



Central Otago District Council Operative District Plan - Submission Form

Clause 6 of First Schedule, Resource Management Act 1991
FORM 5

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| For office use only Submission No: |
| Receipt Date: |

1. Submitter details:

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2. Scope of submission

2.1 This is a submission to the Central Otago District Council Private Plan Change 13 - River Terrace, notified 19 May 2018

Matters raised in the submission:

2.2 RTDL seeks to modify PC13 to add the following acoustic insulation standard:

20.7.7 (x) Acoustic Insulation of Buildings Containing Noise Sensitive Activities

1) Noise Sensitive Spaces located within the River Terrace Resource Area shall be designed, constructed and maintained to ensure that the following Outdoor - Indoor Transmission Class (OITC) noise level reductions are achieved in the Acoustic Insulation Zones shown on the Acoustic Insulation Plan in 20.7.11

| Acoustic Insulation Zone | OITC for Bedrooms | OITC for Other Noise Sensitive Spaces |
|--------------------------|-------------------|---------------------------------------|
| A | 30 | 30 |
| B | 33 | 25 |
| C | 30 | 25 |

- a) The OITC assessment shall be determined in accordance with ASTM E1332-16 *Standard Classification for Rating Outdoor-Indoor Sound Attenuation*;
- b) Noise Sensitive Spaces includes:
- i) Bedrooms, kitchens, living areas and any other habitable rooms in dwellings;
 - ii) classrooms and indoor learning areas, lecture theatres in schools or educational facilities;
 - iii) conference or function spaces, bedrooms and living areas associated with visitor accommodation;
 - iv) Noise sensitive spaces in medical facilities; and
 - v) Any other rooms containing noise sensitive activities that are occupied frequently or for extended periods,
- but does not include spaces insensitive to noise such as hallways, laundrys, bathrooms, toilets, garages, closets, lobbies, workshops or storage spaces.
- c) Compliance with this rule shall be demonstrated by a report from a suitably qualified and experienced acoustics expert. The report shall detail the constructions and assumptions used in the calculation process. Noise measurement is not required.

It is noted that as a result of the submission "*River Terrace Resource Area: Indicative Road Cross Sections*" needs to be renumbered to 20.7.12.

The reasons for the submission are as follows:

- The proposed standard ensures that noise sensitive areas of dwellings/buildings in the River Terrace Resource Area are constructed so that the occupants are not adversely affected by noise generated external to the site (the Motorsport Park, the speedway, adjacent orchard activities);
- The standard has been informed by a comprehensive report "Assessment of Noise Effects for River Terrace Resource Area Private Plan Change Request" prepared by Styles Group dated 20 June 2018 (attached as **Appendix 1** to this submission)
- Minimum standards of construction for noise sensitive activities are an effective mechanism to ensure that people are not disturbed by noise;
- The above standard will work in tandem with the standard requiring registration of restrictive no-complaint covenants to ensure purchasers of properties are aware of the established landuses surrounding the River Terrace Resource Area.

Analysis under Section 32

The proposed new standard achieves the objectives of the zone in the following manner:

| Objective | Discussion: Appropriateness, Effectiveness and Efficiency, Costs and Benefits |
|--|---|
| <p>Objective 20.3.10 – Compatibility with surrounding activities <i>Development which is undertaken in a manner that is compatible with the surrounding land uses including State Highway 6, the Motorsport Park, and orcharding.</i></p> | <p>Appropriateness: The proposed standard ensures a robust standard for noise insulation is achieved for any noise sensitive spaces within buildings. It is appropriate for new noise sensitive activities to be able to experience noise from</p> |

| Objective | Discussion: Appropriateness, Effectiveness and Efficiency, Costs and Benefits |
|-----------|--|
| | <p>existing landuses in the surrounding area without adverse effects arising.</p> <p>Effectiveness: The proposed standard ensures that construction which complies with the standard will ensure that noise effects from the surrounding existing uses can be mitigated. It is effective in that the standard is regulated by compliance with a measurable standard - ASTM E1332-16 Standard Classification for Rating Outdoor-Indoor Sound Attenuation.</p> <p>Efficiency: A standard in the District Plan ensures upfront that measures must be taken in construction of development which include noise sensitive environments. This, combined with no-complaints covenants on titles to ensure that purchasers are aware of the existing environment at the initial time of purchase, address noise issues in an efficient manner.</p> <p>Costs: The cost is principally the requirement for additional insulation and construction standards that are not required in other parts of the residential area in the District.</p> <p>Benefits: The benefits arise from ensuring that residential and other noise sensitive activities, the motorsport activities and orchards can occur near to each other. This is particularly important in Cromwell which is projected to continue to experience rapid population growth, and where suitable land to accommodate such growth is finite.</p> |

- There is a risk on not acting in that there is a risk of failing to achieve a potentially important component of enabling housing to contribute to the social, economic and cultural well-being in the Cromwell area in a timely and efficient manner. This can be achieved in this location provided that appropriate mitigation methods are provided for as part of the development of the Zone.
- There are no risks from acting which arise from introducing this standard.

In summary the proposed Standard 20.7.7 (x) is an appropriate means to give effect to the objectives and policies of the River Terrace Resource Area in terms of Section 32 of the Act

2.3 RTDL seeks to modify Rules 20.7.7 (viii) and (ix) as set out below

- 2.3.1 Rules 20.7.7 (viii) and (ix) refer to restrictive no-compliant covenants that do not include or refer to any particular format and do not specify who determines that format. Attached in [Appendix 2](#) to this submission are draft covenants for the purposes of the two rules. RTDL requests that Rule 20.7.7 (viii) (b) and 20.7.7 (ix) (b) be amended by:

- (a) adding the following subclause:
"is in a format and wording approved by the Council"

(b) include references to the draft covenants in **Appendix 2**, either by including them in the rule as draft covenants or by referring to them as document sitting outside the District Plan held by Council, in either case being draft covenants subject to final amendment and approval by Council prior to registration.

2.3.2 RTDL seeks to amend Rule 20.7.7 viii) as follows

- (a) *Activities enabled under Rules 20.7.1, 20.7.3 and 20.7.4 must be subject to a restrictive no-complaint covenant in favour of:*
- (i) *Cromwell Motorsport Park Trust Limited in respect of Lot 400 DP466637 as the benefitting land;*
 - (ii) *Central Otago District Council in respect of Lot 1 DP 403966 as the benefitting land.*
- (b) *For the purposes of this rule a “restrictive no-complaint covenant” is a restrictive covenant which:*
- (i) *Is registered against the title(s) to the servient land on which the activities will take place in favour of the benefitting land;*
 - (ii) *In the case of Lot 400 DP466637, prevents any owner or occupier of the servient land from complaining about or taking steps to prevent motorsports and related activities lawfully carried out as authorised by the terms and conditions of resource consent numbers RC150225 and RC150281 **including any variations operative prior to 19 May 2018.***
 - (iii) *In the case of Lot 1 DP 403966, prevents any owner or occupier of the servient land from complaining about or taking steps to prevent speedway and stock car track and related activities lawfully carried out as authorised by the terms and conditions of the planning consent for those activities issued by the (former) Vincent County Council dated 29 September 1980 including any **variations effective-operative** prior to ~~insert dated RTRA notified-~~ **19 May 2018.***
 - (iv) *Is binding on successors in title*
 - (v) **Is in a format and wording approved by the Council.**

2.3.3 Make the following amendments to Standard 20.7.7 (ix)

(b) (ii) *prevents any owner or occupier of the servient land from complaining about of taking any steps to prevent noise being **lawfully** generated in the normal course of orcharding activities being undertaken on the benefitting land, including noise from frost-fighting and bird-scaring,*

(ii) *Is binding on successors in title*

(iv) is in a format and wording approved by the Council.

2.3.4 Make any other amendments, including adding additional legal descriptions, to achieve the objective of these rules which is to protect adjacent existing noise generating activities from complaints from residents or occupiers within River Terrace Resource Area.

- 2.3.5 RTDL seeks alternative, additional and/or consequential amendments to the RTRA provisions (including plans), and to the wider District Plan provisions, as may be necessary or appropriate to achieve the RTRA as a new zone in the Central Otago District Plan.

3. RTDL seeks the following decision from the Central Otago District Council:

- 3.1 RTDL seeks the relief set out in Part 2 of this submission.
- 3.2 RTDL seeks alternative, additional or consequential relief necessary or appropriate to address the matters raised in this submission and/or the relief requested in this submission, including any such other combination of plan provisions, objectives, policies, rules and standards to achieve the intent of this submission,.
- 3.3 RTDL **DOES** wish to be heard in support of this submission.
- 3.4 If others make a similar submission, RTDL will consider presenting a joint case with them at a hearing.

4. Appendices

- 4.1 This submission includes the following appendices:
- (a) "Assessment of Noise Effects for River Terrace Resource Area Private Plan Change Request" prepared by Styles Group, dated 20 June 2018
 - (b) New Acoustic Insulation Plan
 - (c) Three draft covenants.

Signature of Submitter



A A Hutton

Date: 20 June 2018

Authorised to sign on behalf of River Terrace Development Limited

Telephone: 03 409 2258 / 021 715572

Notes to person making submission:

If you make your submission by electronic means, the email address from which you send the submission will be treated as an address for service.

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6 (4) of Schedule 1 of the Resource Management Act 1991.

The submitter could NOT gain an advantage in trade competition through this submission

APPENDIX 1 – ASSESSMENT OF NOISE EFFECTS

Prepared for: **River Terrace Developments Ltd**

Date: **20 June 2018**

Title: **Assessment of Noise Effects for River Terrace
Resource Area Private Plan Change Request**

Revision Number: 1

Prepared by:



Jon Styles MASNZ
Director & Principal

And:



J. Exeter MASNZ
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1. Introduction

1.1 Scope of Assessment

Styles Group has been engaged by River Terrace Developments Ltd to prepare an assessment of environmental noise effects for the proposed development of the River Terrace site on Sandflat Road, Cromwell. The development of residential activities is generally considered to be noise-sensitive and the River Terrace site (the Site) is located proximate to orcharding activities, the Highlands Motorsport Park (HMP), State Highway 6 and the Cromwell Speedway.

This report has been prepared to assess the effects of noise from those sources across the Site and to determine what measures may be necessary to ensure that the noise-related effects, including reverse sensitivity effects, are adequately avoided or mitigated. This report has been prepared to accompany a private plan change request (the Request) to rezone the Site of 49.8387ha from Rural Resource Area to River Terrace Resource Area under the Operative Central Otago District Plan (the Plan).

This report has been prepared following several meetings with the project team, a visit to the Site and noise measurements of HMP in 2016. The author was also heavily involved in the processing of the primary resource consent for HMP, assisting the Central Otago District Council to undertake noise level measurements of racing at the track and to undertake the necessary assessments and reporting during the consent processing phase.

To avoid any ambiguity or misunderstanding, this report must be read in conjunction with the application site plans and Proposed Plan Change 13 Request Document. A glossary of acoustical terms used within this document is attached as Appendix A.

2. The Proposal

Under the Operative District Plan, the Site is currently in the Rural Resource Area, with the southern part of the Site subject to a Rural Residential notation. The proposal comprises a request for a change to the District Plan whereby a new zone, the "River Terrace Resource Area" (RTRA) is applied to the Site, supported by the introduction of a bespoke suite of objectives, policies and rules relating to subdivision and development within the RTRA.

Following the plan change, it is intended to develop the Site to provide for up to 900 residential units on the Site. It is likely that a small scale neighbourhood centre will accompany the residential homes and possibly a school. The development of the Site for this purpose will make it sensitive to noise from other activities in the surrounding environment, including orcharding activities, HMP, SH6 and the Speedway. The noise generated by the activities proposed within the Site will be very minor in comparison.

3. Existing Environment

3.1 The Site and Surrounding Environment

The Site of 49.8ha is located on the western side of Sandflat Road opposite HMP, sharing its northern boundary with State Highway 6. The Site and surrounding sites are all in the Rural Resource Area of the District Plan, with the southern part of the site subject to a Rural Residential notation. This zone anticipates and provides for lifestyle (residential) development, while allowing for the ongoing operation of productive rural activities. This zoning is important, because it currently permits the development of noise sensitive activities, albeit in a less intensive manner than the RTRA zone.

The Site and surrounds are generally flat except for the terrace running diagonally through the area. To the north and west are rural land uses including orchards and cropping with some residential dwellings in the area.

To the east of the Site lie HMP and the Speedway. The southern portion of the HMP site is largely in forestry at the current time, but we understand that this may be developed by HMP for residential land use at some time in the future. HMP operates pursuant to their resource consent and Speedway is currently operating pursuant to a consent from 1980 with no noise limits stipulated (these activities are discussed further on in this report).

There are two dwellings in close proximity to HMP which are currently the most exposed to noise from their activities. These dwellings comprise two assessment points where HMP must ensure that compliance with the noise limits in their resource consent are met. These two dwellings are on the sites at 302 and 344 Kawarau Gorge Rd to the north / northwest of HMP.

We understand that whilst there is a dwelling on the property at 18 Sandflat Road immediately adjacent to the Site, HMP and the Speedway, this dwelling does not form a compliance point for HMP activities as we understand that they provided their written approval to the most recent HMP resource consent application in 2016. Where compliance with the HMP resource consent is discussed in this report, this dwelling is not included as a receiver.

3.2 Orchardring Activities

To the northwest of the site (the northern side of SH6), Sarita Orchard occupies approximately 34.6ha of land used exclusively for cherry production. To the immediate west of the Site, the land occupied by the Jones Orchard (Lot 2 DP 300152 and Sections 28-36 Sarita Subdivision contained within CFR 1540) also represents a large area of land used intensively for the production of stone fruit.

In order to provide for seasonal agricultural operations, the noise standards of the Rural Resource Area facilitate the emission of temporary, short duration noises associated with

audible bird deterrent devices and wind machines for frost control. Specifically, Rule 4.7.6E(b) enables audible bird deterrent devices when sited and operated in accordance with the following limits:

Any audible bird deterrence device shall be so sited and operated that the following noise limits shall not be exceeded at any point within the notional boundary (as defined in (a)) of any dwelling, resthome or hospital other than a dwelling on the same site as the device:

| | |
|-------------------------------|--|
| <i>Percussive devices</i> | <i>65 dB ASEL provided that the noise limit is 70 dB ASEL where the device is sited 500 metres or more from any Residential Resource Area or Rural Settlements Resource Area</i> |
| <i>Non-percussive devices</i> | <i>55 dBA L10</i> |

Note: 1. The term "ASEL" means the A-weighted sound exposure level which is sometimes described by the abbreviations LAE, or SEL. 2. Percussive devices shall include any device which emits a shock-wave arising from an explosion generating impulsive sound, and includes gas-guns.

