

25 March 2015

Invercargill City Council
Private Bag 90104
Invercargill 9840

Attention: Liz Devery

Dear Liz

REVIEW OF NOISE RELATED SUBMISSIONS

As requested, we have reviewed relevant noise-related submissions on the proposed Invercargill District Plan, and provided comments.

94.2 Niagara Properties Ltd.

Niagara Properties are concerned that the proposed noise rules will limit their existing activities at Kennington.

The proposed noise rules are essentially identical to the operative rules, with three exceptions:

1. The measurement parameter has changed from L_{10} to L_{eq} , in line with industry best practice. We expect this change to have a negligible effect on existing industrial activity at Kennington,
2. The proposed rules are more **lenient during daytime** at the boundary of the adjoining Rural zone, being 65 dB L_{Aeq} , compared to the operative 55 dB L_{A10} . Night-time rules remain unchanged,
3. The proposed rules implement an additional control on noise, namely a 50 dB daytime and 40 dB night-time (L_{Aeq}) control at the notional boundary of any dwelling.

This third exception is the only one which could be perceived as restricting existing activity. However, the only area where this will have an effect is at the small enclave of rural-zoned dwellings immediately east of the Industrial area on Kennington Road. At all other properties surrounding the Kennington Industrial zone, existing dwellings are sufficiently removed that compliance with the night-time zone boundary rule will also ensure compliance with the night-time notional boundary rule. As noted in exception 2 above, the proposed daytime noise rule at the rural zone boundary is more lenient than the operative rule, and in some cases, Niagara will be able to take advantage of this.

On balance, it is our view that the proposed rules are generally slightly more lenient than the operative rules, with the exception of the small number of dwellings to the east. We accept that these dwellings are almost surrounded by industrial activity and therefore may not enjoy the same residential amenity as other rural dwellings. Nevertheless, we consider the proposed rules to be appropriate.

65.95 Invercargill City Council

This submission seeks some minor amendments to rectify mistakes in terminology. For example, some instances of "...dBA L_{eq} " should read "...dB L_{Aeq} ". These two terms are identical, they simply reflect different ways of writing the same thing. The exception to this is the term L_{dn} , which by definition is A-weighted, and therefore does not change to L_{Adn} (as correctly noted in the further submission FS30.6 by Southern District Health Board).



We fully support these corrections. The intention for the proposed rules is to adopt international terminology, consistent with the updated New Zealand standards referenced in the rules. To this end, the following terminology should be used;

Old Terminology	New Proposed Terminology
dBA	dB
L_{eq}	L_{Aeq}
L_{max}	L_{Amax}
L_{dn}	L_{dn}

117.52 Southern District Health Board

This submission requests that definitions of acoustic terms be added to the District Plan. We agree that there is benefit in this, to ensure that lay persons reading the plan can obtain some insight as to what the noise rules mean. However, we recommend some minor changes to those proposed by the submitter, to keep the definitions simple for lay persons to understand, and to fit with our other recommendations in this report. We propose the following:

Term	Definition
L_{Aeq}	Means the equivalent continuous (time averaged) A-weighted sound level. This is commonly referred to as the average noise level.
L_{Amax}	Means the A-weighted maximum noise level. The highest noise level which occurs during a measurement period.
L_{dn}	Means the day/night noise level, which is a 24 hour L_{Aeq} with a 10 dB penalty applied to the night-time (2200-0700 hours).

We are not satisfied that the term “noise limit” needs defining, nor do we consider it necessary to state that all acoustic terms shall have the meaning given in NZS6801 and NZS6802.

79.33 KiwiRail Holdings Ltd

KiwiRail request rules and assessment criteria for rail vibration.

We considered this issue at the time we provided input to the noise section of the Proposed Plan.

Our concern is that it is a difficult and complex task to predict ground-borne vibration, because it is highly dependent on both the rail and the surrounding ground conditions. As a result, it is normally necessary to undertake measurements of actual vibration at a site as part of any assessment. In our view, the cost of this is not generally warranted.

There are many existing dwellings throughout New Zealand that are within about 12 metres of a rail line, and whilst noise and vibration may exceed accepted guidelines at these locations, it appears that rail vibration is tolerated in detached residential dwellings.

It is our view that residents in new multi-storey residential developments in close proximity to a rail line are unlikely to be as tolerant to rail vibration. In addition, the cost of a detailed vibration assessment for such a development would be very small in the context of the overall project cost.

