

Before the Independent Hearings Panel
at Timaru

under: the Resource Management Act 1991

in the matter of: Submissions and further submissions in relation to
Timaru Proposed District Plan – Hearing F

and: **Fonterra Limited**
Submitter 165

Statement of evidence of Rob Lachlan Hay

Dated: 9 April 2025

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STATEMENT OF EVIDENCE OF ROB LACHLAN HAY

INTRODUCTION

- 1 My full name is Rob Lachlan Hay.
- 2 I am an Associate and Director in the international acoustical consulting firm of Marshall Day Acoustics (*MDA*). I hold a Bachelor of Science and Masters of Science degree from the University of Canterbury, majoring in Chemistry.
- 3 I have worked in the field of acoustics for over 20 years. I joined MDA in 2006, and I have been involved in a number of significant large scale environmental noise assessment projects throughout New Zealand including manufacturing, transportation and retailing activities.
- 4 In recent years I have been involved in or supervised the annual noise surveys for the majority of Fonterra's manufacturing and warehousing sites nationally. I have also carried out, and more recently led the MDA team responsible for the acoustic design, consenting and commissioning of a number of large brown field and green field dairy manufacturing developments. These include the Fonterra manufacturing sites at Edendale, Darfield and Pahiatua. I have also had oversight of MDA teams working with Fonterra on extensions and large-scale modifications of sites nationally, for projects ranging from introduction of new processing lines at existing sites, conversion of coal boilers to biomass, extension or modification of wastewater treatment plants, and noise control initiatives on older plant and equipment.
- 5 I have advised Fonterra during the review of a number of district plans with respect to appropriate noise limits, reverse sensitivity and appropriate noise rules. These Districts include Southland, Clutha, Dunedin, Waimate, Selwyn, Hurunui, Kaikoura, Marlborough, Tasman, South Taranaki and Whangarei. Much of this advice has centred on balancing the needs of what can be achieved in terms of noise control at both existing and possible new dairy factories and distribution centres against the needs of local communities to have acceptable levels of acoustic amenity. In this context the primary focus of my work for Fonterra has been assisting in the development of a more uniform noise criteria and rules to apply nationally to their production and distribution facilities.
- 6 I am familiar with the Clandeboye site and its surrounds, having visited the site numerous times since 2004, conducted annual noise monitoring, and worked on numerous development and noise control projects at the site.

CODE OF CONDUCT

- 7 Although this is a council hearing, I confirm I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving oral evidence before the hearing committee. Except where I state that I am relying on the evidence of

another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

SCOPE OF EVIDENCE

- 8 I have been asked by Fonterra to prepare this brief of evidence to assist the Hearing Panel in relation to noise issues associated with its Clandeboye site, for the purposes of informing proposed plan provisions that, amongst other matters, are intended to address reverse sensitivity effects.
- 9 In preparing my evidence I have reviewed:
 - 9.1 Fonterra's submission in relation to the notified proposed Timaru District Plan (*PDP*).
 - 9.2 The noise provisions of the proposed Timaru District Plan.
 - 9.3 The evidence of Mr Gary Walton, the acoustic consultant for Property Income Fund No. 2 Limited (Fonterra's landlord at Port Timaru).
 - 9.4 The evidence of Ms Susannah Tait, the consultant planner for Fonterra.
 - 9.5 The Section 42A report prepared by Ms Liz White, so far as it applies to matters of noise of interest to Fonterra, along with commentary and questions from Mr Malcolm Hunt, the acoustic consultant for Timaru District Council.
- 10 My evidence is divided into two parts, with Part I addressing the Fonterra Clandeboye processing site, and Part II addressing Fonterra's distribution centre located at Port Timaru.
- 11 In Part I of my evidence, I set out:
 - 11.1 A summary of my conclusions;
 - 11.2 The potential for reverse sensitivity effects in relation to noise;
 - 11.3 The existing noise environment;
 - 11.4 The relevant noise standards;
 - 11.5 The proposed noise control boundary; and
 - 11.6 Matters raised by the s42A report.
- 12 In Part II of my evidence, I briefly set out:
 - 12.1 The noise related reasons behind Fonterra's submission;
 - 12.2 The s42A report response; and

- 12.3 My suggestion to address an inadvertent rule omission created by the s42A response.