PROVIDED THAT

No audible bird deterrence device shall be operated:

- (i) Within 100 metres of any community facility.*
- (ii) (ii) Between half an hour after sunset and half an hour before sunrise.*

Rule 4.7.6E(c) specifies the following noise limits for wind machines used for frost control in the Rural Resource Area:

Any wind machine used for frost control shall be so constructed and operated that any noise emission measured at a distance of 300 metres shall not exceed 65 dBA L10 provided that:

- 1. the wind machine will be allowed to operate during the frost danger period until the leaves of the plant are dry and the air temperature has reached 1° C.*
- 2. the speed of the wind machine must be governed such that the top speed of the rotor does not exceed the speed of sound.*
- 3. the wind machine is located no closer than 300 metres to any Residential or Rural Settlement Resource Area, or within 100 metres of a dwelling house not located on the property*

Where any new activity locates within any part of the Rural Resource Area and that activity includes any noise sensitive activity, the activity or any building associated with the noise sensitive activity shall be sited, oriented and constructed so as to ensure that habitable spaces within the building shall be adequately isolated from any noise source on another site within the class of sources described in sub-clauses (b) – (c) of this rule. Adequate sound isolation shall be achieved by siting and constructing the building to achieve an indoor design sound level of 45 dBA Lmax within any habitable room where the exterior noise source is within the class of sources described in sub-clauses (b) – (c) of this rule. The indoor design level shall be achieved with windows and doors open unless adequate alternative ventilation means is provided, used, and maintained in operating order.

On 18 April 2017, a Certificate of Compliance for the construction and operation of frost fans was issued to the Jones (Suncrest) Orchard which abuts the western boundary of the Site. As depicted on the approved plan for the Certificate of Compliance (Figure 1), the District Plan permits 8 'Orchard – Rite' 3000D frost fans to be distributed across Lot 2 DP 300152 and Sections 28-36 Sarita Subdivision, with the machines positioned at the centres of 10 x 100 metre diameter circles.

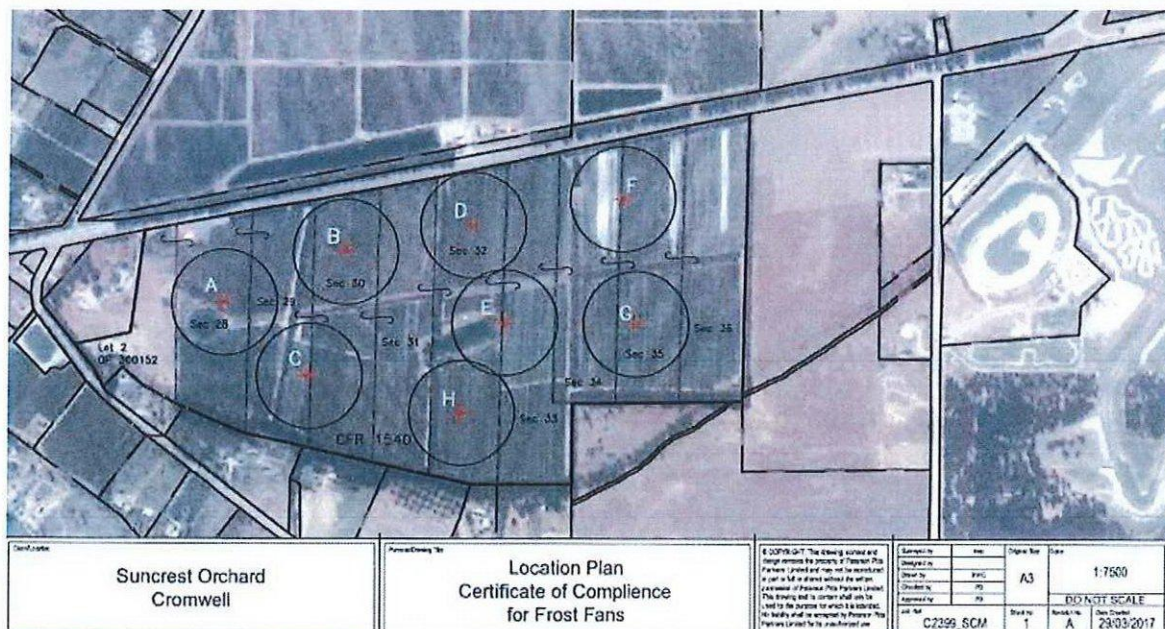


Figure 1: Approved Frost Fan Plan for Certificate of Compliance 170154 - Jones Orchard

To identify the potential noise effects on future noise sensitive activities established on the Site, we have used computer noise modelling software to predict the propagation of noise across the Site from frost fans operating as a permitted activity on the neighbouring orchard. The results of this modelling exercise and recommended mitigation measures through the proposed RTRA provisions are detailed later in this report.

Importantly, the frost fans will only be used during the early hours of the morning and generally only in the cooler months. It would be extremely unlikely for frost fan noise to be generated at the same time as noise from Speedway or HMP Tier 2 days.

3.3 State Highway 6

State Highway 6 adjoins the short northern boundary of the Site. The Transportation Assessment prepared by Carriageway Consulting and provided in support of the Request confirms that based on 2015 NZTA data, the highway had an Annual Average Daily Traffic

count of 3,890 vehicles (two-way). The report notes that traffic volumes on the road are strongly influenced by seasonal recreation traffic and events at nearby HMP.

Development of the Site through the Request is to be guided by a Structure Plan which delineates the general layout of the site, whilst roads and greenways are shown on a Movement Plan. Rules proposed under the RTRA framework require future development to proceed in accordance with these plans, which demonstrate access to the site via Sandflat Road, with no access provided directly to SH6. An open space greenway of a minimum width of 15m is proposed along the Site's northern boundary with SH6.

Notwithstanding the open space buffer on the SH6 boundary, noise sensitive activities establishing within proximity to the northern boundary of the Site have the potential to be affected by noise from vehicles travelling on SH6. We support the RTRA provisions that address the potential effects of traffic noise on future development of the Site in accordance with the approach currently applied to Residential Resource Area 13 of the Operative District Plan via Rule 7.3.6(xii). This rule prescribes the noise levels that must not be exceeded inside dwellings (within 80m of the seal edge of SH6) due to noise generated by vehicles travelling on State Highway 6. We agree that this rule should be included in the RTRA.

3.4 Highlands Motorsport Park

HMP comprises a large and comprehensively developed international motorsports facility, with a sealed race track, cafe and hospitality buildings, parking, pits area, tourist attractions and spectator areas and facilities. HMP host a number of large race meetings each year, and on the days when there is no major racing being held, they are permitted to host corporate functions and visitor days where the public are able to drive or be a passenger on the track in fast cars. The track is also open to driver training, filming and vehicle testing. We understand that these activities make up the majority of the use (in terms of time) at HMP.

HMP operate pursuant to resource consent RC150225 which was granted in November 2015. That consent contains a number of detailed noise related conditions which permit and control the generation of noise across surrounding sites.

In broad terms, the consent provides for 348 Tier 1 days per year, where noise levels are permitted to reach 55dB L_{Aeq} at the notional boundary of any dwelling. The consent does not restrict the compliance points to the dwellings existing at the time consent was granted.

The consent also allows for up to 16 Tier 2 days at HMP, which are essentially race days where a large number of people and cars attend HMP. These days have no noise limit applying to them other than the requirement for all race vehicles to meet a limit of 95dB L_{Amax} when measured at 30m from the sound source – usually infield of the track at a point where the

vehicles are accelerating hard. In practice, this permits the generation of noise levels up to around 80dB $L_{Aeq(15min)}$ and 70dB L_{Aeq} across the day to be received on neighbouring sites. The HMP consent contains detailed conditions controlling the timing, duration and frequency of such events and should be referred to in full to avoid any misunderstanding.

3.5 Cromwell Speedway

We understand that the Cromwell Speedway currently operates pursuant to a consent from 1980 that has no controls on the noise emissions. From the advertising material available, we understand that the Speedway run approximately 20 meetings per year between around October and April. The meetings generally run on a Friday or Saturday evening from around 5.30pm to 10pm, with variations likely across the season to account for weather, attendance and other variables. The Speedway typically hosts Sprint Cars, Super Saloons, Saloons, Six Shooters and Ministocks.

We have produced noise models to show the typical noise emissions over the Site from both HMP and Speedway activities. The results of the noise model are detailed in the following section of this report.

4. Predicted Noise Levels of Surrounding Activities on the Site

Styles Group have produced computer noise models to illustrate the propagation of noise across the Site from orcharding activities, Cromwell Speedway and Tier 1 days and Tier 2 race days at HMP. This section outlines the anticipated noise levels likely to be experienced on the Site from the ongoing operation of these activities. The anticipated effects and recommended mitigation responses under the proposed RTRA provisions are outlined in the subsequent sections of this report.

4.1 Noise Measurements

Styles Group were engaged by the Central Otago District Council to undertake noise measurements of a large motor racing weekend at HMP on the 25th and 26th January 2014. The event was the Central Muscle Car Series where racing included muscle cars as well as a large range of support classes of varying speeds and noise output. Overall, the race days measured can be considered one of the loudest days that would be likely to be held at HMP and can therefore be used in this instance to characterise the noise emissions on Tier 2 days. Although the measurements were undertaken at a time when HMP were operating under their previous resource consent, the conditions applying to the race day were ostensibly the same as those applying under the current consent (in terms of noise emissions for Tier 2 days).

The measurement methodology and results are presented in detail in our report to the Council dated 7th March 2014¹ and that report should be read in full for a complete understanding. The noise level measurements in that report have been used to calibrate the noise model discussed in the following section.

4.1.1 Noise Modelling

Styles Group has produced noise models to illustrate the propagation of noise across the Site from orcharding activities, Cromwell Speedway, Tier 1 and Tier 2 race days at HMP.

Brüel & Kjær Predictor computer noise modelling software was used to prepare noise level predictions, based on the International Standard ISO 9613-1/2. The noise level predictions assume meteorological conditions that slightly enhance propagation in all directions in accordance with NZS 6802:2008. The Brüel & Kjær Predictor software is globally recognised and has been successfully implemented on a large number of projects throughout New Zealand.

Terrain contours, land parcels, vegetation and building footprints for the model were provided to us. The topographical contours encompass the entire site and the surrounding land. We have ensured the integrity of the noise model by careful scrutiny of the final three-dimensional model. The noise levels produced by the model include the effects of the abovementioned factors and any reduction afforded by the topography and ground cover. The input parameters of the noise models are provided within Appendix B.

4.2 Orchardling Activities – Frost Fans

To identify the extent of potential noise effects on the Site of frost fans located and operated on the Jones Orchard (as per the Certificate of Compliance), a noise model was produced to show the propagation across the Site. The results of the noise modelling are shown in Appendix C to this report.

We have produced the noise models assuming that the noise output of each fan is at the maximum permitted by Rule 4.7.6E(c), being no greater than 65dB L_{A10} measured at a distance of 300 metres. We have used a frequency spectrum based on measurements of a similar Orchard Rite fan. From information supplied by Orchard Rite, we have calculated that the difference between the L_{A10} level and the L_{Aeq} level for the normal operation of a fan is approximately 3dB. So for consistency with the noise modelling for HMP and Speedway, we have based the frost fan noise emissions on precise compliance with a level of 62dB L_{Aeq} at 300m from each of the fans.

¹ *Highlands Motorsport Park Noise Monitoring Report 25 and 26 January 2014, Styles Group 7th March 2014*

The locations of the fans in the noise model are the same as those shown in the plan in Figure 1 from the Certificate of Compliance.

The noise level contours in Appendix C show that the noise from the frost fans extends across the Site, with the highest levels being approximately 71dB L_{Aeq} in the lower northwest corner of the Site, and down to approximately 58dB L_{Aeq} at the south eastern corner.

4.3 Highlands Motorsport Park

We have produced one noise model showing the propagation across the Site on Tier 1 days where the noise levels must comply with a limit of 55dB L_{Aeq} at the closest existing dwellings at 302 and 344 Kawarau Gorge Rd to the north / northwest of HMP. The second noise model is to show the typical noise emissions over the Site during a Tier 2 day which are based on our noise measurements in January 2014. The results of the noise modelling are shown in Appendix C to this report.

4.3.1 Tier 1 Days

The noise level contours in Appendix C for Tier 1 days show that when the noise from activities at HMP are just compliant with the 55dB L_{Aeq} noise limit at 302 Kawarau Gorge Road, the noise levels across the Site are also compliant with the same noise limit of 55dB L_{Aeq} . The noise sources on the HMP site may vary in terms of their location and intensity and this noise level contour may shift slightly at times. We expect that such variations would be limited to +/- 2-3dB which would be a barely noticeable difference to a compliant situation.

4.3.2 Tier 2 Days

Based on the noise measurements undertaken in January 2014, the noise level contours in Appendix C show noise levels across the Site from 77dB L_{Aeq} to 67dB L_{Aeq} . It is important to note that these noise level contours represent the noise levels on the day of the measurements and can only be considered typical of a Tier 2 day. The actual noise emissions on any given Tier 2 may vary and could be higher or lower. We would not expect the noise levels to be more than 3-5dB higher than those presented herein (a noticeable increase) on the very loudest day, but the levels could easily be 10dB lower depending on the class of racing cars on any given day.

We note that the noise generated on Tier 2 days affects large areas of the Cromwell basin, including a number of dwellings existing in the general area of the Site, as well as a large number of dwellings to the east.

4.4 Cromwell Speedway

The computer noise model provided within Appendix C shows the spatial propagation of noise over the Site from speedway racing. Although no noise level measurements of Cromwell Speedway were used for this exercise, we have used data from our extensive database of noise measurements of over 2000 speedway races from Western Springs Speedway and Bay Park Speedway (and others). We have adopted the typical noise level over a night of racing involving the classes of cars advertised by the Speedway and applied the source levels to the noise model and the local topography. The other input parameters are the same as that used for the HMP noise modelling.