In summary, we support the concept of rail vibration criteria, but not for stand-alone single storey residential dwellings. The criteria would usefully apply within the same setback distances as required for rail noise.

59.3 Quenton Stephens

Mr Stephens is concerned about noise conflicts at Industrial/Rural interfaces, particularly at Kennington.

Many of the concerns raised in this submission are covered in our response to *94.2 Niagara Properties Ltd*. For the most part, we are of the view that the proposed rules provide essentially the same protection for residents as the operative rules, and we do not recommend any changes.

In addition, the submitter inadvertently highlights a wording anomaly in the operative rules, when commenting that the existing rules restrict noise in the rural zone to 70 dB L_{Amax} during both daytime and night-time. It is our view that the L_{max} column in the operative rules only applies at night, given that the limits in that column are significantly more stringent than any other daytime rules in New Zealand. The proposed rules retain 70 dB as the L_{max} control at night in a rural area.

There are several further submissions relating to this submission, and we briefly comment on key issues as follows;

- FS4.31 Federated Farmers is concerned that the proposed rules in rural areas are too stringent. As already discussed in regard to *94.2 Niagara Properties Ltd*, the proposed rural noise rules are actually more lenient during the daytime than the operative rules. At night, the rules are essentially unchanged,
- FS5.26 Invercargill Airport Ltd is concerned about the effect of this submission on airport operations. Noise from aircraft operations is not covered by these rules, and therefore the only activity at the airport which could be affected is sources of noise such as permanent mechanical plant. Given our discussion above on the changes to the rural rules, we are satisfied that the proposed plan will not affect the airport.
- FS30.20 and 22, Southern District Health Board opposes L_{max} limits during daytime, in part because it is "...unnecessary for reasonable protection of peoples' health...", and "...contrary to assessment standard NZS6802:2008...". Section 8.2 of that standard recommends that L_{max} controls are only applied to night-time. However, this section of the standard is clearly given as a guideline, and is therefore not mandatory, even when the standard is specified in the District Plan. In almost every situation, daytime noise is adequately controlled by use of an L_{eq} control alone, and in this respect, we agree with the submitter that a daytime L_{max} limit is unnecessary. However, there are sporadic cases where the daytime L_{max} provides a useful additional control, and we therefore recommend that it is retained. The Christchurch City operative rules have used daytime L_{max} controls for 20 years, and we are not aware of any issues arising from that approach.
- FS30.21 Southern District Health Board considers that the two-tier rural noise rule approach (zone boundary and notional boundary) is too complex. It is not clear to us how this further submission fits within the original submission, which doesn't seem to directly question this approach. However, we disagree that this approach will make "...enforcement more difficult or impossible, and decrease protection to residents...". Noise measurements are always undertaken at multiple locations, particularly if enforcement action is being contemplated, and one further measurement at the notional boundary of a dwelling will not make any significant difference. In addition, the two-tiered approach will provide better protection for rural dwellings that are very close to the zone boundary, because the more stringent notional boundary rule will apply at the zone boundary.
- FS49.2 Niagara Properties Ltd asks to "...remove the requirement of Rule 3.13.2 that noise from any site within the Industrial 3 Zone must comply with the relevant limits of all surrounding sites...". This is not a new rule, and this further submission highlights why the proposed rules have been reworded. In the operative rules, this requirement exists at rule 4.34.3 which states that "...at the boundaries of Sub-Areas referred to in [the table of limits] above the sound emissions shall be the lesser of the two limits...". We recommend that this rule is retained.

71.54 New Zealand Aluminium Smelters Ltd

This submission considers that only the notional boundary limit should apply in the rural area surrounding the Smelter Zone.

We agree with this submission as it would be consistent with the operative rules. Noise from the Smelter is currently controlled by the residential areas on the western side of the inlet.

Council will need to be careful in drafting this exemption, to ensure that it doesn't inadvertently apply to other interfaces with the rural zone. We agree with the submitter that it may be possible to do this by way of an additional clause in the "...In applying this rule..." section in rule 13.3.2. However, we do not agree with new clause (1A) proposed by the submitter, because as worded it would also remove any requirement for the Smelter to comply with the residential rules to the west.

We do not agree with the suggested changes to clause (1) for the reason discussed above. In addition, the proposed additional word "zone" in this clause should not be inserted because the table of limits in this rule includes a notional boundary rule, and a rule that applies to sites not within the City, and adding the word zone would negate these two rules.