PART I – THE CLANDEBOYE PRODUCTION SITE

SUMMARY OF FINDINGS

- 13 My findings can be summarised as:
- 13.1 Fonterra Clandeboyne currently operates under a resource consent that permits stipulated noise levels at the notional boundary of existing dwellings. These noise levels are essentially 5 dB greater than the proposed Timaru District Plan limits.
 - 13.2 It is not possible for Fonterra to internalise its noise levels within the proposed Clandeboyne Dairy Manufacturing Zone (CDMZ).
 - 13.3 Should a new or altered dwelling lawfully establish near the site, Fonterra would be unable to comply with the proposed District Plan noise standards at that dwelling's notional boundary.
 - 13.4 At present, this would result in new dwellings experiencing noise levels greater than the existing resource consent (45 dB L_{A10}) or the PDP proposed night-time noise limits.
 - 13.5 This is not a desirable situation for Fonterra, Council, or possible future residents, as the exercise of permitted development rights may create a reverse sensitivity effect in which the future residents, unaware that Fonterra is permitted to make the current noise level seek remedy from Fonterra and Council.
 - 13.6 To prevent this reverse sensitivity effect, it would be appropriate to establish a Noise Control Boundary (NCB) around the site, along with a set of appropriate controls over noise emissions and building controls (such as sound insulation rules) on new or altered buildings that include sensitive activities seeking to establish within the NCB.
 - 13.7 The concept of an NCB is a well established and nationally proven framework that would protect Fonterra's ability to operate on its established and mature site, while providing certainty to Council and the local community as to where future noise effects lie and how these will be responded to.
 - 13.8 A NCB gives effect (in part) to proposed CDMZ-O2 and CDMZ-P3, which recognise that reverse sensitivity effects on the Clandeboyne site must be avoided.

REVERSE SENSITIVITY

- 14 In some large scale industrial and infrastructure environments it is anticipated that activities may produce noise effects that extend beyond their own site boundary, but which are acceptable. These often necessitate

appropriate land use controls at dwellings or proposed dwellings on adjoining sites to ensure future reverse sensitivity effects do not occur.

- 15 Examples of this include ports and airports, road and rail corridors, very large industrial activities, and entertainment venues such as outdoors music, sports and motorsport venues.
- 16 The location of such activities is often selected, at least in part, to minimise the number and proximity of noise sensitive activities nearby.
- 17 In the case of Fonterra Clandeboye, despite being a lawfully established industrial activity operated with a high degree of regard for its noise emissions, the site would be disadvantaged should a new dwelling be constructed too close to the activity where they may be exposed to noise levels in excess of what the proposed District Plan envisions.
- 18 Reverse sensitivity has been acknowledged as an effect by the Environment Court. In this case, this relates to the potential for complaints arising from these new dwellings in close proximity to an existing source of noise and a possible rise in objections for future development.
- 19 It is common practice to provide some degree of protection from this scenario by the use of building setbacks, noise control boundaries and/or sound insulation criteria. Such controls do not necessarily prevent development or subdivision on neighbouring land, but they do require certain standards (e.g. sound insulation) to be met.
- 20 I note that of Fonterra's 23 manufacturing and distribution sites around New Zealand, 16 of these utilise NCBs in their district plans and another site had an NCB created by resource consent (since lapsed). The majority of these NCB have associated rule packages for both noise limits and reverse sensitivity that are very similar to those proposed for Clandeboye. While I do not work on non-Fonterra dairy sites, I am aware of very similar NCB arrangements for other dairy operators, and also large private quarries.
- 21 As I will outline below, the existing consent for the Clandeboye site already permits noise at a level greater than the relevant District Plan performance standards beyond the zone boundaries that align with the Clandeboye site. Fonterra does not own all of this land.
- 22 For these reasons, it is appropriate to identify an area (the NCB) around the Clandeboye site that requires the relevant developer/property owner to provide appropriate sound insulation for any new noise sensitive activities to manage potentially adverse noise effects and minimise the potential for reverse sensitivity effects.

EXISTING NOISE ENVIRONMENT

- 23 The noise environment in the vicinity of the Fonterra Clandeboye site is dominated by the existing dairy manufacturing operation and traffic on local

roads – a significant proportion of which is associated with Fonterra staff and contractor vehicles, milk tankers, and incoming and outgoing freight.

