities proposed by KiwiRail are all NSA. We understand that all of the specific activities would be defined as NSA under the PDP through the definitions of “residential activity” and “visitor accommodation”. We suggest that this is confirmed by the planners.
d	Visitor accommodation	KiwiRail’s modifications include visitor accommodation in residential activity.
		The PDP definition of visitor accommodation means “<i>land and/or buildings used for accommodating visitors, subject to a tariff being paid, and includes any ancillary activities</i>”. We understand that activities such as boarding houses would therefore fall under the definition of visitor accommodation. For the avoidance of doubt, we agree that visitor accommodation and boarding houses should be considered as NSA.
e	Places of worship	Congregation within any place of worship
		KiwiRail’s changes are designed to apply to congregation spaces within any place of worship. We agree with this in principle. We agree that the term places of worship should be refined further given the wide variety of spaces (indoor and outdoor). We recommend that the definition be amended to specifically refer to “any space within a building formally used as a place of worship.”

	PDP Noise Chapter	KiwiRail	Styles Group Comment
f	Marae or Papatipu Runanga complex	Activity at a marae	KiwiRail's changes apply to "any activity" at a Marae and KiwiRail have removed Papatipu Runanga complex. As with palces of worship, we recommend that this be refined to include only the important parts of the buildings that are part of these facilities. We leave the planners to determine the best way to define this.
g	Grave yard or urupa	Removed from list.	KiwiRail recommend that grave yard and urupa are deleted from the list. No reason is provided. No acoustic treatment controls apply to these activities given that they do not include occupied rooms. We agree that they should not be subject to any controls requiring acoustic treatment to reduce rail, road or business zone noise. However, identifying these activities as NSA ensures that the zone noise limits for general / commercial noise apply at these sites, and that the potential adverse noise effects from discretionary or non-complying land use activities can be considered in the decision making process. We recommend they are retained in the list for this reason. Retaining them in the list does not affect KiwiRail.

We recommend that the definition of "habitable room" is updated to align with all noise sensitive spaces inside the various NSA. If the PDP definition of habitable room is linked to other land use controls not related to noise, we recommend the use of the alternative term "noise sensitive space" is used in the NOISE Chapter and defined appropriately for use in NOISE-S3.

2.3 Definition of Rail Corridor Noise Control Overlay

KiwiRail seek the inclusion of the following definition for the Rail Corridor Noise Control Overlay:

"means the area potentially affected by noise between a railway corridor boundary and a distance of 100m. Rail Corridor Noise Control Overlay shown on the planning maps identifies areas that have the potential to experience high noise levels from rail traffic.

New buildings and alterations to habitable rooms in buildings used for sensitive land uses are required to demonstrate that adverse noise effects have been appropriately managed by demonstrating compliance with the standards specified in section '2.1 Railway Noise' of Appendix A attached"

We support a definition of "Rail Corridor Noise Control Overlay" (or the equivalent nominated term for the rail and state highway noise overlays). The nominal distance referred to in the definition should be consistent with the outcome of Section 2.1 above.

We note that the PDP refers to “the railway corridor overlay” and “state highway noise control overlay”. We recommend the terms for the overlays are updated in a consistent manner. This would include updating NOISE-P3. The terms could be “*Rail Noise Control Overlay*” and “*State Highway Noise Control Overlay*”.

We do not recommend the second paragraph in the definition suggested by KiwiRail should be included as:

- The definition does not need to function as a rule or standard.
- The proposed definition refers to KiwiRail’s standards that sit outside of the plan.

We support the following definition:

Rail Noise Control Overlay

means the area of land potentially affected by high noise levels from rail traffic. The Rail Noise Control Overlay shown on the planning maps identifies the extent of the overlay XXm either side of the centre of the rail line.

2.4 Rule- NOISE R1

KiwiRail’s submission also notes that Table 4 (construction noise limits) is omitted and seek that the missing table is provided, or the rule is re-written.

We agree and have commented on the construction noise limits and incorrect table referencing in Section 1.4 of this advice.