As shown in Appendix C, the noise levels during Speedway racing vary between approximately 65dB L_{Aeq} and 80dB L_{Aeq} across the Site. As with the noise from HMP, these levels are indicative only and may vary by several decibels on any given night. Overall we would not expect an increase in noise levels by more than 1-3dB, but there could be a reduction of 10dB or more if only the quieter classes of vehicle are raced on any given night.

4.5 Noise Effects of Motorsport Activities on the Site

4.5.1 Tier 1 Days at HMP

As set out above, the noise levels across the site on a Tier 1 day are no greater than the limit in the HMP consent of 55dB L_{Aeq} . On the basis that no mitigation was required for the existing dwellings subject to noise from HMP at the time of consenting, we consider that no further mitigation is required for the development on the Site beyond that already required in the HMP consent.

Notwithstanding, the noise from Tier 1 days will be noticeable for the occupants of the Site, and will at times be the dominant noise source in the environment. A level of 55dB is generally accepted to be the upper level of noise for a residential environment, where a small proportion of the population (often around 10%) will be highly annoyed. Such a noise limit is very common in District Plans around New Zealand for activities affecting residential receivers during the day.

4.5.2 Tier 2 Days & Speedway

The noise levels experienced across the Site on Tier 2 days and during a Speedway meeting are considered to be relatively high, with levels ranging from approximately 65dB L_{Aeq} and up to 80dB L_{Aeq} . Such noise levels would dominate the noise environment across the Site and would compromise the outdoor acoustic amenity to the point where some residents would likely seek respite indoors for much or all of the day or leave home to undertake other activities away from the Site. A number of residents may also be attracted to the events at HMP or the Speedway.

It is important to note that events generating this level of noise are both infrequent and in the case of Speedway are of a relatively short duration. The events are also well publicised and the receivers of noise have the opportunity to plan ahead and avoid the noise if they desire.

5. Recommended Noise Mitigation Framework under the RTRA

Given the description of the noise levels likely to be experienced on the Site, we consider that it would be imprudent to allow for the development of noise sensitive activities on the Site without imposing rules and controls to provide an appropriate level of acoustic comfort from noise sources in the surrounding environment, and to mitigate the potential reverse sensitivity effects on SH6, orcharding activities, HMP and the Speedway.

The noise effects on the Site can be managed by:

- ~ Requiring all noise sensitive activities on the Site to be adequately acoustically insulated from noise sources within the surrounding environment; and
- ~ Requiring that all incoming residents and occupants of the site are made very well aware of the nature and scale of the noise effects that are permitted on nearby orchards, HMP and Speedway sites through a no complaints covenant.

It is important to note that other than the noise from SH6 which affects only a small part of the site, the noise from HMP Tier 2 days, Speedway and orcharding activities as they affect the site will be intermittent throughout the year, with only a maximum of approximately 36 days or evenings when motorsport noise could be an issue, and only the mornings when frost fans are required to be used, generally in the winter and for a variable number of mornings. This situation is quite different to developing land for residential purposes near to a noise source which operates constantly, such as a port, airport or industry such as a dairy factory. It is likely that for most of the time throughout the year, noise levels across the Site will be entirely reasonable for residential use without any mitigation or insulation.

5.1 Management of Noise Effects between the Rural Resource Area and RTRA

5.1.1 Rule 4.7.6E(a) General Noise Limits

If the Plan Change is successful to rezone the site RTRA, Rule 4.7.6E(a) Noise of the Rural Resource Area would continue to control the noise emissions produced from sites within the Rural Resource Area and received on the Site. Despite the operative Noise rule not specifically referring to the RTRA, the current rule requires that the specified noise limits are not exceeded within the notional boundary of any dwelling. The current wording of the Rule therefore means that the noise emissions from activities in the Rural Resource Area will need to comply at the notional boundary of any dwelling in the RTRA. The specified noise levels (55 dBA L₁₀ during the day 40 dBA L₁₀ at night) are readily acceptable for residential development.

Rule 4.7.6E(a) Noise specifies the following noise limits:

E. Noise

- (a) *All activities shall be conducted so as to ensure the following noise limits are not exceeded at any point within the notional boundary of any dwelling, resthome or hospital, or at any point within any Residential Resource Area or any Rural Settlements Resource Area:*

| | |
|--|--------------------|
| <i>On any day 7:00am to 10:00pm</i> | <i>55 dBA L10</i> |
| <i>10:00pm to 7:00am the following day</i> | <i>40 dBA L10</i> |
| | <i>70 dBA Lmax</i> |

5.1.2 Noise Emissions of Audible Bird Deterrent Devices

The noise limits of *Rule 4.7.6E(a)* do not apply to any temporary activity (as defined by the Plan), devices used to protect crops from birds or frost, or sirens associated with emergency service activities.

As per the 'Reason' for the Rule, noise emissions associated with the protection of crops from birds and/ or frost are exempt from the standard noise controls so as not to unduly restrict seasonal agricultural operations. Furthermore, the Operative Plan emphasises that the responsibility of noise mitigation should lie with any new noise sensitive activity which elects to locate in a rural area:

"It is also considered appropriate that where a new activity that may be noise sensitive locates in the rural environment next to an activity that generates noise then the developer of the new activity should take steps to mitigate the effects of that noise. The cost should not be borne by the existing activity unless it does not meet the 70dBA standard."

The protection of crops from frost is an activity undertaken on neighbouring orchards and therefore represents a source of noise likely to be experienced by future noise sensitive activities on the Site.

The requirements of *Rule 4.7.6E(b) Audible Bird Deterrent Devices* will apply to any such devices sited and operated from within the Rural Resource Area. This rule requires the following performance standards to be achieved:

Any audible bird deterrence device shall be so sited and operated that the following noise limits shall not be exceeded at any point within the notional boundary (as defined in (a)) of any dwelling, resthome or hospital other than a dwelling on the same site as the device:

| | |
|-------------------------------|--|
| <i>Percussive devices</i> | <i>65 dB ASEL provided that the noise limit is 70 dB ASEL where the device is sited 500 metres or more from any Residential Resource Area or Rural Settlements Resource Area</i> |
| <i>Non-percussive devices</i> | <i>55 dBA L₁₀</i> |

If the Site is rezoned RTRA, the current rule will require any audible bird deterrent devices sited and operated from within the Rural Resource Area to achieve a limit of 65 dB ASEL (percussive devices) and 55 dBA L₁₀ (non percussive devices) when assessed from the notional boundary of any dwelling, resthome or hospital established on the Site.

Because bird scaring devices are highly mobile and variable in terms of noise level and directionality, it is not possible to use a computer noise model to show what the spatial extent of noise levels could be like. Their location, orientation and therefore noise output can and probably will change from day to day.

We consider that the sensitivity of residential activity to bird scaring devices is best managed by way of a no-complaints covenant, primarily to set expectations about their operation for incoming residents.

Notwithstanding, the insulation controls proposed for motorsport and frost fan activities as set out below will provide a very good level of acoustic insulation for bird scaring devices for the dwellings close to the neighbouring orchards.

5.1.1 Noise Emissions of Wind Machines for Frost Control

Rule 4.7.6E(c)Wind Machines for Frost Control will control the noise emissions of any frost fan sited and operated from within the Rural Resource Area and requires (emphasis added):

Any wind machine used for frost control shall be so constructed and operated that any noise emission measured at a distance of 300 metres shall not exceed 65 dBA L10 provided that:

- a) the wind machine will be allowed to operate during the frost danger period until the leaves of the plant are dry and the air temperature has reached 1 °C.*
- b) the speed of the wind machine must be governed such that the top speed of the rotor does not exceed the speed of sound.*

- c) *the wind machine is located no closer than 300 metres to any Residential or Rural Settlement Resource Area, or within 100 metres of a dwelling house not located on the property*

- d) *Where any new activity locates within any part of the Rural Resource Area and that activity includes any noise sensitive activity, the activity or any building associated with the noise sensitive activity shall be sited, oriented and constructed so as to ensure that habitable spaces within the building shall be adequately isolated from any noise source on another site within the class of sources described in sub-clauses (b) – (c) of this rule. Adequate sound isolation shall be achieved by siting and constructing the building to achieve an indoor design sound level of 45 dBA L_{max} within any habitable room where the exterior noise source is within the class of sources described in sub-clauses (b) – (c) of this rule. The indoor design level shall be achieved with windows and doors open unless adequate alternative ventilation means is provided, used, and maintained in operating order.*

In order to ensure new noise sensitive activities are adequately insulated from noise associated with the protection of crops from birds and/ or frost, Rule 4.7.6E(d) of the Operative Plan requires any new noise sensitive activity which locates within the Rural Resource Area to adequately acoustically isolate habitable spaces from noise from wind machines or audible bird deterrent devices to achieve an indoor design sound level of 45 dBA L_{max}. This level is to be achieved with windows and doors open unless adequate alternative ventilation means is provided, used, and maintained in operating order.

If the Plan Change is made operative, the acoustic insulation requirements of Rule 4.7.6E(c) would *not* apply to the proposed RTRA as the current rule only applies to activities *within* the Rural Resource Area. As such, and based on the predicted noise levels of these noise sources on the Site, it is recommended that a similar rule is adopted within the proposed RTRA framework to ensure future noise sensitive activities on the Site are designed and located to achieve a sufficient level of acoustic protection from frost fans. As the risk of frost typically occurs at night and in the early morning when the air is still (which also coincides with the period when ambient noise levels are low), frost fans typically operate when people are generally sleeping, resulting in the potential for sleep disturbance or annoyance.

Rule 4.7.6E(c)3 stipulates that a wind machine may be located no closer than 300 metres to any Residential or Rural Settlement Resource Area, or within 100 metres of a dwelling house not located on the property. If the Plan Change is successful, a wind machine would not be permitted within 100m of a dwelling house located on the Site. From our understanding of the location of existing frost fans (as per the Certificate of Compliance issued to the Jones Orchard) the existing machines are located approximately 110-120m from the common boundary with the Site and therefore the proposed plan change will not render the existing fans non compliant with the rule.

However, the noise levels are only controlled to a level of 65dBA L_{10} / 62dB L_{Aeq} at 300m, so the noise levels could be higher than this for the dwellings located on the Site between the 300m radius and the boundary (at approximately 110-120m). Notwithstanding, we have recommended acoustic insulation controls that require the same level of insulation as Rule 4.7.6E(c) for all dwellings including those within the 300m noise limit radius. This extra level of insulation means that for frost fan noise occurring predominantly at night, the introduction of dwellings as close as 110-120m from the frost fans will not result in the occupants of the dwellings being exposed to any greater level of noise than the current rules permit.

It is our experience that occupants of rural areas often have differing amenity expectations, whereby residential / lifestyle occupants may expect a reasonably high level of amenity, including low noise levels. In order to set amenity expectations and attitudes to noise within the rural environment which surrounds the RTRA, we recommend in addition to the insulation controls, no complaints covenant should be adopted as proposed within Rule 20.7.7(ix) *Orcharding Activities* of the Request and as discussed further on in this report.

5.1.2 Proposed Wind Machine Internal Noise Control

Rule 4.7.6E(d) requires that new dwellings are sited and constructed to ensure that the internal noise level does not exceed 45dBA L_{max} . The use of the L_{10} noise level descriptor for the frost fan itself and the L_{max} descriptor for the internal noise environment makes the insulation calculation difficult, due to the different metrics. We have calculated the difference between the existing District Plan controls and the L_{Aeq} equivalents so that a simple and effective insulation control can be applied across the Site for the various noise sources based on only the L_{Aeq} noise level descriptor.

As set out above, based on measurement data we have determined that at the permitted level of 65dBA L_{10} at 300m, the L_{Aeq} noise level will be approximately 62dB.

Based on measurement data of frost fans operating continuously, the L_{Amax} noise level is typically around 6dB greater than the L_{Aeq} noise level. So if the internal noise level of 45dBA L_{max} from Rule 4.7.6E(d) is to be complied with using the L_{Aeq} descriptor, the internal noise level would need to be no greater than 39dB L_{Aeq} (45dBA L_{max} - 6dB difference = 39dB L_{Aeq}).

So for example, if the frost fan noise at a particular location was permitted to be as high as 69dB L_{Aeq} , insulation of a dwelling to achieve a noise level difference from outside to inside of 30dB would result in the internal noise level being no greater than 39dB L_{Aeq} , which would be compliant with the existing 45dBA L_{max} control. If the external noise level from frost fans was 71dB L_{Aeq} , the noise level difference from outside to inside would need to be 32dB.

5.2 State Highway 6

We consider that it is appropriate to ensure that any noise sensitive activity developed close to State Highway 6 is acoustically insulated to ensure a reasonable noise environment for the occupants and to avoid any reverse sensitivity effects on the road controlling authority.

We have reviewed the existing District Plan Rule 7.3.6(xii) *Acoustics: Residential Resource Area (13)* and recommend that this rule be incorporated into the RTRA provisions subject to minor modifications to the technical aspects of the rules, including the noise levels, metrics and standards referenced. Those modifications would not change the level of effect or degree of insulation required by the Rule, but would ensure that the most appropriate and up to date metrics and terminology are used for this plan change.

The proposed rule for the RTRA requires all internal noise level (bedrooms and habitable spaces) located within 80m of the SH6 boundary to achieve an internal noise level of 40dB $L_{Aeq(24hr)}$. This level is appropriate for the proposed RTRA environment, and will be readily achievable using modern construction methods. The rule will ensure a good level of acoustic amenity is provided for future occupants, particularly at night where the noise level will be 35dB $L_{Aeq(1hr)}$ or lower in this location. This level is also consistent with the NZTA's own guide to reverse sensitivity².

Proposed Rule 20.7.7(vii) of the proposed River Terrace Resource Area Request requires:

Acoustic insulation of dwellings

Any new residential buildings, or buildings containing activities sensitive to road noise, located within 80m of the boundary with State Highway 6 shall be designed, constructed and maintained to ensure that the internal noise level does not exceed 40dB $L_{Aeq(24hr)}$ in bedrooms and all other habitable spaces.