- 24 MDA has conducted regular noise surveys at Fonterra Clandeboye for many years. Over this time some production lines have been permanently closed, while others have been built. The internal site layout (such as tanker parking) or site infrastructure (such as the wastewater treatment plant) has been modified. In each case Fonterra, with MDA input, has ensured that appropriate design and mitigation approaches have been used to comply with the requirements of the resource consent. Where major expansions have made this impracticable, affected dwellings have been purchased, and in some cases removed.
- 25 There are currently two properties at which Fonterra's noise emissions are consistently close to, or on, the night-time noise limit under the consent.
- 26 At both of these locations the dominant noise from the Clandeboye site is from the combined dryer towers (up to four operating) and energy centre. Occasional tanker movements are perceptible and at times contribute to noise experienced at one of these dwellings.
- 27 Since 2020, Fonterra has conducted development and modification of activities on the site on the basis of a voluntary NCB. MDA measured noise emissions from the site and used these to model the current noise contours. From these contours we suggested a potential regularised NCB to Fonterra.
- 28 It is this voluntary NCB that has been used to inform and constrain the acoustic design of proposed new and altered developments within the site since that time.
- 29 This process has proven viable for Fonterra and has to date avoided the need to acquire and remove any further dwellings. Fonterra now seeks to formalise this NCB to the benefit of all parties.

NOISE STANDARDS

- 30 In this section I will discuss the following:
 - 30.1 The consented noise limits for the Clandeboye site; and
 - 30.2 The Proposed District Plan's noise limits.
- 31 The Clandeboye site currently operates 24 hours per day for the production season. There is little difference between the daytime and night-time operating state other than a generally greater level of maintenance, contractor, export product handling, and administration activity during the daytime.
- 32 The primary purpose of daytime noise limits is to protect general community amenity by preventing significant annoyance and associated adverse health effects. The primary purpose of night-time noise limits is to

preserve adequate sleep amenity. The requirement to protect both general and sleep amenity must be balanced against the needs of the community to provide for its economic wellbeing, enabling necessary businesses and services to operate, and allowing for an appropriate level of night-time activity to take place.

- 33 Where dwellings are situated within rural areas, close to transport infrastructure or industrial zones, it is normal to allow a slightly more relaxed noise standard than would be expected in areas of higher amenity, such as quiet suburbs or remote countryside locations.

Consented Noise Standards

- 34 The Fonterra Clondeboye site operates under resource consent 3145 which refers to the older 1991 versions of standards NZS 6801 and 6802.

- 35 The following noise limits apply at the notional boundary of dwellings existing at the time the consent was granted:

- (i) Daytime, 0700 to 2200 55 dB L_{A10}
- (ii) Night-time, 2200 to 0700 45 dB L_{A10} and 75 dB L_{AFmax}

- 36 The noise limits that apply under this consent are consistent with the maximum guidance limits suggested in NZS 6802:2008, other than that they are expressed using the L_{10} rather than L_{eq} parameter.

- 37 For plant noise, which at dairy manufacturing sites is largely constant, the resulting L_{A10} / L_{Aeq} noise level can be considered as being the same, other than in close proximity to vehicle access points where the L_{A10} level is typically 3 dB greater than the L_{eq} level.

Proposed District Plan Noise Standards

- 38 The proposed Timaru District Plan (PDP) sets the following noise limits at the notional boundary of dwellings within the General Rural Zone (GRZ):

- (i) Daytime, 0700 to 1900 50 dB L_{Aeq} (15 min)
- (ii) Evening, 1900 to 2200 45 dB L_{Aeq} (15 min)
- (iii) Night-time, 2200 to 0700 40 dB L_{Aeq} (15 min) and 70 dB L_{AFmax} .

- 39 Noise is to be measured in accordance with NZS 6801:2008 and assessed in accordance with NZS 6802:2008.

- 40 The PDP requires acoustic insulation of noise sensitive activities under a range of circumstances – such as for dwellings in a residential zone within 20m of the boundary with an industrial zone. However, no such allowance is made for dwellings in the GRUZ in proximity to the Fonterra Clondeboye site.

- 41 Should new or altered dwellings be established within the Clondeboye site's current noise emission contours, Fonterra would be unable to meet its

consented noise standards at this dwelling, and indeed would not be required to do so.