94.3 Niagara Properties Ltd

This submission asks that the noise limits on rural land adjoining the Industrial 3 zone be the same as the Industrial rules. In the relief sought, the submitter asks to remove the notional boundary noise rule.

We strongly oppose this request. The proposed rules provide a two-tiered approach to noise in the rural zone. This allows adjoining industry to produce reasonably high noise levels whilst maintaining appropriate residential amenity at rural dwellings by use of a notional boundary rule. Allowing industry to create high noise levels at the rural interface would result in significant adverse effects at existing residential dwellings.

94.3 Niagara Properties Ltd

The submission by Niagara Properties goes on to support the "...change to the daytime L_{Amax} for the Industrial 3 zone...". As discussed above (submission 59.3), this submitter understands the existing L_{max} rules to apply during both daytime and night-time, whereas we believe this is an unintentional typo. If our interpretation is correct, the operative rules are adding a more lenient daytime L_{max} rather than increasing an existing one.

117.26 Southern District Health Board

This submission seeks to rename the heading of rule 3.13.2 from "...Noise Levels from Activities..." to "...Noise Levels for Activities...".

The proposed wording is identical to the operative plan, and we do not see any good reason to change. However, we do not hold strong views either way.

117.27 Southern District Health Board

This submission is concerned with acoustic terminology. We have discussed this in part in relation to submission 65.95. However, we add the following comments to the specific request for relief sought by this submission:

- We do not consider it necessary to add the "(15 min)" notation to the term L_{Aeq} . New Zealand Standard NZS6802:2008 makes it clear that the standardised measurement time is 15 minutes, and all assessments stem from this. We therefore consider the simple L_{Aeq} is adequate, and we prefer it because of its simplicity,
- Similarly, we prefer to leave the "F" out of L_{AFmax} for simplicity. The standards allow L_{max} as an acceptable alternative to L_{AFmax} ,
- We are not convinced that changing the night-time L_{max} rules will lead to confusion. If an activity can demonstrate existing use rights, Council will not be able to enforce the proposed rules.

However, we anticipate that this will be a rare occurrence, particularly given that the L_{max} rule has not changed in most zones.

117.28 Southern District Health Board

This submission seeks changes to wording in the table at rule 3.13.2.

We agree with the proposed changes because they clarify the intent of the rules and address the potential difficulty that can arise in measuring precisely “at” a boundary. In summary, we recommend accepting the following changes.

Table Row	Existing Wording	Submitters Proposal
3	...at or within the boundary...	...at any point within the boundary...
11	...measured at the notional boundary...	...measured at any point within the notional boundary...
13	...measured at any site...	...measured at any point...
14	...at or within the boundary of any site...	...on any site...

We do not support the request to reconsider changes to the proposed night-time noise limits in the Business 1-5 zones. Adding vitality to areas such as the central city requires a mix of commercial and residential activities, with apartments and hotels being essential. The operative rules allow very high night-time noise levels, such that residential activity would not be compatible. In our view, the proposed rules better provide for the desired mix of uses in these areas.

117.29 Southern District Health Board

This submission proposes changes to wording to the “...in applying this rule...” section of 3.13.2.

We offer the following comments on the various points raised.

- Sub-Clause 1 currently begins with the words “For clarity”. We can understand the concerns of the submitter, but consider the suggested alternative to be too wordy, without adding anything. We recommend simply deleting the words “For Clarity”,
- Sub-Clause 2 allows for measurements to be made 1 metre from the façade of a building where that building is within 1 metre of the boundary. This is designed to accommodate areas such as the central city where many sites are developed right up to their site boundary. In such situations, it is not possible to measure “at the boundary”, nor is it possible to measure “..at any point within the boundary” as recommended by this same submitter in 117.28. However, it is possible that the submitter is concerned that it may be the building on the site generating the noise that is within 1 metre of the boundary. We suggest rewording this clause to read “...Where there are buildings on an adjoining site within...” to clarify this. We do not agree with the proposal to delete this clause,
- Sub-Clause 3 is important, to ensure that an applicant can utilise boundary fences and similar forms of mitigation to control noise. Without this clause, the noise rules can be deemed to apply at upper storeys of multi-storey buildings, even when there is no adverse effects on the amenity on that property. We would support something other than the word “intended” if this causes problems, but do not support deletion. We do not consider Juliet balconies to warrant residential amenity, and therefore are not concerned that these are excluded from assessment under this clause,
- We disagree that “fence or other noise control structure” implies that all fences have a noise control function. The sub-clause simply directs that “the effect of such structure” is taken into account. This is to avoid having compliance measurements made directly above the fence. We

agree that some fences will provide no noise reduction, and this would be reflected in any assessment of “the effect of such structure”.