The titles affected shall be encumbered with a consent notice requiring ongoing compliance with this standard in perpetuity.

Reason: The rule avoids the potential for adverse effects of road noise from the State Highway on sensitive activities within the Resource Area.

We consider that the inclusion of this rule in the proposed plan change is appropriate and will ensure that the effects of and on SH6 will be avoided or mitigated adequately. It is likely that

² *Effects on noise sensitive land use* NZ Transport Agency September 2015 v1.0 <https://nzta.govt.nz/assets/resources/effects-on-noise-sensitive-land/effects-on-noise-sensitive-land-use.pdf>

the acoustic insulation controls for frost fans and motorsport will be more than sufficient to enable compliance with this rule also.

5.3 Motorsport Activities

Because the noise levels from Tier 2 days and Speedway are unlimited by consent conditions, it is not practicable to require the internal noise level in dwellings to be below a certain level (as the outdoor level is not known). Instead, we recommend that the dwellings meet a performance standard requiring a standard noise level reduction across the Site in two stages depending on the proximity to the eastern boundary.

For dwellings located inside the 70dB L_{Aeq} contour for Tier 2 days, we recommend that the noise level insulation of 30 dB should be achieved. For dwellings west of the same contour, we recommend a performance standard of 25dB. These controls will provide an approximate reduction of 30dB and 25dB from inside to outside respectively. These will generally be perceived as providing a significant reduction in noise level. We would expect that the internal noise levels will be approximately 30dB and 25dB lower than the external noise levels shown in Appendix C.

This will mean that for the houses closest to HMP or the Speedway, the internal noise levels will be no greater than approximately 50dB L_{Aeq} , and for the sites further away the noise levels will be as low as approximately 30dB L_{Aeq} during the day and evening.

Although the insulation controls only deal with the control of internal noise levels, they will provide a significant reduction of noise levels indoors.

6. Acoustic Insulation for Buildings

Our assessment has shown that all buildings that are sensitive to noise on the site will need to be insulated to various degrees to ensure that the internal noise levels are low enough to provide respite from a limited number of motorsport events and to provide for sleep protection during the operation of frost fans. We have specified the insulation requirements in terms of the Outdoor to Indoor Transmission Class (OITC)³. This method effectively requires a noise level difference from outside to inside to be achieved, taking into account the number of exposed facades and their construction, the roof construction and the frequency spectrum of the noise sources. Our assessment of the frequency spectrum of both motorsport and frost fan noise is that the OITC specification will result in the same approximate noise level reduction in practice for these sources. That is to say that for these sources, an OITC specification of 30dB would result in motorsport or frost fan noise being reduced by approximately 30dB. Whilst that may

³ Outdoor to Indoor Transmission Class in accordance with ASTM E1332-16 *Standard Classification for Rating Outdoor-Indoor Sound Attenuation*.

seem to be commonsense, for some sources of noise the OITC specification can result in smaller or larger noise level differences in practice due to the different frequency characteristics of the sound of interest. Importantly, the OITC specification extends the frequency spectrum for calculation down to 80Hz, which is important for frost fans and motorsport noise.

The highest degree of insulation is required close to the permitted frost fans on the western boundary, and also for dwellings on the other side of the site close to HMP and Speedway. The lowest level of insulation is required in the south eastern area of the site, where the dwellings would be several hundred metres away from any of the four noise sources.

We have only specified acoustic insulation for Noise Sensitive Spaces, which comprise the following general activities:

- i) Bedrooms, kitchens, living areas and any other habitable rooms in dwellings;
- ii) Classrooms and indoor learning areas, lecture theatres in schools or educational facilities;
- iii) Conference or function spaces, bedrooms and living areas associated with visitor accommodation;
- iv) Noise sensitive spaces in medical facilities; and
- v) Any other rooms containing noise sensitive activities that are occupied frequently or for extended periods,

We consider that spaces insensitive to noise such as hallways, laundries, bathrooms, toilets, garages, closets, lobbies, workshops or storage spaces be excluded.

6.1 Acoustic Insulation Zones

Based on our noise modelling work, an Acoustic Insulation Plan has been prepared for incorporation into the Plan Change. The plan shows 3 different acoustic insulation areas as follows, from Zone A to Zone C. The origin of those zones can be explained as follows:

6.1.1 Zone A

This zone is effectively the combined land area that would be within the 70dB L_{Aeq} noise level contour for Speedway and HMP Tier 2 days, and also affected by frost fan noise to a lesser degree. The curved boundary of this zone has been determined by overlaying the Speedway and HMP Tier 2 day noise level contours across the site. The western-most extent of the area is intersected by Zone B for frost fan noise as below.

The insulation requirements for Zone A are OITC 30dB for bedrooms and all other habitable spaces. The insulation requirement will ensure that the effects of motorsport noise will be mitigated for all internal spaces during the day, and that frost fan noise in the night will be compliant with the existing 45dBA L_{max} control in bedrooms (see below).

6.1.2 Zone B

Zone B is bounded by the western boundary of the Site and the 69dB L_{Aeq} noise level contour for frost fan noise which curves through the site, centred about the frost fans in the Jones orchard to the west. Zone B is also well removed from HMP and Speedway so the insulation requirement for those sources can be reduced slightly.

The 69dB L_{Aeq} contour represents the threshold between achieving compliance with the internal control of 45dBA L_{max} not using an insulation control of OITC 30dB. So for all buildings east of the 69dB L_{Aeq} contour, (in Zone A) achieving OITC 30dB will enable compliance. For buildings west of the 69dB L_{Aeq} contour (i.e. inside Zone B) it will be necessary to achieve OITC 33dB to maintain compliance.

The single control means that for houses inside Zone B very close to the 69dB L_{Aeq} contour, the internal noise levels will be compliant by a margin of almost 3dB. For the houses inside Zone B closest to the frost fans, the margin of compliance will be 0-1dB.

The insulation requirements for Zone B are OITC 33dB for bedrooms (for frost fan noise) and OITC 25dB all other habitable spaces (for motorsport noise). The insulation requirement will ensure that the effects of motorsport noise will be mitigated for all internal spaces during the day, and that frost fan noise in the night will be compliant with the existing 45dBA L_{max} control in bedrooms.

6.1.3 Zone C

Zone C is the area of the Site that is most remote from the external noise sources. The noise of frost fans at night will still need to be reduced by as much as 30dB in the northern area of Zone C, and motorsport noise during the day and evenings will still need to be reduced by up to 25dB for other habitable rooms.

The insulation requirements for Zone C are OITC 30dB for bedrooms (for frost fan noise) and OITC 25dB all other habitable spaces (for motorsport noise). The insulation requirement will ensure that the effects of motorsport noise will be mitigated for all internal spaces during the day, and that frost fan noise in the night will be compliant with the existing 45dBA L_{max} control in bedrooms.

6.2 Building Constructions

To achieve OITC 25dB, the building envelope would generally require minor upgrades compared to an otherwise untreated design, and attention to detail when designing and installing the glazing, extraction fans and any other apertures will be necessary, as well as ensuring that all windows and doors are fitted with good quality compressible seals.

To achieve OITC 30dB, in addition to the measures required to achieve OITC 25dB, the dwellings would likely require some upgrades compared to an otherwise untreated design, such as improved glazing, slightly heavier ceilings and wall linings and in some cases the larger facades may need to be constructed with a heavy weight cladding or masonry.

To achieve OITC 33dB, in addition to the measures required to achieve OITC 25dB, the dwellings would require considerable upgrades to the internal and external claddings, roofs and glazing. Heavy weight external cladding (such as a 70mm brick veneer) will be necessary, with 2 layers of 13mm plasterboard in the ceiling, fibre cement sarking beneath the roof, insulation in all cavities and heavy double glazing (4mm float, 12mm airspace, 6.38mm laminate).

Because the design of the dwellings is not available at the Plan Change stage, it is not possible to prepare precise specifications for construction. However, the example construction methods noted above establish that the requirements will be achievable in practice. The proposed insulation rule in the RTRA requires that the buildings are designed, constructed and maintained to achieve the OITC requirements in the Acoustic Insulation Plan, and that a report is required from a suitably qualified acoustics expert to confirm that this is the case.

6.3 Ventilation and Thermal Comfort

In order to achieve the OITC requirements above, it will be necessary to ensure that windows and doors are able to be kept closed. Whilst this is not likely to be a particular issue in the winter (where temperatures are generally low) it will be impracticable to keep windows closed in the summer time without considerable thermal discomfort at times. To overcome this, we recommend that mechanical cooling (air conditioning) is provided for, along with a source of fresh air to meet the requirements of clause G4 of the Building Code. These measures are very commonly applied in built up areas around New Zealand, including close to transport infrastructure, city centres and mixed use zones. We consider it appropriate to apply in this case also. Such rules would in practice be likely to require one or two split cycle domestic heat pumps per dwelling, along with a fresh air supply through a silenced trickle fan.

The proposed insulation rule for the RTRA includes a requirement for this.

6.4 No Complaints Covenant

In order to set the appropriate expectations for the incoming residents of the RTRA and to address potential reverse sensitivity effects of motorsports and orcharding activities, we understand that proposed Rule 20.7.7(viii) *Reverse Sensitivity- Motorsports Activities* and Rule 20.7.7(ix) *Orcharding Activities* of the Request will require any title created within the RTRA to be encumbered with a no complaints covenant.

In our view, the instrument to create awareness of the noise issues is very important to ensure that the incoming residents are well aware of the nature and scale of noise effects that orcharding activities, HMP and the Speedway are permitted to generate across the Site.

In our experience, the no complaints covenant method proposed is effective for setting expectations of the incoming landowners and is a widely used mechanism for this purpose.

It is our view that creating the awareness of the potential issues is likely to be the most important measure for mitigating the potential reverse sensitivity effects on HMP, the Speedway and orcharding activities.

7. Proposed RTRA Acoustic Insulation Rule

Based on our assessment, the following rule has been proposed for incorporation into the RTRA rules. This should be read in conjunction with the Acoustic Insulation Plan.

- 1) *Noise Sensitive Spaces located within the River Terrace Resource Area shall be designed, constructed and maintained to ensure that the following Outdoor - Indoor Transmission Class (OITC) noise level reductions are achieved in the relevant Acoustic Insulation Zones:*

| <i>Acoustic Insulation Zone</i> | <i>OITC for Bedrooms</i> | <i>OITC for Other Noise Sensitive Spaces</i> |
|---------------------------------|--------------------------|--|
| <i>A</i> | <i>30</i> | <i>30</i> |
| <i>B</i> | <i>33</i> | <i>25</i> |
| <i>C</i> | <i>30</i> | <i>25</i> |

- b) *The OITC assessment shall be determined in accordance with ASTM E1332-16 Standard Classification for Rating Outdoor-Indoor Sound Attenuation;*
- c) *Noise Sensitive Spaces includes:*
- i) Bedrooms, kitchens, living areas and any other habitable rooms in dwellings;*
 - ii) Classrooms and indoor learning areas, lecture theatres in schools or educational facilities;*
 - iii) Conference or function spaces, bedrooms and living areas associated with visitor accommodation;*
 - iv) Noise sensitive spaces in medical facilities; and*
 - v) Any other rooms containing noise sensitive activities that are occupied frequently or for extended periods,*
- but does not include spaces insensitive to noise such as hallways, laundrys, bathrooms, toilets, garages, closets, lobbies, workshops or storage spaces.*
- d) *Compliance with this rule shall be demonstrated by a report from a suitably qualified and experienced acoustics expert. The report shall detail the constructions and assumptions used in the calculation process. Noise measurement is not required.*
- e) *Where the design requires windows and doors to be closed to meet the OITC requirements, all Noise Sensitive Spaces shall be ventilated or supplied with fresh air to meet the requirements of the Building Act, and shall be mechanically cooled (air conditioned) to ensure that the occupants do not need to open windows or doors for thermal comfort.*

8. Summary

This report has been prepared to assess the effects of noise from those sources across the Site and to determine what measures may be necessary to ensure that the noise-related reverse sensitivity effects are adequately avoided or mitigated. Following the plan change, it is intended to develop the Site to provide for up to 900 residential units on the Site. The development of residential activities is generally considered to be noise-sensitive and the River Terrace site (the Site) is located proximate to orcharding activities, the Highlands Motorsport Park (HMP), State Highway 6 and the Cromwell Speedway.

The Site and surrounding sites are currently all in the Rural Resource Area of the District Plan, with the southern part of the site subject to a Rural Residential notation. This zone anticipates and provides for lifestyle (residential) development, while allowing for the ongoing operation of productive rural activities. This zoning is important, because it currently permits the development of noise sensitive activities, albeit in a less intensive manner than the RTRA zone.

Northwest and immediately west of the Site, the land is used intensively for the production of cherries and stone fruit. In order to provide for seasonal agricultural operations, the noise standards of the Rural Resource Area facilitate the emission of temporary, short duration noises associated with audible bird deterrent devices and wind machines for frost control.

State Highway 6 adjoins the short northern boundary of the Site. The current rules in the District Plan and the proposed rules for the RTRA require the acoustic insulation of dwellings to ensure that reverse sensitivity effects on the road controlling authority do not arise from the establishment of dwellings close to it.

To the east of the Site is HMP, comprising a large and comprehensively developed international motorsports facility, with a sealed race track, cafe and hospitality buildings, parking, pits area, tourist attractions and spectator areas and facilities. HMP operate pursuant to resource consent RC150225 which was granted in November 2015. That consent contains a number of detailed noise related conditions which permit and control the generation of noise across surrounding sites. In broad terms, the consent provides for 348 Tier 1 days per year, where noise levels are permitted to reach 55dB L_{Aeq} at the notional boundary of any dwelling. The consent also allows for up to 16 Tier 2 days at HMP, which are essentially race days where a large number of people and cars attend HMP. These days have no noise limit applying to them, other than a maximum noise level for each vehicle, (which indirectly controls the overall noise levels).

Also to the east of the Site is the Cromwell Speedway. We understand that they run approximately 20 meetings per year between around October and April. The meetings generally run on a Friday or Saturday evening from around 5.30pm to 10pm.