Summary of Noise Standards

- 42 Time averaging and parameter differences aside, the degree of amenity protection afforded by all of these performance standards is very similar.
- 43 The daytime and night-time noise limits in consent 3145 are functionally 5 dB greater than those proposed in the PDP, which also includes an evening limit that is not present in the existing consent conditions.
- 44 The level of amenity provided in the consent can be considered the same as the maximum guidance in NZS 6802:2008, but not as conservative as that provided by the PDP noise standard.

FONTERRA CLANDEBOYE NOISE CONTROL BOUNDARY

- 45 As mentioned above, MDA has built and maintained a detailed noise prediction model for the Fonterra Clandeboye site over several years. This has been used to predict the changes in noise emissions arising from proposed changes on site, and to test the various noise mitigation strategies that have been proposed. The model has been kept current and calibrated against measurements conducted both on and around the site at critical locations by MDA staff.
- 46 The key assumptions underpinning the model are that all aspects of the plant are operating normally and that the worst-case 15-minute scenario for heavy vehicle movements (i.e. a tanker shift-change) are in progress.
- 47 This model has been used to inform the location and extent of the proposed noise control boundary (NCB) as shown in **Figure 1** (attached) overlaid on Fonterra land holdings.

Operational Noise

- 41 In **Figure 2** (attached), the noise contours for the operational peak scenario are provided. I wish to draw attention to three properties close to, or within, the proposed NCB.
- 42 Firstly, the Clandeboye Kindergarten to the immediate northwest of the site is only operative during daytime hours¹, and therefore only the 55 dB L_{A10} consented noise limit currently applies at this property. In the future the proposed 55 dB $L_{Aeq (15 \text{ min})}$ noise rating limit would apply.
- 43 Secondly, the measured noise level at 62 Clandeboye Settlement Road is in practice generally below 45 dB $L_{Aeq (15 \text{ min})}$, suggesting that our assumptions regarding intensity of tanker movements in the parking area to the north of this property are somewhat conservative.
- 44 Finally, our experience has shown that the measured noise level at 110 Donehue Road is consistently on, or very close to, the consented noise

¹ The website advertises operating hours of Monday to Friday, 8:30 am to 12:30 pm.

limit, as this is controlled largely by the dryer towers and energy centre, both of which generate a constant level of noise.

- 45 There is no existing property, not owned by Fonterra, that consistently receives noise in excess of the existing 45 dB L_{A10} consented night-time noise limit, or the proposed 45 dB $L_{Aeq (15 \text{ min})}$ night-time limit at the NCB.
- 46 Other non-Fonterra dwellings that are more distant from the Clandeboye site receive noise levels consistently below the consented night-time noise limits and lie outside the proposed NCB.
- 47 I will discuss these dwellings in more detail in the s42A review section of my evidence below.

Proposed NCB

- 48 In **Figure 1**, the proposed regularised NCB is shown. The reasons for preferring a regularised NCB can be summarised as enhancing the practicality of enforcement, compliance monitoring, and certainty for all parties.
- 49 The proposed NCB also extends to the north-east to cover a large area of land owned by Fonterra.
- 50 At the NCB Fonterra proposes a daytime noise limit of 55 dB $L_{Aeq (15 \text{ min})}$ and a night-time noise limit of 45 dB $L_{Aeq (15 \text{ min})}$ / 70 dB L_{AFmax} . These noise limits will ensure that all existing dwellings receive noise levels that are the same as present or permitted by the current resource consent, while providing Fonterra flexibility for ad hoc daytime only activities that may have localised noise effects.
- 51 Should any new or altered dwellings be constructed within the NCB, I propose a sound insulation rule to prevent reverse sensitivity.
- 52 The proposed NCB supports proposed CDMZ-O2 and CDMZ-P3 which seek to avoid reverse sensitivity effects on the Clandeboye site.

THE S42A REPORT

- 53 I have reviewed a summary of the s42A report prepared by Ms White and the memorandum from Mr Hunt included as Appendix 3 to that report.
- 54 I agree that if the NCB is adopted, then the appropriate District Plan maps should be amended to include the NCB.
- 55 I also agree that NOISE-O2 and NOISE-P5 should also be amended as a consequence. Similarly, I consider it appropriate for NOISE-R9, and NOISE-S3 be amended.
- 56 I do not have a strong view as to whether NOISE-P7 should be amended, or whether in the case of NOISE-R9 the activity status should be restricted discretionary or non-complying. This is because the Clandeboye site 55 dB noise contour – representing a noise environment greater than which

outdoor living areas would experience compromised amenity - is largely contained within the site, other than for a small area opposite the main tanker entrance and the area of Industrial Zoned land to the northeast of the existing wastewater treatment plant (**Figure 2**).