65.96 ICC Environmental And Planning Services

This submission is concerned about the activity status for shooting ranges.

We agree with this concern. The proposed rules simply note that the noise rules do not apply to shooting ranges (3.13.3(B)).

In our view, there is no noise rule that fits all shooting operations, both because of the number of different receiving environments that can occur, and because each shooting range is different in terms of the type of firearms and the number of shots fired. Our preference would therefore be to make shooting ranges a fully discretionary activity, such that noise effects can be fully addressed in a resource consent application on a case by case basis. FS30.7 supports this approach.

88.85 Federated Farmers

We agree that “the keeping of livestock as part of normal farming activities” should be exempted from the noise rules. The operative rules allow this exemption by way of the rule exempting “agricultural activities”. In drafting a more specific exemption (3.13.3(A)), this has been overlooked.

117.30 Southern District Health Board

This submission proposes changes to the list of exemptions in 3.13.3.

Whilst we agree that the exemption for trains is unnecessary for designated land, we consider the exemption appropriate, to ensure that the general public are not left with the impression that rail noise must comply. However, we agree with the submitter that trains on private sidings should not be exempted, because this would allow a new siding to be established close to existing dwellings with no assessment of noise effects. We suggest rewording this clause to read “...Trains on land designated for rail purposes...”.

We agree with the submitters recommendation to add an exemption for “Warning devices used by emergency services”, and recommend this be added.

We do not consider it appropriate to exempt “...activities of a normal domestic nature...”. We are concerned that this could, for example, allow a resident to undertake late night panelbeating in their garage, without having to comply with the noise rules. Other “normal” residential activities do not require a resource consent, and we therefore do not consider it necessary to mention them.

We strongly oppose the suggestion that an exemption be added “...where any residential activity exists on the same site as a noise source being assessed...”. The way this is worded, it could imply that the noise source being assessed is exempt because there is residential activity on the same site.

65.97 ICC Environmental And Planning Services

This submission raises concerns over the construction noise provisions in 3.13.4.

We agree that the construction noise standard is more than a set of noise limits. However, we are equally concerned that the proposed alternative “...shall be measured and assessed in accordance with...” does not constitute a measureable standard against which compliance can be assessed.

This is an issue that was recently brought to our attention when drafting new rules for Christchurch City. The approach adopted in that case involves setting a simple permitted activity standard based broadly on the long term limits in the standard, and then allowing construction activity that doesn’t comply with this standard to be “...assessed in accordance with NZS6803...”.

If Council agree with this approach, we suggest a permitted activity standard of:

Days and Times	Noise limit
Monday to Saturday 0730-1800	70 dB L _{Aeq} and 85 dB L _{Amax}

Days and Times	Noise limit
All other times	45 dB L _{Aeq} and 75 dB L _{Amax}

71.55 New Zealand Aluminium Smelters Ltd

This submission addresses the same issue as 65.97. We agree with the intent of the submission, but prefer the approach outlined above.

We note that the concern raised in both this submission and in 65.97 equally applies to helicopters and wind farms as per 3.13.5 and 3.13.6. In these cases, we recommend that both helicopter landing areas and wind farms are made discretionary activities subject to assessment under the relevant standards.

65.98 ICC Environmental And Planning Services

This submission proposes to add a design external noise level to provide clarification to the rule requiring compliance with an internal noise level in rule 3.13.7.

We agree that this would add clarity to the rule, and recommend accepting the submission. However, we do not consider the proposed spectrum adequately considers amplified music in the entertainment precinct, and recommend the following alternative .

	Octave Band Centre Frequency (Hz)						
	63	125	250	500	1000	2000	4000
Design incident sound pressure level at building façade (dB re 2×10^{-5} Pa)	71	61	54	48	45	44	44

Further submission **FS30.9** comments on this submission, and suggests an alternative approach. The alternative approach is one which we often use. However, whilst it is simpler, it is less flexible. Because this rule is confined to the entertainment precinct, we prefer the more flexible approach adopted in the proposed rules. We therefore recommend rejecting this further submission.

