

Whakatāne District Council District Plan Section 32 Evaluation

FOR:

Proposed Plan Change 6 to
Operative District Plan Chapter 11

ON:

Amendments to
Audible Bird Scaring Device Provisions

*Required under Section 35(2)(b) of the Resource Management Act 1991
07 July 2022*

Table of Contents

Plan Change 6 – Audible Bird Scaring Devices – s32 Report	4
1 Executive Summary	4
2 Introduction	4
3 Structure of Report	5
4 Consultation	6
4.1 Legislative Requirements (Schedule 1)	6
4.2 Pre-Notification Consultation with iwi authorities	7
5 Statutory Policy Context.....	8
5.1 Resource Management Act (RMA).....	8
5.2 Existing Use Rights.....	9
5.3 Section 32 requirements	9
5.4 Section 35 requirements	10
5.5 Section 74 requirements	11
5.6 New Zealand Standards.....	11
5.7 Operative District Plan Provisions for Audible Bird Scaring Devices.....	11
5.8 Review of other Council ABSD controls	13
6 Review of Sound.....	20
6.1 Types of Sound Measurements.....	20
6.2 Logarithmic Scale	20
7 Field Monitoring.....	21
7.1 Field Monitoring Communication	21
7.2 Field Monitoring Outcomes	22
8 Desktop Acoustic Modelling.....	27

8.1	Summary of desktop modelling results.....	27
8.2	Desktop modelling recommendations	30
9	Evaluation of Planning Options for ABSD Use.....	31
9.1	Planning Option 1 – Status Quo / Do Nothing	31
9.2	Planning Option 2 – Restricted Discretionary Activity Status for Impulsive ABSD Use	33
9.3	Planning Option 3 – Non-complying activity status for ABSD use	38
10	Preferred Option	40
11	Appendices	41
12	References.....	41

Plan Change 6 – Audible Bird Scaring Devices – s32 Report

1 Executive Summary

- 1.1** Whakatāne District Council (Council) has undertaken a review of the existing Audible Bird Scaring Device (ABSD) controls and the permitted operating sound levels due to community concerns. Community concerns raised related to excessive noise and the negative impact on the amenity of the rural environment. Following community complaints, Council investigated and found an issue exists.
- 1.2** A review of other Councils' controls identified the Whakatāne District Plan (District Plan) controls are more permissive than other district plans. Site specific acoustic modelling and field monitoring were undertaken to determine a more appropriate level of sound control.
- 1.3** This plan change proposes to reduce the permitted sound level for ABSDs from 100dB L_{zpeak} to 85dB L_{cpeak} . ABSDs will still be a permitted activity providing they comply with the proposed reduced sound level of 85dB L_{cpeak} .
- 1.4** In instances where they exceed the proposed permitted sound level, they will be considered a Restricted Discretionary Activity and their use will be assessed against the restricted discretionary activity criteria.
- 1.5** This proposal will enable the Council to reduce the nuisance sound effects from ABSD use in the rural zone and manage the wider impact on adjoining zones.

2 Introduction

- 2.1** The purpose of this report is to consider a plan change to better manage the impacts of ABSDs on residents within the Whakatāne District.
- 2.2** Within the Whakatāne District, ABSDs are used predominantly by kiwifruit orchardists to deter birds during the budding period. Loss of buds, and in turn fruit, due to birds can be a significant issue. The District Plan permits the use of ABSDs where their use conforms with the permitted standards (see section 5.7 for planning provisions).
- 2.3** The Council has received noise complaints related to ABSDs use. While ABSDs are used for a relatively short period of the year, the intensity of their use can create a noise nuisance for local residents and businesses.
- 2.4** On 23 October 2020, Council received a petition from residents concerned with the use of ABSDs, the frequency of use and the emitted sound levels. The petition requested Council review the existing planning rules and consider promoting alternative management of bird pests, specifically within local kiwifruit orchards.

2.5 In response to this petition, the Strategy and Policy Committee at the 1 April 2021 meeting resolved to:

- advocate on behalf of the community for alternative bird scaring options,
- undertake monitoring, under section 35 of the Resource Management Act (RMA) of ABSD use, and determine whether there is a compliance issue with the District Plan noise rules, and
- work towards a District Plan change.

2.6 A monitoring programme was undertaken in September 2021 (see section 7 for details) to understand the level of compliance with the existing rule and the nuisance noise impact on the receiving environment and residents. This data informs Plan Change 6 (PC6).