- 57 While I do not consider it desirable to establish new dwellings in close proximity to existing industrial activities, my primary concern would be sleep amenity and this can be addressed using sound insulation rules.
- 58 I agree with Ms White that a new rule setting limits to the NCB would be required. Ms Tait has proposed an appropriate rule in her evidence.
- 59 I note that while Mr Hunt is generally supportive of the proposed NCB, he has requested further information to enable him to confirm this view. I will address each of these matters below.

1. The NCB restricts noise levels to levels no greater than permitted by the resource consent, and in some cases lower than this

- 60 Mr Hunt requested a comparison of the noise levels permitted by the NCB, compared to those permitted by the current resource consent and has requested *"a diagram showing indicative contour lines of 'existing' and 'proposed' maximum allowable noise emissions"*.
- 61 In reference to **Figure 3**, the dwellings shown in yellow² are those that existed at the time the consent was granted (1998). Dwellings shown in blue are owned by Fonterra. Fonterra is permitted to create 55 dB L_{A10} daytime, and 45 dB L_{A10} night-time at the notional boundaries of these dwellings. As discussed above, in practice only 62 Clandeboye Settlement Road and 110 Donohue Road receive these consented noise levels.
- 62 All other existing dwellings are outside the existing 45 dB noise contour and the proposed NCB. A number of the dwellings are outside the 40 dB noise contour.
- 63 I note that 55 Mackle Road has since been demolished and a new dwelling a little to the north (beyond the image shown) has been constructed. Both are well outside the proposed NCB.
- 64 This demonstrates that there are no non-Fonterra owned dwellings that will receive an increase in noise level as a result of implementing the proposed NCB.

2. There are a small number of dwellings outside the NCB that receive greater than 40 dB L_{Aeq}

- 65 Mr Hunt asks that Fonterra advise the Panel as to "the extent the maximum Clandeboye noise emissions are likely to exceed the daytime and night-time noise standards for the GRUZ". Mr Hunt asks about noise levels beyond the NCB that may be greater than the ODP or PDP permits. He acknowledges

² Note that although the pre-school is shown for completeness, this is not a dwelling, but a noise sensitive activity (daytime only). Also note that we have not shown dwellings well outside the 40 dB noise contour.

that the extent of areas affected by noise compliant with existing resource consents may also inform this assessment.

- 66 Referring to **Figure 3**, there are four dwellings that existed at the time of the consent being granted that receive noise levels greater than the proposed night-time limit of 40 dB, but less than the currently consented 45 dB. These are all on either Donohue Road or Clandeboye Settlement Road. In addition, at least one new secondary dwelling (possibly two), have been constructed on Donohue Road in close proximity to these dwellings, just outside the proposed NCB (not shown).
- 67 The NCB also restricts Fonterra's daytime noise emissions to 55 dB $L_{Aeq} (15 \text{ min})$ at the NCB, rather than at the notional boundary of more distant dwellings existing at the time of the resource consent being granted.

3. Noise levels in the area around the site are elevated in the late evening and night

- 68 Mr Hunt asks about noise effects on people in the outdoor areas surrounding their dwellings in the evening period (1900 to 2200 hours), compared to other rural areas.
- 69 This is an open-ended question that is difficult to answer as there are extensive rural areas in the South Island that vary widely in their noise environment. Without doubt the noise levels in the area around the Clandeboye site are elevated compared to what they would be in the absence of the site. However, given that the site is lawfully established and operated, and that the existing noise environment must be recognised as such, that is not the relevant question.
- 70 Further, the noise contours, while accurately reflecting the noise generated by the site, are not a complete picture of the noise environment. The local roads carry not just typical rural traffic, but also Fonterra milk tankers. During the production season this is a 24-hour a day activity with little variation day and night. This elevates the noise level for dwellings along the local roads, particularly for those roads that are the main collection/distribution routes for tankers heading to the State Highway network. This will be particularly so for Milford Clandeboye Road and Canal Road.
- 71 For existing dwellings noise from the site and tankers within the site will be as shown in Figure 2 (noting that the level at 62 Clandeboye Settlement Road may be a little lower generally). For properties that are more distant, such as those to the northwest along Canal Road, the noise from the site may be audible as a distant hum or drone, but noise from milk tankers and other traffic on the local road will determine the local noise environment. This in some cases will be significantly greater than the plant noise.
- 72 In any event, no change to the existing noise environment will arise from the adoption of the proposed NCB.