2.5 NOISE- R7

KiwiRail have requested that the distance is included in the rule. KiwiRail seek the following amendments:

Where:

1. Any habitable room within a building used for a noise sensitive activity which is located within the:

(a) railway corridor overlay (**within 100m of the railway corridor**)

(b) the state highway noise control overlay **complies with NOISE-S3**

~~Complies with NOISE-S3~~

We do not consider that reference to the distance needs to be specified within (a) on the basis that KiwiRail have requested that the inclusion of a definition for “Rail Corridor Noise Control Overlay” in the Plan, and that the definition would refer to the nominal distance that has been adopted by the PDP.

KiwiRail propose to shift “complies with NOISE-S3” so that it sits alongside clause (b). In our view, having “complies with NOISE-S3” below both a) and b) makes it clear that development within both overlays need to comply with NOISE-S3. We prefer the notified wording for this reason. However, we leave this to the planners.

2.6 Request for new rule and new standard

KiwiRail have requested the inclusion of their “model acoustic performance standard” (including noise, vibration and mechanical ventilation requirements) be included in the PDP as a rule and standard.

KiwiRail’s submission also states *“there is currently no standard in the proposed plan that relates to reverse sensitivity for noise and vibration. Please refer to the comments above and Appendix A attached to this submission for the noise and vibration standard, which has been requested to be added to the Proposed Gore District Plan”*.

We note that NOISE-R7 and NOISE-S3 require the acoustic treatment of any noise sensitive activity within the railway noise overlay. We therefore disagree that there is no rule/ standard that relates to noise effects from the rail corridor. However, we agree that NOISE-S3 has not been drafted in a manner that enables rail noise to be correctly assessed and it will therefore require modification so that it properly addresses rail, road and zone noise and uses the correct descriptors for road noise ($L_{Aeq24hr}$), rail noise (L_{Aeq1hr}) and zone noise ($L_{Aeq15min}$).

We note that the MSL rail line follows the alignment of the state highway corridor across the majority of the District. This means that NSA inside the State Highway Noise Overlay are also likely to be inside the Rail Noise Control Overlay in many cases. We consider that the acoustic treatment requirements (including mechanical ventilation requirements) should be as consistent as possible to avoid land owners being subject to conflicting or confusing acoustic treatment or mechanical ventilation controls.

We can work with the Project Team to revise NOISE-S3 so that it contains appropriate detail to enable road noise, rail noise and business zone noise to be correctly assessed. We will recommend a consistent set of mechanical ventilation controls regardless of the external noise source to ensure consistency.

We note that KiwiRail and Waka Kotahi propose a restricted discretionary activity status where a permitted activity status is not achieved. We leave the planners to confirm the appropriate activity status (i.e. NOISE S3 adopts a discretionary activity status). Our experience is that the Restricted Discretionary status is commonly adopted as the matters for discretion can be clearly specified.

2.6.1 Extent of Railway Buffer Zone

KiwiRail request that the “Railway buffer zone” shown in the Rail Noise Control Overlay be checked to ensure that the buffer is 100m either side of the rail corridor boundary. We suggest this task is performed by Council’s GIS Specialist.

2.7 Area specific matters

Submission points 150 (LCZ-R10), 156 and 157 (MUZ Rules) and 163-164 (TCZ Rules) relate to KiwiRail’s requests to cross-reference the acoustic treatment requirements (in Noise-S3) in other zone chapters.

We understand that the rules and standards in the NOISE chapter apply to an activity without needing to cross-reference rules and standards between various chapters, however this is a planning matter.

We also note that KiwiRail have referred to “*new, extended or converted buildings*” in one of the submission points relating to the MUZ. We recommend that the terminology used to trigger acoustic treatment controls (i.e. additions, alterations, extensions, relocations, conversions) is consistent throughout the plan and defined appropriately. We leave this to the planners.

2.8 Vibration Alert Area Overlay

KiwiRail have requested a Rail Corridor Vibration Alert Area (Alert Area). The purpose of the Alert Area is described as follows:

The Rail Corridor Vibration Alert Area identifies the vibration-sensitive area within 60metres each side of the rail corridor. Properties within this area may experience rail vibration. No specific district plan rules or notification requirements apply as a result of this Rail Corridor Vibration Alert Area.

The Alert Area is designed to creates an expectation that there could be a potential rail vibration effect. The alert layer option contains no land use controls and imposes no additional engineering or construction costs on the landowner. Alert Areas have been included in several recent plan review processes.

We agree in principle that the Alert Area provision is appropriate.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jon Styles', written in a cursive, fluid style.

Jon Styles, MASNZ
Director and Principal