We have produced computer noise models to illustrate the propagation of noise across the Site from orcharding activities, Cromwell Speedway and Tier 1 days and Tier 2 race days at HMP. The noise model outputs are included in Appendix C to this report. The 70dB L_{Aeq} noise level contour for motorsport activities and the 69dB L_{Aeq} contour for frost fan noise have been reproduced onto the proposed Acoustic Insulation Plan (to form part of the RTRA plans) to form the spatial boundaries of Acoustic Insulation Areas A, B and C. These areas have specific insulation requirements to achieve the desired internal acoustic environment depending on the external noise levels and time of day for the various noise sources.

Provided that all Noise Sensitive Spaces inside the zones are constructed such that the acoustic insulation requirements are met, the internal noise levels will be sufficiently low to provide a high level of respite for motorsport noise, and to avoid sleep disturbance from frost fan noise in bedrooms.

We also support the imposition of no-complaints covenants on the titles to ensure that the expectations of incoming residents are appropriately set and to avoid complaints about noise from activities that are operating lawfully.

It is important to note that, other than the noise from SH6 which affects only a small part of the site, the noise from HMP Tier 2 days, Speedway and orcharding activities as they affect the site will be intermittent throughout the year, with only a maximum of approximately 36 days or evenings when motorsport noise could be an issue, and only the mornings when frost fans are required to be used, generally in the winter and for a variable number of mornings. Motorsport noise will be no greater than 55dB L_{Aeq} (and for most houses significantly less) for no less than approximately 329 days per year.

This situation is quite different to, and in many ways significantly better than, developing land for residential purposes near to a noise source which operates constantly, such as a port, airport or industry such as a dairy factory, even where the noise levels are lower. It is likely that for most of the time throughout the year, noise levels across the Site will be entirely reasonable for residential use without any mitigation or insulation. The noise effects are therefore intermittent and temporary in nature.

The effects of Speedway and HMP Tier 2 days will remain outdoors, but only for a maximum of approximately 36 occasions per year. However, the proposed insulation controls for the RTRA will provide significant acoustic insulation for the occupiers, allowing for respite indoors from motorsport noise and the avoidance of sleep disturbance at night from frost fan noise. The proposed no-complaints covenant will ensure that the expectations of incoming residents are appropriately set and that complaints regarding noise from activities being undertaken lawfully will not be permitted.

9. Appendix A: Glossary

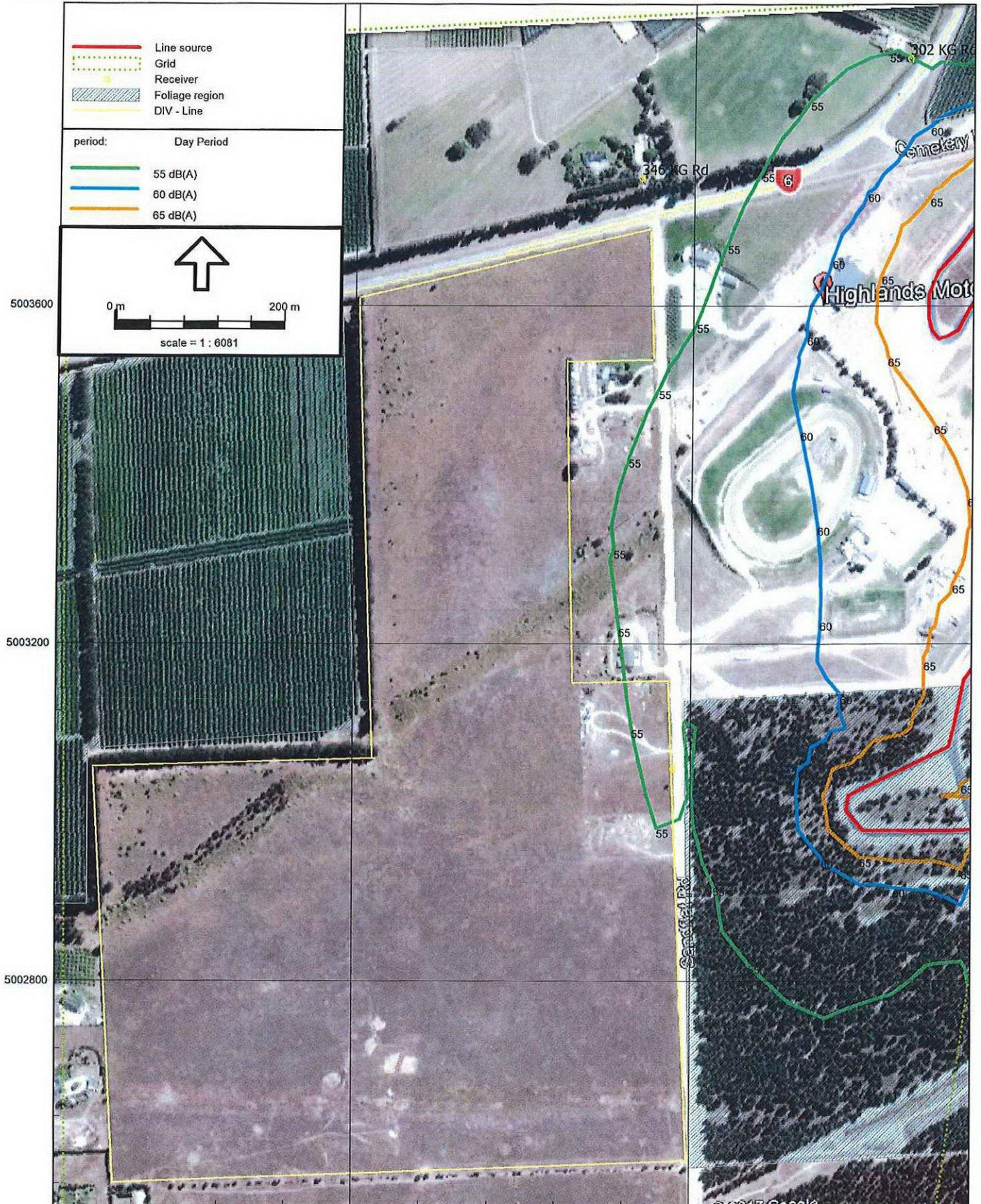
| Acoustical Term | Definition |
|---------------------------------|--|
| Noise | A sound that is undesired by, or distracting to, the recipient. |
| dB (decibel) | The basic measurement unit of sound. The logarithmic unit used to describe the ratio between the measured sound pressure level and a reference level of 20 micropascals (0 dB). |
| A-weighting L_{Aeq} or dBA | A frequency filter applied to the full audio range to approximate the response of the human ear. |
| Ambient noise | Ambient noise is the total of all noise within a given environment, comprising a composite of sounds from sources near and far. |
| L_{10} dBA | The noise level that is exceeded for 10% of the measurement period, which is typically 15 minutes. This descriptor has historically been used to correlate with annoyance but has been superseded by the L_{Aeq} metric. For many sources of noise, the measured L_{10} noise level will be around 2-4dB above the L_{Aeq} noise level for the same measurement. |
| dB L_{Aeq} | The A-weighted equivalent sound pressure level with the same energy content as the measured varying acoustic signal over a sample period (t). Sometimes referred to as the 'average' noise level. The preferred metric for sound levels that vary over time because it takes into account the total sound energy over the time period of interest. |
| dB L_{AFmax} or L_{max} dBA | The maximum A-weighted sound pressure level recorded during the measurement period. |
| NZS 6801:2008 | N.Z. Standard NZS 6801:2008 <i>Measurement of Environmental sound.</i> |
| NZS 6802:2008 | N.Z. Standard NZS 6802:2008 <i>Acoustics – Environmental Noise.</i> |
| ISO 9613-1/2 | International Standard ISO 9613-1/2 <i>Attenuation of sound during propagation outdoors.</i> |
| OITC | Outdoor to Indoor Transmission Class – a measure of the performance of the acoustic insulation of a building envelope measured and assessed in accordance with ASTM E1332. |

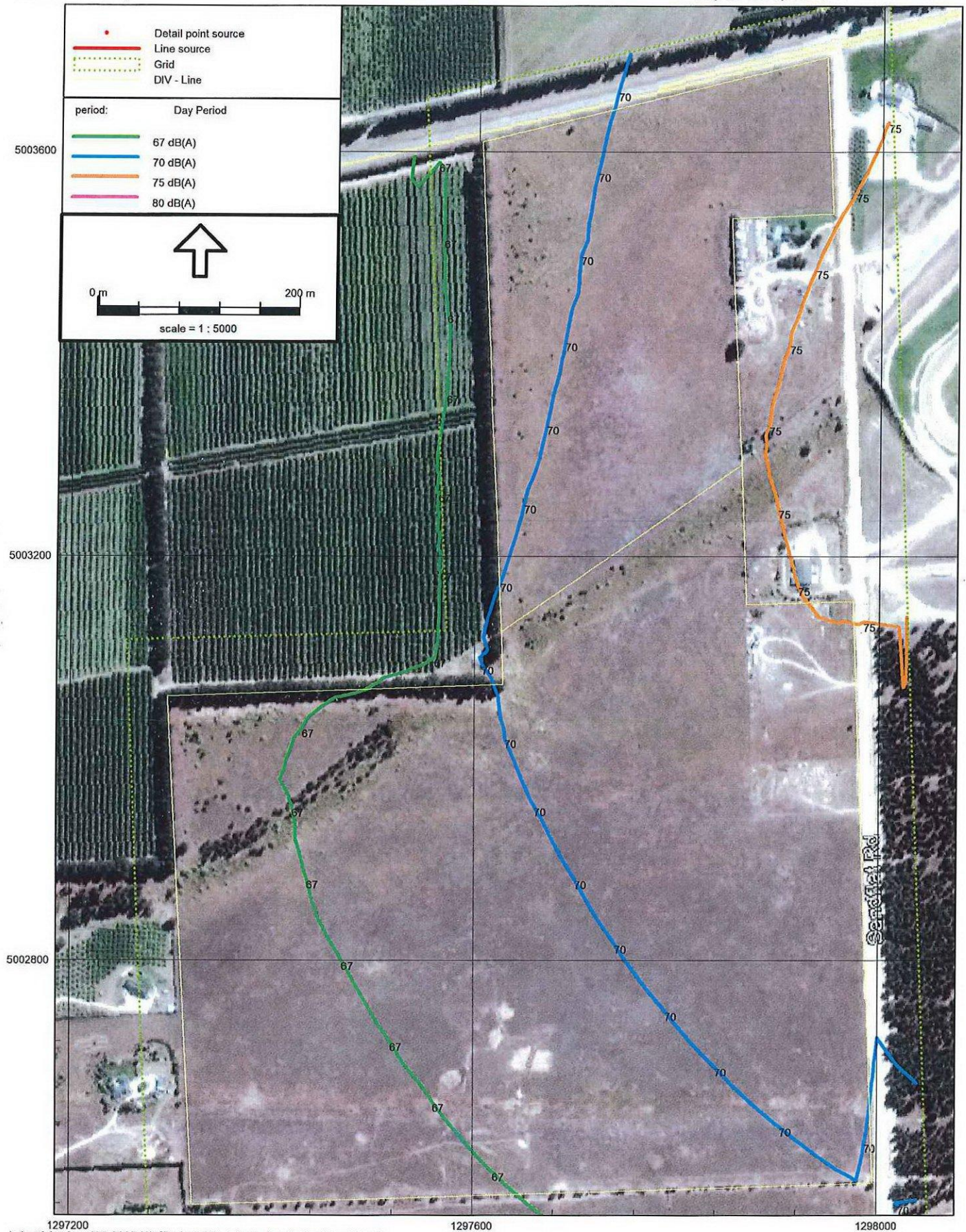
10. Appendix B: Brüel & Kjær Predictor Input Parameters

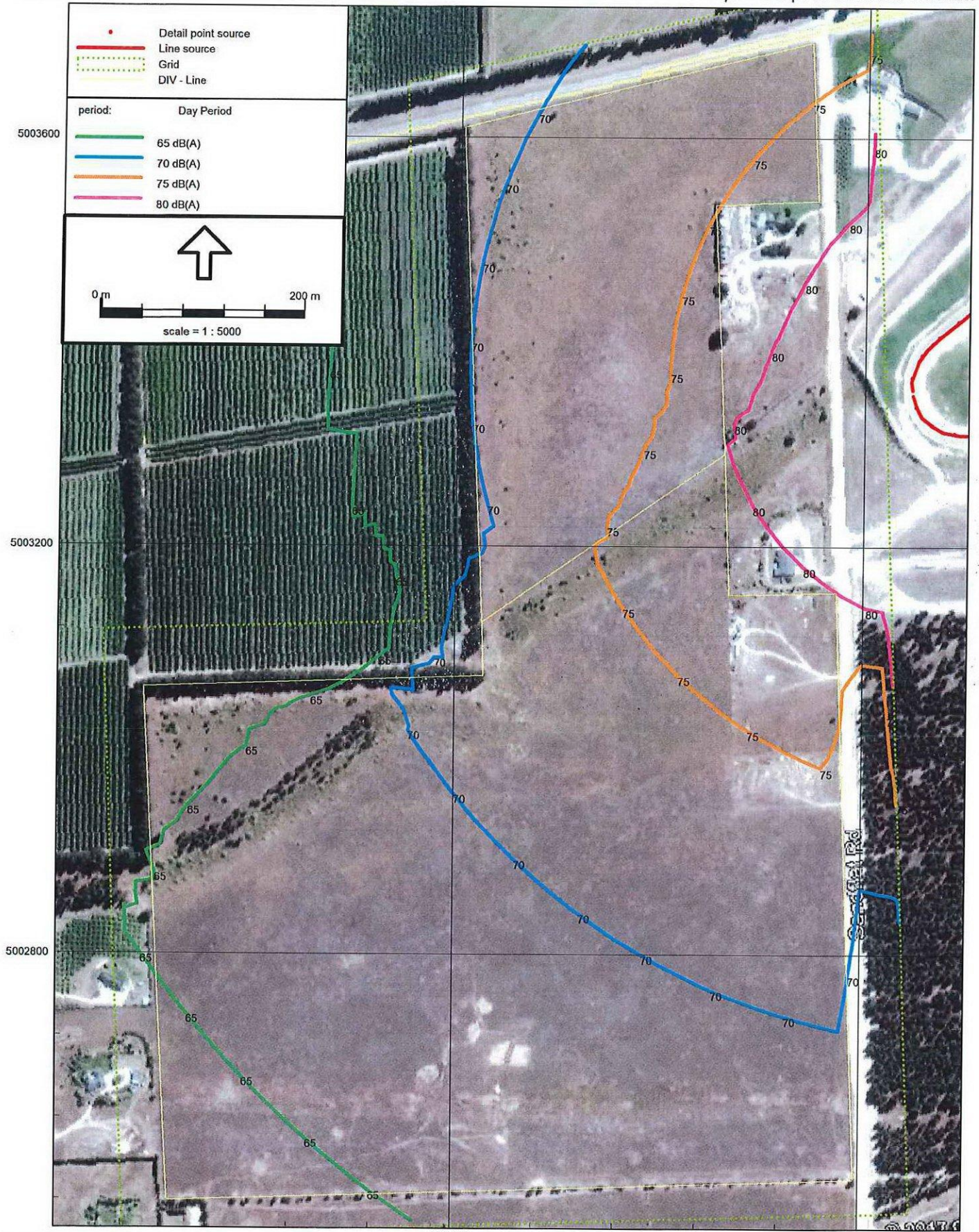
| Parameters / calculation settings | Details |
|-----------------------------------|---|
| Software | Brüel & Kjær Predictor |
| Calculation method | ISO 9613.1/2 |
| Calculation grid height | 1.5 m |
| Grid point spacing | 10 m x 10 m |
| Meteorological parameters | Single value, C0 = 0 |
| Ground attenuation | General method, ground factor 0.6 |
| Air temperature | 293.15 K |
| Atmospheric pressure | 101.33 kPa |
| Air humidity | 60 % |
| Air absorption (dB/km) | 31 Hz: 0.03, 63 Hz: 0.10, 125 Hz: 0.38, 250 Hz: 1.22, 500 Hz: 2.78, 1 kHz: 4.80, 2 kHz: 9.28, 4 kHz: 25.64, 8 kHz: 88.94. |
| Source heights (relative) | Motor Racing Vehicles 0.5 m Frost Fans Orchard – Rite 3000D 15m |
| Receiver heights (relative) | 1.5 m |
| Building heights (nominal) | Single level 5 m |