4. The sound insulation requirement of the reverse sensitivity rule should be as low as practicable

- 73 Mr Hunt has asked for confirmation as to which sound insulation rule should apply.
- 74 It is my view that reverse sensitivity rules should create the lowest cost or restriction on the dwelling owner that is appropriate to the provision of acceptable amenity. Individuals who are aware of a noise source can make a choice to do better but should not be forced to do more than the minimum justifiable by the potential effect.
- 75 For that reason, I suggest that NOISE-S3.2, which requires a $30 \text{ dB } D_{tr,2m,nT,w} + C_{tr}$ is appropriate. This level of noise reduction would achieve internal noise levels of less than $25 \text{ dB } L_{Aeq}$ for potentially worst located future dwellings within the NCB, and significantly less for dwellings at the periphery of the NCB. This is appropriate for preservation of sleep amenity.
- 76 While achieving this level of sound insulation requires a good standard of construction, no special materials or techniques are required, and I have observed this to be achieved with a skyline cottage employing a second layer of plasterboard in bedrooms and better than minimum double glazing for example.
- 77 For dwellings close to busy local roads, this level of sound insulation will have the added benefit of reducing road traffic noise.
- 78 This sound insulation rule also requires that appropriate ventilation under the Building Act is achieved. As a general rule opening windows for ventilation will mean that this level of sound insulation cannot be achieved, and therefore an alternative method of ventilation must be provided.
- 79 In my view there are a number of options that the builder of a future dwelling can explore. There are many styles of mechanical ventilation that can be provided at a wide range of cost, performance and capability. In some cases, passive ventilation slots integrated into windows can be used while achieving the required level of sound insulation – I have recently used this to good effect in an apartment building near Queenstown Airport intended for community and low-cost housing.
- 80 I also note that for dwellings near the periphery of the NCB an appropriate route may be to demonstrate that a satisfactory internal noise level can be achieved with windows ajar for ventilation. While this option may require a resource consent and acoustic report, this may be appropriate and attractive to a builder in a few cases and can consider zero cost mitigation such as building orientation and internal layout planning.

CONCLUSION

- 48 Overall, I consider that the implementation of a NCB and associated reverse sensitivity controls is the most effective and appropriate method for protecting Fonterra's ability to operate and develop the Clandeboye site,

while at the same time providing a transparent and robust means for accountability to the community and Council. My experience over the last decade working with sites where NCB have been established has been that outcomes have been positive for all parties.

PART II – FONTERRA’S PORT TIMARU OPERATION

- 49 Fonterra operates a distribution centre at the south end of Port Timaru located at 1 Fraser Street. Under the PDP this site will be zoned PORTZ, with adjoining land to the west and southwest zoned GIZ and MRZ.
- 50 Fonterra operates the distribution centre 24-hours per day at times to meet demand for shipping. The main noise sources are container handlers and heavy goods vehicles operating around the perimeter of the site and within the warehouse itself. Under the underlying PDP proposed zone noise limits Fonterra would be unable to comply at night as the configuration of the site is fixed and not practicable to change and the noise generating equipment cannot be replaced with sufficiently quieter equipment or processes. The proposed noise rules also created a ‘gap’ where it was uncertain what limit may apply.
- 51 Mr Walton’s evidence on behalf of Fonterra’s landlord outlines the situation well, and rather than repeat the analysis, I refer the Panel to his evidence.
- 52 Fonterra has proposed an alternative night-time noise limit on any day between 2200 and 0700 hours of 45 dB L_{Aeq} (9 hr). I understand that the s42A report recommends accepting this submission but places the proposed limit with NOISE-R8.2 PER-2.
- 53 The effect of this relocation of the proposed noise rule is that no daytime noise limit applies. This was not Fonterra’s intent.
- 54 I have suggested, and Fonterra has accepted, that in addition to the night-time noise limit proposed, a daytime (0700 to 2200) noise limit of 55 dB L_{Aeq} (15 min) also apply. This would be consistent with the existing level of amenity in the ODP and is appropriate given the existing environment.