75.20 McDonalds Restaurants (NZ) Ltd

This submission seeks to extend the applicability of rule 3.13.7 to all business zones.

We do not consider this necessary. Noise sensitive activities establishing within general business zones need to be aware that they will not receive the same level of amenity as in a residential zone. The Entertainment Precinct is a special case because there is an expectation that late night amplified music is likely in this area, and standard building constructions will not adequately control this.

We recommend rejecting this submission.

79.32 KiwiRail Holdings Ltd

This submission relates to the reverse sensitivity provisions in rule 3.13.9.

We do not support the detailed proposal by KiwiRail for two reasons. First, there are a number of points that are not clear, and second, the proposal is very complex, and in our view would add significant compliance costs for little benefit.

Our specific comments on the proposed wording by KiwiRail are;

- The first paragraph under the heading “Airborne Noise” includes the wording “...take into account the future use of the NIMT by the addition of 3-5dB (depending on the Line)...”. Not only

does the NIMT line not run to Invercargill, the entire statement is unclear, in that there is nothing to show what value should be used for which line,

- There is no method given for calculating the existing level of rail noise, and hence it is not possible to determine compliance with the given design limits. Measurements are very difficult and expensive, and in our view not warranted for most small projects. However, we note that this is also a flaw in the notified provisions,
- We have no idea what is meant in the table by “Compliance Distance (no less than)”. Does this mean that bedrooms need to be located no less than 100 metres from the rail line, or does it mean an assessment needs to be undertaken for all bedrooms within this distance?,
- The statement “Where part of a habitable space straddles the compliance distance it shall meet the relevant criterion” does not clarify this situation at all,
- In our view, the ventilation requirements are too prescriptive.

In summary, we recommend rejecting the KiwiRail submission, and retaining the notified rules. However, the KiwiRail submission does highlight the need for a calculation method within the existing rules. We therefore suggest adding the following to 3.13.9 (B) (a): "...For the purposes of compliance with these limits, road traffic noise shall be calculated using a recognised prediction model and based on existing traffic flow data plus 3 dB to allow for future growth. Train noise shall be deemed to be 70 dB $L_{Aeq(1hr)}$ at 12 metres from the closest rail track. This level shall be deemed to vary at a rate of 3 dB per doubling of distance up to 30 metres, and 6 dB per doubling beyond 30 metres..."

117.36 Southern District Health Board

This submission also relates to the reverse sensitivity provisions in rule 13.3.9, and requests specific changes to wording.

- We can understand that concern that the noise levels specific in this rule will only be used during the design of a new project, because there is no requirement for post-construction measurements. We are therefore happy to accept the proposal to replace “noise levels” with “design levels”,
- We don’t agree with the proposed addition of “having regard to any noise barriers”. In our view, this is unnecessary, because the rule allows for any and all methods of noise control to be used, including noise barriers. Further submission **FS28.18** agrees that this proposal should be rejected,
- We agree with the concern expressed regarding ventilation requirements. However, we consider it cumbersome to cross-reference the aircraft rules as the submitter proposes. We recommend a simple addition along the lines of “...Compliance with this rule must be achieved concurrently with any building code ventilation requirements...”.

26.3 NZ Defence Force

This submission relates to the provisions in rule 3.13.10 relating to Temporary Military Training activities.

We agree with the submitter that noise standards should be “relatively simple to understand and assess compliance with”. Unfortunately, the rules proposed by the submitter do not achieve this.

The Defence Force submission proposes a three-tiered approach to the noise rules, and we comment on each as follows:

1. **Weapons Firing:** We do not support the setback distance concept proposed by NZDF. First, we have no idea how a Council officer could ever be expected to check compliance with such a rule if investigating complaints. Second, we believe that setback distances are better incorporated into a noise management plan that NZDF could develop for themselves to assist them in mitigating effects and/or achieving compliance. Third, their proposed wording provides noise limits “...to be

complied with if minimum separation distances for [weapons and explosives] cannot be met...”, which essentially means that the setback distances are meaningless.

2. **Mobile Noise Sources:** We don't fundamentally have a problem with the NZDF suggestion of allowing mobile noise sources to be assessed in the same manner as construction noise. However, we think that there is little benefit in complicating the rules by doing so.