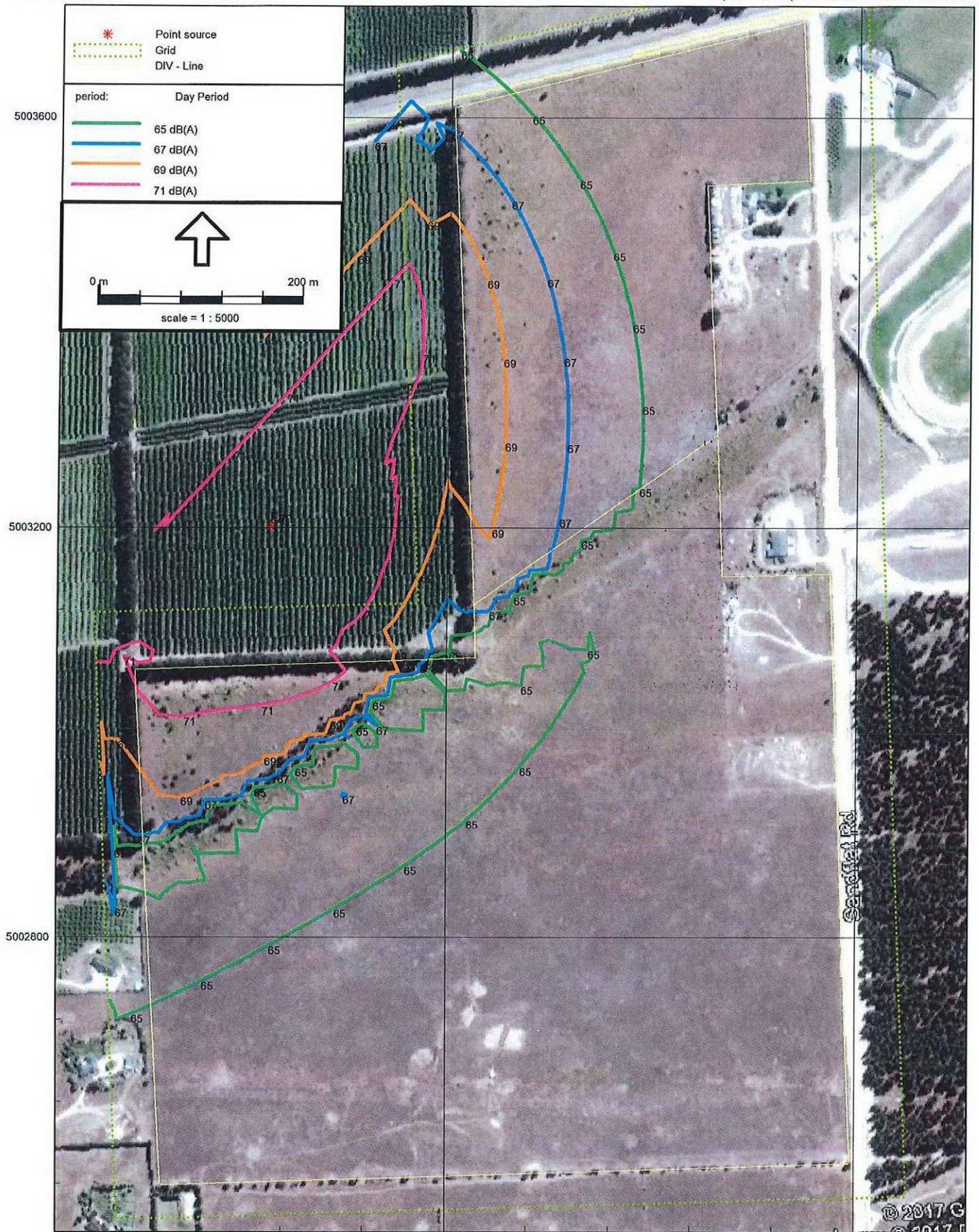
11. Appendix C: Noise Level Contours

Calibrated to compliance at 302 Kawarau Gorge Road



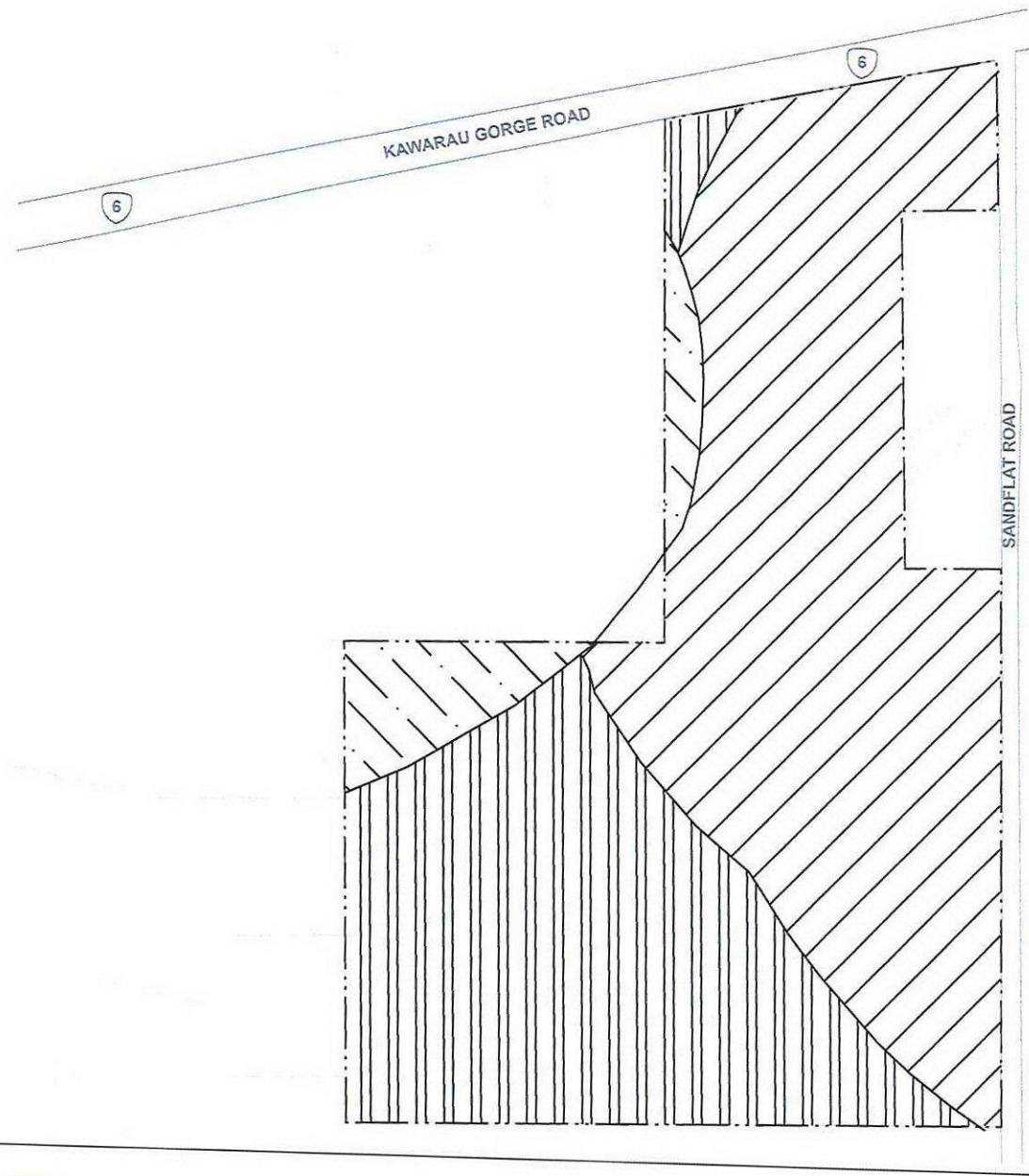




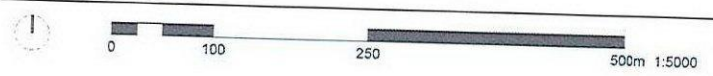


APPENDIX 2 – ACOUSTIC INSULATION PLAN

ACOUSTIC INSULATION PLAN



- RESOURCE AREA BOUNDARY
- ACOUSTIC INSULATION ZONE A
- ACOUSTIC INSULATION ZONE B
- ACOUSTIC INSULATION ZONE C



APPENDIX 2 – THREE DRAFT COVENANTS

MOTORSPORT COVENANT

Easement instrument to create land covenant

(Sections 90A and 90F Land Transfer Act 1952)

Grantor

River Terrace Developments Limited

Grantee

Cromwell Motorsport Park Trust Limited

Schedule A

| Purpose (Nature and extent) of covenant | Shown (plan reference) | Servient Tenement (Computer Register) | Dominant Tenement (Computer Register) |
|---|--|---|---|
| Land covenants (as set out in Schedule B) | All that land contained within the Servient Tenement | Part Section 24 and Section 28 Block 1 Cromwell Survey District CFR's OT16A/611 and OT7D/1155 | Lot 400 Deposited Plan 466637 CFR663001 |

Covenant provisions

The provisions applying to the specified covenants are those set out in Schedule B

MOTORSPORT COVENANT

Easement instrument to create land covenant

Schedule B

CONTINUATION OF COVENANT PROVISIONS

Background

- A. The Grantor is the registered proprietor of the relevant Servient Land.
- B. The Grantee is the registered proprietor of the relevant Dominant Land.
- C. The Grantee operates a motorsports facility on the Dominant Land which results in, and is likely to result in, noise, bright lights, disturbances and other usual incidences of motorsports activity which may have consequences beyond the boundaries of the Dominant Land, including upon the Servient Land. That motorsports activity is lawfully operated under the terms and conditions of a resource consent held by the Grantee.
- D. The Grantor proposes to carry out a residential development on the Servient Land which is adjacent to the Dominant Land. The Grantor has agreed to take steps to ensure that future residents and occupiers on the Servient Land are informed about the motorsports facility on the Dominant Land and will not complain about, or take any other steps to prevent, the operation of the motorsports facility on the Dominant Land.
- E. The Grantor and Grantee have agreed that the Servient Land will be subject to the Covenants for the benefit of the Dominant Land.

1. Interpretation

- 1.1 For the purposes of this Instrument:

Approved Activities means the development of a motorsports facility and the operation of motorsports activities as lawfully developed and operated in accordance with the terms and conditions of the Resource Consent which apply as at the date of this Instrument.

Council means the Central Otago District Council.

Covenants means the covenants set out in this Instrument.

Dominant Land means all or any part of the land contained or formerly contained in the dominant tenements set out in Schedule A of this Instrument.

Grantee means the registered proprietor of the Dominant Land from time to time together with its lessees, occupiers or invitees carrying out Approved Activities on the Dominant Land.

Grantor means the registered proprietor of the Servient Land from time to time together with its lessees, occupiers or invitees on the Servient Land.

Instrument means the front pages of this Instrument together with all Schedules attached to it.

MOTORSPORT COVENANT

Easement instrument to create land covenant

Relevant Authority means any court, tribunal, government, local, statutory or non-statutory body, including the Council, having jurisdiction over the land referred to in this Instrument.

Resource Consent means resource consent number 070149 issued by the Council, as finally confirmed by the Environment Court in Decision C132/2009 dated 23 December 2009, authorising the development and operation of the Approved Activities, including and subject to any variations to that consent granted by the Council prior to the date of this Instrument.

RMA means the Resource Management Act 1991.

Servient Land means all or any part of the land contained or formerly contained in the servient tenements set out in Schedule A of this Instrument.

- 1.2 For the avoidance of doubt:
- a. words importing the singular number include the plural and vice versa.
 - b. references to the parties are references to the Grantor and the Grantee.
 - c. a covenant to do something is also a covenant to permit or cause that thing to be done and a covenant not to do something is also a covenant not to permit or cause that thing to be done.
 - d. this Instrument binds the Grantors and their heirs, executors, successors and assigns in perpetuity and also any lessee, occupier or invitee of or on the Servient Land.
 - e. this Instrument benefits the Grantees and their heirs, executors, successors and assigns in perpetuity.
 - f. a reference to a statute, regulation or by-law includes all statutes, regulations, or by-laws varying, consolidating or replacing them, and a reference to a statute includes all regulations or by-laws issued under that statute.