Rob Lachlan Hay

9 April 2025

Figure 1. Proposed noise control boundary



Figure 2. Predicted operational noise contour

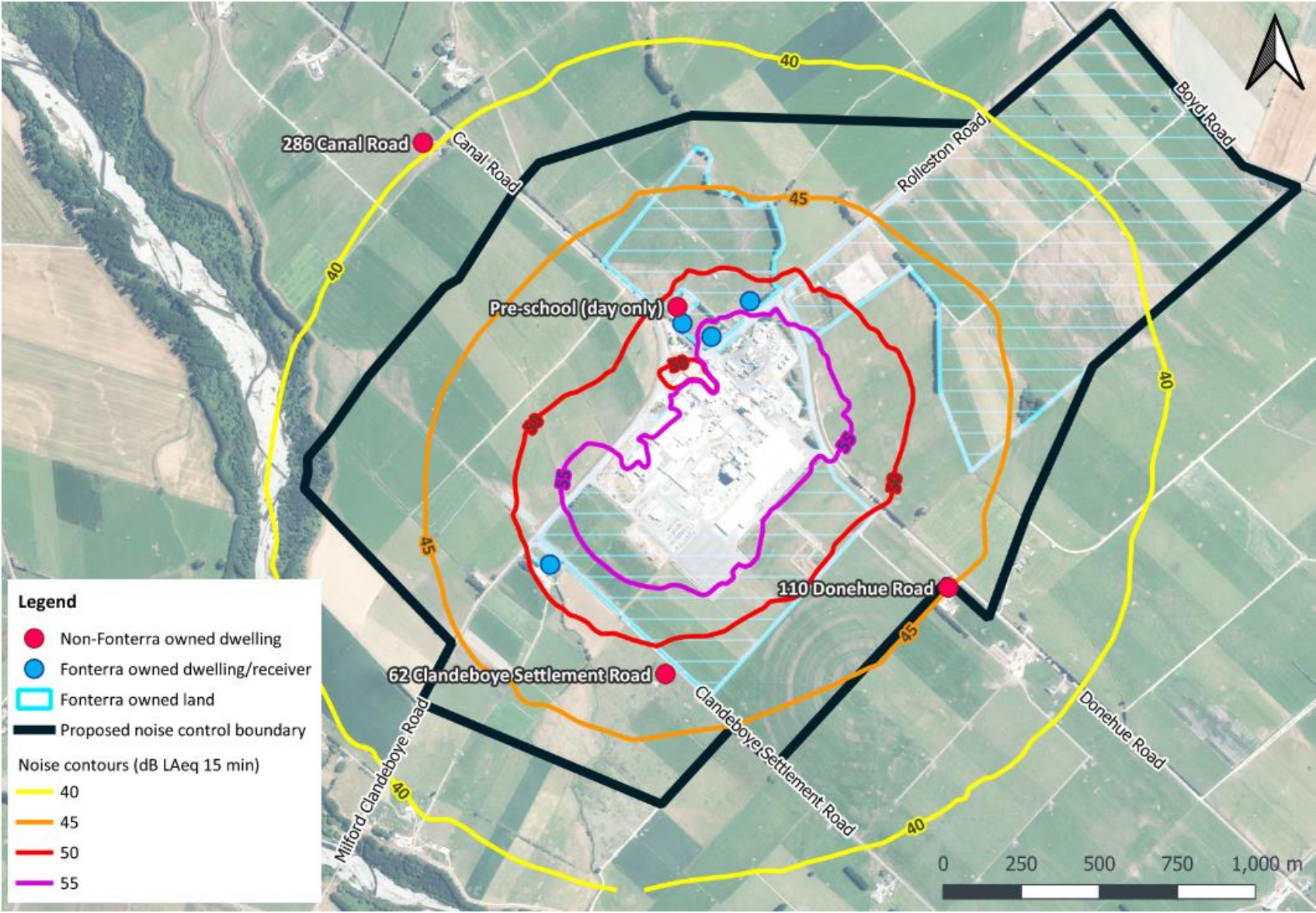


Figure 3. NCB extent, operational noise contour, and relevant dwellings.