First, compliance with noise limits for weapons and explosives will require large setback distances, and this would almost certainly result in quite low noise levels from mobile sources. Second, the construction noise standard has very stringent night-time noise limits which come in to effect much earlier than the night-time District Plan limits. As such, if a NZDF activity only just complied with the construction noise standard during the day, they would have to cease activity in the early evening to ensure compliance at night. We doubt that this would be practical.

In our view, we do not consider it necessary to have a specific rule for mobile noise sources.

3. **Fixed (stationary) Noise Sources:** The NZDF proposal for these sources is very similar to the general Plan noise limits. As such, we recommend simply requiring all stationary sources to comply with the underlying Plan rules.

In summary, it is our view that the Defence Force proposal is too complicated, and the much simpler two-tiered approach in the proposed plan is appropriate—subject to our comments on submission 117.37 below.

117.37 Southern District Health Board

This submission comments on terminology in 3.13.10 relating to Temporary Military Training activities.

- We agree that the term “noise levels shall not exceed” is vague, in that it doesn't specify where the limits apply. However, the proposed alternative is cumbersome. Given that we generally expect the effects of noise from military training activities to be on noise sensitive activities, we recommend a simpler form of the suggested rewording, namely “sound levels at any point within the notional boundary of any noise sensitive activity shall not exceed”,
- We agree that L_{10} should be replaced with L_{eq} , but do not agree with adding “(15min)” as per other comments in this report,
- We agree that “non-frequency weighted” should be deleted. This wording is actually incorrect, given that the limit is given as dBC, which is frequency-weighted.
- The submitter doesn't notice that to be consistent with terminology elsewhere in the plan, “122 dBC (peak)” should actually be reformatted as “122 dB L_{Cpeak} ”.

101.9 NZ Fire Service Commission

This submission seeks to expand the exemption in 3.13.11 to include “warning devices associated with emergency service training activities”.

We agree with this request, and have always assumed that training activities would be included in the exemption. We therefore recommend accepting this submission.

We note that submission **117.30** discussed above recommended that an exemption for warning devices be included in the exemptions listed in 3.13.3. We agreed with that suggestion, but suggest that it may be appropriate to make that exemption reasonably simple, but add a cross reference to this more complete exemption.

103.64 Invercargill Airport Ltd

This submission comments on rule 3.13.13 in relation to aircraft noise. In particular;

- The submitter requests that clause (B) is deleted. We do not agree with deleting this clause. Clause (B) requires the airport to comply with the 65 dB noise contour. We consider this important. Other parts of the rule require new noise sensitive activities to be treated to control

aircraft noise. It is therefore appropriate to also require the airport to limit their noise emissions to comply with the same noise contours,

- As a side issue, (B)(1) should be updated from “ $65L_{dn}$ dBA” to “ $65 \text{ dB } L_{dn}$ ”,
- We believe it may be necessary to modify the wording of (C) to reflect updated aircraft noise contours. We have not seen these contours yet, and the Auckland office of Marshall Day Acoustics acts for Invercargill Airport on this matter, and we therefore have a conflict of interest which prevents us from commenting further.

117.40 Southern District Health Board

This submission supports rule 3.13.13. As discussed above, we agree in concept with the rule, but consider that some rewording may be required.

15.39 Balance Agri-Nutrients Ltd

This submission asks for “recreational activities” to be included in the definition of noise sensitive activities.

We do not agree with this, because this would imply, for example, that a boisterous game of rugby, jet boating, or motorbike activity is as sensitive to noise as residential activity. In our view, outdoor recreational activity is not sufficiently sensitive to noise to warrant being included in this definition.

117.51 Southern District Health Board

This submission requests a change to the definition of notional boundary.

We agree with this suggestion, but don't consider it necessary to include any specific zones within the definition. A noise sensitive activity is the same irrespective of which zone it is in. We recommend rewording to “Notional Boundary: Means a line 20 metres from any side of a building used for a noise sensitive activity, or the legal boundary...”

117.50 Southern District Health Board

This submission requests minor wording changes to Appendix VI relating to noise sensitive insulation requirements.

We agree in part. To be consistent with terminology used elsewhere, the changes should be;

Notified Terminology	New Proposed Terminology
$40 \text{ dB } L_{dn}$	No change required
$65 \text{ dB } L_{AE}$	$65 \text{ dB } L_{AE}$
$40 \text{ dB } L_{dn}$	$40 \text{ dB } L_{dn}$

Yours faithfully

MARSHALL DAY ACOUSTICS LTD



Stuart Camp
Principal