2. General Covenants

- 2.1 The Grantor covenants and agrees:
- a. to observe and perform all the Covenants at all times.
 - b. that the Covenants shall run with and bind the Servient Land for the benefit of the Dominant Land.
 - c. to do all things necessary to ensure that any invitees of the Grantor on the Servient Land and any mortgagees, lessees or occupiers of the Servient Land comply with the provisions of this Instrument.
 - d. to pay the Grantee's legal costs (as between solicitor and client) of and incidental to the enforcement or attempted enforcement of the Grantee's rights, remedies and powers under this Instrument.

MOTORSPORT COVENANT

Easement instrument to create land covenant

- e. to indemnify the Grantee against all claims and proceedings arising out of a breach by the Grantor of any of its obligations set out in this Instrument.

3. Covenants in Relation to Approved Activities

3.1 The Grantor covenants and agrees with the Grantee that the Grantor:

- a. acknowledges that the Grantee is entitled to carry out the Approved Activities on the Dominant Land in accordance with the Resource Consent.
- b. acknowledges that the Servient Land is in close proximity to the Dominant Land and that the Approved Activities necessarily involve noise, lights, disturbances and other usual incidences of motorsports activities which residents and occupiers on the Servient Land may find disturbing and inconvenient.
- c. shall not:
 - i. make or lodge; nor
 - ii. be party to, procure, assist or support; nor
 - iii. finance or contribute to the cost of,

any submission, application or proceeding (under the RMA or otherwise), to or with the Council or any Relevant Authority, designed or intended to or having the effect of limiting the Grantee's conducting or implementation of Approved Activities on the Dominant Land.
- d. shall include a provision in all leases, contracts or other written documents enabling any use or occupation of any building on the Servient Land in the same form as (c) above, to bind all third party lessees, licensees, occupiers or visitors.
- e. take steps to enforce any provision referred to in (d) above against any person or entity acting in breach of such provision, if the Grantee requests the Grantor to take such steps.
- f. acknowledges generally that the Grantee is entitled to carry out Approved Activities as lawfully authorised by the Resource Consent without having to respond in any way to any complaint or objection by any Grantor in relation to the lawful operation of the Approved Activities.

4. Vesting of Roads or Reserve

4.1 The Grantee:

- a. consents to the deposit or registration of any survey plan by a Grantor which has the effect of vesting or dedicating all or any part of a Servient Land as any road or reserve in any local authority, territorial authority or the Crown (such plan referred to as **Survey Plan**).

MOTORSPORT COVENANT

Easement instrument to create land covenant

- b. agrees that the covenants in this Instrument shall cease to apply in respect of any land to vest or dedicate upon such Survey Plan immediately prior to the date of lodgement with Land Information New Zealand of such Survey Plan for deposit or registration.
 - c. agrees that this clause will be deemed to be the written consent of the Grantee to the deposit or registration of any Survey Plan (including under section 224(b)(i) RMA).
 - d. will, at its cost, on a Grantor's request, immediately:
 - i. give any additional written consent as required by a Grantor to deposit or register any Survey Plan.
 - ii. sign all documents (including Authority and Instruction Forms) and do all things reasonably required to register a surrender of this Instrument in respect of any land to vest or dedicate upon the deposit or registration of such Survey Plan (**Easement Surrender Instrument**).
 - iii. use reasonable endeavours to obtain any consents from any registered proprietor (**Encumbrancee**) of an encumbrance, mortgage or interest registered against the Dominant Land required to deposit or register any Survey Plan or to register the Easement Surrender Instrument.
- 4.2 Any caveator or registered proprietor of an encumbrance, mortgage or interest registered against the Dominant Land which is registered after the date of registration of this Instrument:
- a. will take its interest/s in the Dominant Land subject to the terms of this Instrument; and
 - b. will be deemed to have given its consent to the:
 - i. deposit or registration of any Survey Plan (including under section 224(b)(i) RMA); and
 - ii. registration of any Easement Surrender Instrument (including under the Land Transfer 1952).
- 4.3 Notwithstanding any other provision of this Instrument, the Grantee irrevocably appoints the Grantor or its successor in title as its attorney to:
- a. sign any consent necessary in the required form to deposit or register a Survey Plan;
 - b. sign all documents and do all things required to register an Easement Surrender Instrument; and
 - c. obtain all required Encumbrancees' consents to deposit a Survey Plan or register an Easement Surrender Instrument.

MOTORSPORT COVENANT

Easement instrument to create land covenant

No person dealing with the Grantor as the attorney in this capacity need inquire if the Grantor is validly exercising its powers as attorney under this clause 4.3.

5. **General**

- 5.1 Any notice required to be served on any party shall be in writing and served in accordance with the Property Law Act 2007.
- 5.2 Any failure by a party to enforce any clause of this Instrument, or any forbearance, delay or indulgence granted by that party to any other party, will not be construed as a waiver of the first party's rights under this Instrument.
- 5.3 The Grantor will not seek to have this Instrument removed from the title to the Servient Land due to any lack of proximity between the Servient Land and the Dominant Land.

6. **Liability**

- 6.1 Without prejudice to the Grantor's and Grantee's other rights, this Instrument binds the Grantor's successors in title so that contemporaneously with the acquisition of any interest in the Servient Land all such successors in title become bound to comply with this Instrument. However, the liability of any Grantor under this Instrument is limited to obligations and liabilities that accrue during that Grantor's time as registered proprietor of the Servient Land and only in respect of that part of the Servient Land owned by that Grantor. A Grantor will not be liable for any breach of this Instrument which occurs during any period prior to or after its term as registered proprietor of the Servient Land (however, for the avoidance of doubt, any Grantor shall remain liable for any such antecedent breach following the transfer of the Servient Land).

7. **Severability**

- 7.1 If any of the provisions of this Instrument are judged invalid, unlawful or unenforceable for any reason whatsoever by a Court of competent jurisdiction, such invalidity, unenforceability or illegality will not affect the operation, construction or interpretation of any other provision of this Instrument to the intent that the invalid, unenforceable or illegal provisions will be treated for all purposes as severed from this Instrument. In the event of any such severance the parties will use reasonable endeavours to negotiate with the intent that the Instrument shall achieve the economic, legal and commercial objectives of the unenforceable term, covenant or obligation.

ORCHARD COVENANT

Easement instrument to create land covenant

(Sections 90A and 90F Land Transfer Act 1952)

Grantor

River Terrace Developments Limited

Grantee

Alan Bevin McKay

Schedule A

| Purpose (Nature and extent) of covenant | Shown (plan reference) | Servient Tenement (Computer Register) | Dominant Tenement (Computer Register) |
|---|--|---|---|
| Land covenants (as set out in Schedule B) | All that land contained within the Servient Tenement | Part Section 24 and Section 28 Block 1 Cromwell Survey District CFR's OT16A/611 and OT7D/1155 | Lot 2 DP300152 and Sections 28-36 Sarita Subdivision CFR 1540 |

Covenant provisions

The provisions applying to the specified covenants are those set out in Schedule B

ORCHARD COVENANT

Easement instrument to create land covenant

Schedule B

CONTINUATION OF COVENANT PROVISIONS

Background

- A. The Grantor is the registered proprietor of the relevant Servient Land.
- B. The Grantee is the registered proprietor of the relevant Dominant Land.
- C. The Grantee operates an orchard on the Dominant Land which results in, and is likely to result in, noise disturbances and other usual incidences of orcharding activity which may have consequences beyond the boundaries of the Dominant Land, including upon the Servient Land. That orcharding activity is lawfully operated by the Grantee.
- D. The Grantor proposes to carry out a residential development on the Servient Land which is adjacent to the Dominant Land. The Grantor has agreed to take steps to ensure that future residents and occupiers on the Servient Land are informed about the orcharding activity on the Dominant Land and will not complain about, or take any other steps to prevent, the operation of the orcharding activity on the Dominant Land.
- E. The Grantor and Grantee have agreed that the Servient Land will be subject to the Covenants for the benefit of the Dominant Land.

1. Interpretation

- 1.1 For the purposes of this Instrument:

Approved Activities means the development of an orcharding activity and the operation of orcharding activities as lawfully developed and operated in accordance with the Central Otago District Plan and/or the terms and conditions of any resource consent (including any certificate of compliance) which apply as at the date of this Instrument.

Council means the Central Otago District Council.

Covenants means the covenants set out in this Instrument.

Dominant Land means all or any part of the land contained or formerly contained in the dominant tenements set out in Schedule A of this Instrument.

Grantee means the registered proprietor of the Dominant Land from time to time together with its lessees, occupiers or invitees carrying out Approved Activities on the Dominant Land.

Grantor means the registered proprietor of the Servient Land from time to time together with its lessees, occupiers or invitees on the Servient Land.

Instrument means the front pages of this Instrument together with all Schedules attached to it.

ORCHARD COVENANT

Easement instrument to create land covenant

Relevant Authority means any court, tribunal, government, local, statutory or non-statutory body, including the Council, having jurisdiction over the land referred to in this Instrument.

RMA means the Resource Management Act 1991.

Servient Land means all or any part of the land contained or formerly contained in the servient tenements set out in Schedule A of this Instrument.

1.2 For the avoidance of doubt:

- a. words importing the singular number include the plural and vice versa.
- b. references to the parties are references to the Grantor and the Grantee.
- c. a covenant to do something is also a covenant to permit or cause that thing to be done and a covenant not to do something is also a covenant not to permit or cause that thing to be done.
- d. this Instrument binds the Grantors and their heirs, executors, successors and assigns in perpetuity and also any lessee, occupier or invitee of or on the Servient Land.
- e. this Instrument benefits the Grantees and their heirs, executors, successors and assigns in perpetuity.
- f. a reference to a statute, regulation or by-law includes all statutes, regulations, or by-laws varying, consolidating or replacing them, and a reference to a statute includes all regulations or by-laws issued under that statute.

2. **General Covenants**

2.1 The Grantor covenants and agrees:

- a. to observe and perform all the Covenants at all times.
- b. that the Covenants shall run with and bind the Servient Land for the benefit of the Dominant Land.
- c. to do all things necessary to ensure that any invitees of the Grantor on the Servient Land and any mortgagees, lessees or occupiers of the Servient Land comply with the provisions of this Instrument.
- d. to pay the Grantee's legal costs (as between solicitor and client) of and incidental to the enforcement or attempted enforcement of the Grantee's rights, remedies and powers under this Instrument.
- e. to indemnify the Grantee against all claims and proceedings arising out of a breach by the Grantor of any of its obligations set out in this Instrument.

3. **Covenants in Relation to Approved Activities**

3.1 The Grantor covenants and agrees with the Grantee that the Grantor:

ORCHARD COVENANT

Easement instrument to create land covenant

- a. acknowledges that the Grantee is entitled to carry out the Approved Activities on the Dominant Land in accordance with the Resource Consent.
- b. acknowledges that the Servient Land is in close proximity to the Dominant Land and that the Approved Activities necessarily involve noise disturbances and other usual incidences of orcharding activities which residents and occupiers on the Servient Land may find disturbing and inconvenient.
- c. shall not:
 - i. make or lodge; nor
 - ii. be party to, procure, assist or support; nor
 - iii. finance or contribute to the cost of,

any submission, application or proceeding (under the RMA or otherwise), to or with the Council or any Relevant Authority, designed or intended to or having the effect of limiting the Grantee's conducting or implementation of Approved Activities on the Dominant Land.
- d. shall include a provision in all leases, contracts or other written documents enabling any use or occupation of any building on the Servient Land in the same form as (c) above, to bind all third party lessees, licensees, occupiers or visitors.
- e. take steps to enforce any provision referred to in (d) above against any person or entity acting in breach of such provision, if the Grantee requests the Grantor to take such steps.
- f. acknowledges generally that the Grantee is entitled to carry out Approved Activities without having to respond in any way to any complaint or objection by any Grantor in relation to the lawful operation of the Approved Activities.

4. Vesting of Roads or Reserve

4.1 The Grantee:

- a. consents to the deposit or registration of any survey plan by a Grantor which has the effect of vesting or dedicating all or any part of a Servient Land as any road or reserve in any local authority, territorial authority or the Crown (such plan referred to as **Survey Plan**).
- b. agrees that the covenants in this Instrument shall cease to apply in respect of any land to vest or dedicate upon such Survey Plan immediately prior to the date of lodgement with Land Information New Zealand of such Survey Plan for deposit or registration.
- c. agrees that this clause will be deemed to be the written consent of the Grantee to the deposit or registration of any Survey Plan (including under section 224(b)(i) RMA).

ORCHARD COVENANT

Easement instrument to create land covenant

- d. will, at its cost, on a Grantor's request, immediately:
 - i. give any additional written consent as required by a Grantor to deposit or register any Survey Plan.
 - ii. sign all documents (including Authority and Instruction Forms) and do all things reasonably required to register a surrender of this Instrument in respect of any land to vest or dedicate upon the deposit or registration of such Survey Plan (**Easement Surrender Instrument**).
 - iii. use reasonable endeavours to obtain any consents from any registered proprietor (**Encumbrancee**) of an encumbrance, mortgage or interest registered against the Dominant Land required to deposit or register any Survey Plan or to register the Easement Surrender Instrument.
- 4.2 Any caveator or registered proprietor of an encumbrance, mortgage or interest registered against the Dominant Land which is registered after the date of registration of this Instrument:
 - a. will take its interest/s in the Dominant Land subject to the terms of this Instrument; and
 - b. will be deemed to have given its consent to the:
 - i. deposit or registration of any Survey Plan (including under section 224(b)(i) RMA); and
 - ii. registration of any Easement Surrender Instrument (including under the Land Transfer 1952).
- 4.3 Notwithstanding any other provision of this Instrument, the Grantee irrevocably appoints the Grantor or its successor in title as its attorney to:
 - a. sign any consent necessary in the required form to deposit or register a Survey Plan;
 - b. sign all documents and do all things required to register an Easement Surrender Instrument; and
 - c. obtain all required Encumbrancees' consents to deposit a Survey Plan or register an Easement Surrender Instrument.

No person dealing with the Grantor as the attorney in this capacity need inquire if the Grantor is validly exercising its powers as attorney under this clause 4.3.

5. General

- 5.1 Any notice required to be served on any party shall be in writing and served in accordance with the Property Law Act 2007.

ORCHARD COVENANT

Easement instrument to create land covenant

- 5.2 Any failure by a party to enforce any clause of this Instrument, or any forbearance, delay or indulgence granted by that party to any other party, will not be construed as a waiver of the first party's rights under this Instrument.
- 5.3 The Grantor will not seek to have this Instrument removed from the title to the Servient Land due to any lack of proximity between the Servient Land and the Dominant Land.
6. **Liability**
- 6.1 Without prejudice to the Grantor's and Grantee's other rights, this Instrument binds the Grantor's successors in title so that contemporaneously with the acquisition of any interest in the Servient Land all such successors in title become bound to comply with this Instrument. However, the liability of any Grantor under this Instrument is limited to obligations and liabilities that accrue during that Grantor's time as registered proprietor of the Servient Land and only in respect of that part of the Servient Land owned by that Grantor. A Grantor will not be liable for any breach of this Instrument which occurs during any period prior to or after its term as registered proprietor of the Servient Land (however, for the avoidance of doubt, any Grantor shall remain liable for any such antecedent breach following the transfer of the Servient Land).
7. **Severability**
- 7.1 If any of the provisions of this Instrument are judged invalid, unlawful or unenforceable for any reason whatsoever by a Court of competent jurisdiction, such invalidity, unenforceability or illegality will not affect the operation, construction or interpretation of any other provision of this Instrument to the intent that the invalid, unenforceable or illegal provisions will be treated for all purposes as severed from this Instrument. In the event of any such severance the parties will use reasonable endeavours to negotiate with the intent that the Instrument shall achieve the economic, legal and commercial objectives of the unenforceable term, covenant or obligation.

SPEEDWAY COVENANT

Easement instrument to create land covenant

(Sections 90A and 90F Land Transfer Act 1952)

Grantor

River Terrace Developments Limited

Grantee

Central Otago District Council

Schedule A

| Purpose (Nature and extent) of covenant | Shown (plan reference) | Servient Tenement (Computer Register) | Dominant Tenement (Computer Register) |
|---|--|---|---------------------------------------|
| Land covenants (as set out in Schedule B) | All that land contained within the Servient Tenement | Part Section 24 and Section 28 Block 1 Cromwell Survey District CFR's OT16A/611 and OT7D/1155 | Lot 1 Deposited Plan 403966 CFR413533 |

Covenant provisions

The provisions applying to the specified covenants are those set out in Schedule B

Easement instrument to create land covenant

Schedule B

CONTINUATION OF COVENANT PROVISIONS

Background

- A. The Grantor is the registered proprietor of the relevant Servient Land.
- B. The Grantee is the registered proprietor of the relevant Dominant Land.
- C. The Grantee operates a motorsports facility on the Dominant Land which results in, and is likely to result in, noise, bright lights, disturbances and other usual incidences of motorsports activity which may have consequences beyond the boundaries of the Dominant Land, including upon the Servient Land. That motorsports activity is lawfully operated under the terms and conditions of a resource consent held by the Grantee.
- D. The Grantor proposes to carry out a residential development on the Servient Land which is adjacent to the Dominant Land. The Grantor has agreed to take steps to ensure that future residents and occupiers on the Servient Land are informed about the motorsports facility on the Dominant Land and will not complain about, or take any other steps to prevent, the operation of the motorsports facility on the Dominant Land.
- E. The Grantor and Grantee have agreed that the Servient Land will be subject to the Covenants for the benefit of the Dominant Land.

1. Interpretation

- 1.1 For the purposes of this Instrument:

Approved Activities means the development of a speedway and stock car track and ancillary buildings and facilities and the operation of speedway and stock car activities as lawfully developed and operated in accordance with the terms and conditions of the Resource Consent which apply as at the date of this Instrument.

Council means the Central Otago District Council.

Covenants means the covenants set out in this Instrument.

Dominant Land means all or any part of the land contained or formerly contained in the dominant tenements set out in Schedule A of this Instrument.

Grantee means the registered proprietor of the Dominant Land from time to time together with its lessees, occupiers or invitees carrying out Approved Activities on the Dominant Land.

Grantor means the registered proprietor of the Servient Land from time to time together with its lessees, occupiers or invitees on the Servient Land.

Instrument means the front pages of this Instrument together with all Schedules attached to it.

SPEEDWAY COVENANT

Easement instrument to create land covenant

Relevant Authority means any court, tribunal, government, local, statutory or non-statutory body, including the Council, having jurisdiction over the land referred to in this Instrument.

Resource Consent means the Conditional Use Consent dated 29 September 1980 granted under s72 Town and Country Planning Act 1977 by the (former) Vincent County Council, authorising the development and operation of the Approved Activities, including and subject to any variations to that consent granted by the Council prior to the date of this Instrument.

RMA means the Resource Management Act 1991.

Servient Land means all or any part of the land contained or formerly contained in the servient tenements set out in Schedule A of this Instrument.

1.2 For the avoidance of doubt:

- a. words importing the singular number include the plural and vice versa.
- b. references to the parties are references to the Grantor and the Grantee.
- c. a covenant to do something is also a covenant to permit or cause that thing to be done and a covenant not to do something is also a covenant not to permit or cause that thing to be done.
- d. this Instrument binds the Grantors and their heirs, executors, successors and assigns in perpetuity and also any lessee, occupier or invitee of or on the Servient Land.
- e. this Instrument benefits the Grantees and their heirs, executors, successors and assigns in perpetuity.
- f. a reference to a statute, regulation or by-law includes all statutes, regulations, or by-laws varying, consolidating or replacing them, and a reference to a statute includes all regulations or by-laws issued under that statute.

2. **General Covenants**

2.1 The Grantor covenants and agrees:

- a. to observe and perform all the Covenants at all times.
- b. that the Covenants shall run with and bind the Servient Land for the benefit of the Dominant Land.
- c. to do all things necessary to ensure that any invitees of the Grantor on the Servient Land and any mortgagees, lessees or occupiers of the Servient Land comply with the provisions of this Instrument.
- d. to pay the Grantee's legal costs (as between solicitor and client) of and incidental to the enforcement or attempted enforcement of the Grantee's rights, remedies and powers under this Instrument.

SPEEDWAY COVENANT

Easement instrument to create land covenant

- e. to indemnify the Grantee against all claims and proceedings arising out of a breach by the Grantor of any of its obligations set out in this Instrument.

3. Covenants in Relation to Approved Activities

3.1 The Grantor covenants and agrees with the Grantee that the Grantor:

- a. acknowledges that the Grantee is entitled to carry out the Approved Activities on the Dominant Land in accordance with the Resource Consent.
- b. acknowledges that the Servient Land is in close proximity to the Dominant Land and that the Approved Activities necessarily involve noise, lights, disturbances and other usual incidences of motorsports activities which residents and occupiers on the Servient Land may find disturbing and inconvenient.
- c. shall not:
 - i. make or lodge; nor
 - ii. be party to, procure, assist or support; nor
 - iii. finance or contribute to the cost of,

any submission, application or proceeding (under the RMA or otherwise), to or with the Council or any Relevant Authority, designed or intended to or having the effect of limiting the Grantee's conducting or implementation of Approved Activities on the Dominant Land.
- d. shall include a provision in all leases, contracts or other written documents enabling any use or occupation of any building on the Servient Land in the same form as (c) above, to bind all third party lessees, licensees, occupiers or visitors.
- e. take steps to enforce any provision referred to in (d) above against any person or entity acting in breach of such provision, if the Grantee requests the Grantor to take such steps.
- f. acknowledges generally that the Grantee is entitled to carry out Approved Activities as lawfully authorised by the Resource Consent without having to respond in any way to any complaint or objection by any Grantor in relation to the lawful operation of the Approved Activities.

4. Vesting of Roads or Reserve

4.1 The Grantee:

- a. consents to the deposit or registration of any survey plan by a Grantor which has the effect of vesting or dedicating all or any part of a Servient Land as any road or reserve in any local authority, territorial authority or the Crown (such plan referred to as **Survey Plan**).

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- b. agrees that the covenants in this Instrument shall cease to apply in respect of any land to vest or dedicate upon such Survey Plan immediately prior to the date of lodgement with Land Information New Zealand of such Survey Plan for deposit or registration.
 - c. agrees that this clause will be deemed to be the written consent of the Grantee to the deposit or registration of any Survey Plan (including under section 224(b)(i) RMA).
 - d. will, at its cost, on a Grantor's request, immediately:
 - i. give any additional written consent as required by a Grantor to deposit or register any Survey Plan.
 - ii. sign all documents (including Authority and Instruction Forms) and do all things reasonably required to register a surrender of this Instrument in respect of any land to vest or dedicate upon the deposit or registration of such Survey Plan (**Easement Surrender Instrument**).
 - iii. use reasonable endeavours to obtain any consents from any registered proprietor (**Encumbrancee**) of an encumbrance, mortgage or interest registered against the Dominant Land required to deposit or register any Survey Plan or to register the Easement Surrender Instrument.
- 4.2 Any caveator or registered proprietor of an encumbrance, mortgage or interest registered against the Dominant Land which is registered after the date of registration of this Instrument:
- a. will take its interest/s in the Dominant Land subject to the terms of this Instrument; and
 - b. will be deemed to have given its consent to the:
 - i. deposit or registration of any Survey Plan (including under section 224(b)(i) RMA); and
 - ii. registration of any Easement Surrender Instrument (including under the Land Transfer 1952).
- 4.3 Notwithstanding any other provision of this Instrument, the Grantee irrevocably appoints the Grantor or its successor in title as its attorney to:
- a. sign any consent necessary in the required form to deposit or register a Survey Plan;
 - b. sign all documents and do all things required to register an Easement Surrender Instrument; and
 - c. obtain all required Encumbrancees' consents to deposit a Survey Plan or register an Easement Surrender Instrument.

SPEEDWAY COVENANT

Easement instrument to create land covenant

No person dealing with the Grantor as the attorney in this capacity need inquire if the Grantor is validly exercising its powers as attorney under this clause 4.3.

5. **General**

- 5.1 Any notice required to be served on any party shall be in writing and served in accordance with the Property Law Act 2007.
- 5.2 Any failure by a party to enforce any clause of this Instrument, or any forbearance, delay or indulgence granted by that party to any other party, will not be construed as a waiver of the first party's rights under this Instrument.
- 5.3 The Grantor will not seek to have this Instrument removed from the title to the Servient Land due to any lack of proximity between the Servient Land and the Dominant Land.

6. **Liability**

- 6.1 Without prejudice to the Grantor's and Grantee's other rights, this Instrument binds the Grantor's successors in title so that contemporaneously with the acquisition of any interest in the Servient Land all such successors in title become bound to comply with this Instrument. However, the liability of any Grantor under this Instrument is limited to obligations and liabilities that accrue during that Grantor's time as registered proprietor of the Servient Land and only in respect of that part of the Servient Land owned by that Grantor. A Grantor will not be liable for any breach of this Instrument which occurs during any period prior to or after its term as registered proprietor of the Servient Land (however, for the avoidance of doubt, any Grantor shall remain liable for any such antecedent breach following the transfer of the Servient Land).

7. **Severability**

- 7.1 If any of the provisions of this Instrument are judged invalid, unlawful or unenforceable for any reason whatsoever by a Court of competent jurisdiction, such invalidity, unenforceability or illegality will not affect the operation, construction or interpretation of any other provision of this Instrument to the intent that the invalid, unenforceable or illegal provisions will be treated for all purposes as severed from this Instrument. In the event of any such severance the parties will use reasonable endeavours to negotiate with the intent that the Instrument shall achieve the economic, legal and commercial objectives of the unenforceable term, covenant or obligation.

RESOURCE MANAGEMENT ACT 1991
FORM 5
SUBMISSION ON NOTIFIED PROPOSED PLAN CHANGE
TO CENTRAL OTAGO DISTRICT PLAN

Clause 6 of Schedule 1, Resource Management Act 1991

To: Central Otago District Council
PO Box 122
ALEXANDRA 9340

Name of Submitter: Mark William Hourigan
(Full name)

This is a submission on proposed Plan Change 13 to the Central Otago District Plan (the proposal).

I ~~could~~/could not* gain an advantage in trade competition through this submission.
(* Select one)

~~I am/am not* directly affected by an effect of the subject matter of the submission that-~~

~~(a) adversely affects the environment; and~~

~~(b) does not relate to trade competition or the effects of trade competition.~~

(Delete entire paragraph if you could not gain an advantage in trade competition through this submission)
(* Select One)

The specific provisions of the proposal that my submission relates to are:

The entire proposed plan change and the density of residential activity next to Highlands Motorsport Park

My submission is:

I am a regular visitor and club member to Highlands. Along with family and friends, we are also avid spectators of all events held there. I have seen the growth in visitor numbers attracted to this facility since its completion and are concerned this density development will have major on going effects to Highlands operations and attractions it offers. I believe development at this density will restrict Highlands ability to continue developing its tourist attractions which will also have a negative effect on the economic benefits it has proved to bring to Cromwell and Queenstown.

(Please include:

- whether you support or oppose the specific provisions or wish to have them amended; and
 - reasons for your views;
- and continue on additional page if necessary)

I seek the following decision from the local authority:


The proposed plan change is rejected.

(Please give precise details)

I ~~wish~~/do not wish to be heard in support of my submission.

(Please strike out as applicable)

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Please delete if you would not consider presenting a joint case)


.....

Signature of Submitter
(or person authorised to sign on behalf of submitter)
(A signature is not required if you make a submission by electronic means)

20/06/2018
.....
Date

Electronic address for service of submitter: hoolie@xtra.co.nz
.....

Telephone No: 021 427 603
.....

Postal Address: 1 Bloomfield Terrace
Lower Hutt 5010
.....
.....

Contact Person: Mark Hourigan
(name & designation, if applicable)

**SUBMISSIONS CLOSE IN RESPONSE TO PROPOSED PLAN CHANGE 13 ON
WEDNESDAY 20 JUNE 2018**

Note to person making submission

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991.

Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that a least 1 of the following applies to the submission (or part of the submission):

- it is frivolous or vexatious;
- it discloses no reasonable or relevant case;
- it would be an abuse of the hearing process to allow the submission (or the part) to be taken further;
- it contains offensive language;
- it is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.