2.7 PC6 proposes a number of changes to the District Plan, specifically:

a) Changes relating to **impulsive** ABSDs:

- Reduce the permitted noise level from 100dB L_{zpeak} to 85dB L_{cpeak} ;
- Introduce a reference to a site boundary in any residential zone;
- Introduce restricted discretionary activity criteria for any device that exceeds the new noise level of 85dB L_{cpeak} ;
- Reduce the permitted hours of use;
- Reduce the frequency of use;
- Introduce the need for an acoustic report to identify the 85dB L_{cpeak} noise contour for the purposes of identifying affected parties as part of a resource consent application;
- Introduce restrictions of use to a time of the year;
- Introduce restrictions relating to exclusion zones from device use; and
- Introduce an assessment of impacts on significant indigenous biodiversity sites.

b) Changes relating to **non-impulsive** ABSDs:

- Clarification of non-impulsive audible bird scaring device rules;
- Introduced time and acoustic sound limits for use from 7:00am – 10:00pm and 10:00pm to 7:00am; and
- Reduce the permitted noise level from 50dBA to 40dB LAeq and 70dB LAm_{ax} (from 10:00pm – 7:00am).

c) Changes relating to key **overarching** rules:

- Clarification of existing use rights; and
- Clarify the relationship of general information requirements between Chapter 3 and Chapter 11.

3 Structure of Report

3.1 This Section 32 (S32) report has been prepared for PC6 and identifies and reviews:

- a. statutory context and framework,
- b. other district plan documents rules,
- c. monitoring and modelling assessment, and

d. proposed amendments to the District Plan.

3.1.1 This report provides an analysis of the policy response proposed by the change as required by s32 of the Resource Management Act (RMA), using the following sections:

- a) An overview of the applicable Statutory Policy Context.
- b) A description of the Resource Management Issue being addressed by the proposal.
- c) An assessment of the scale and significance of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposal.
- d) An Evaluation against s32 of the RMA, including
 - Whether the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA (Section 32(1)(a)).
 - Whether the provisions (policies and methods) are the most appropriate way to achieve the objectives of the proposal (Section 32(1)(b)), including:
 - i) identifying other reasonably practicable options for achieving the objectives;
 - ii) assessing the efficiency and effectiveness of the provisions in achieving the objectives, including consideration of the risk of acting or not acting; and
 - iii) summarising the reasons for deciding on the provisions.

4 Consultation

4.1 Legislative Requirements (Schedule 1)

4.1.1 Clause 3(1) of Schedule 1 of the RMA requires the Council to consult the following during the preparation of a proposed plan:

- a) The Minister for the Environment;
- b) Other Ministers of the Crown who may be affected;
- c) Local authorities who may be affected;
- d) Tangata Whenua of the area who may be affected (through iwi authorities); and
- e) Any customary marine title group in the area.

4.1.2 The Minister for the Environment has been advised of PC6 and feedback has been sought. No issues or concerns related to PC6 were raised by MfE.

4.1.3 No other Ministers of the Crown or customary marine title group are considered affected by the proposed plan change. However, should subsequent concerns be raised, Council can address these through the formal notification process.

4.1.4 The Bay of Plenty Regional Council¹ were advised of proposed PC6. The BOPRC Environmental Policy and Planning Team advised they have no comment as no airborne contaminants are involved.

¹ 24 February 2022, email sent to BOPRC.

4.1.5 Council identified the New Zealand Kiwifruit Growers Incorporated (NZKGI) and the Eastern Bay of Plenty branch of Forest and Bird (EBOPF&B) as parties interested in proposed PC6. Their input was sought, and the following feedback received:

- NZKGI² recognised that the District Plan noise limit is permissive compared to other districts and supported the review and (in theory) a possible reduction of the relevant noise limit.
- EBOPF&B³ advised they had no position on proposed PC6 and were unlikely to make a submission.

4.1.6 During the ABSD baseline monitoring for PC6, Council engaged with orchard owners, residents within 500 metres of an orchard and the general public (see section 7.2 below). This information continues to be publicly available via Council's website⁴. In addition, published articles and letters to the editor in the Beacon⁵ provided the wider community with updates. Community concerns generally supported limiting ABSD use or the status quo.

4.2 Pre-Notification Consultation with iwi authorities

4.2.1 Under Clause 3B of Schedule 1, with respect to Tangata Whenua, the Council is treated as having consulted iwi authorities if it:

- (a) considers ways in which it may foster the development of their capacity to respond to an invitation to consult; and*
- (b) establishes and maintains processes to provide opportunities for those iwi authorities to consult it; and*
- (c) consults with those iwi authorities; and*
- (d) enables those iwi authorities to identify resource management issues of concern to them; and*
- (e) indicates how those issues have been or are to be addressed.*

4.2.2 Te Puni Kōkiri recognises that the following iwi are connected to the Whakatāne District:

- Ngāti Awa
- Ngāti Mākino
- Ngāti Manawa
- Ngāti Rangitahi
- Ngāti Tūwharetoa (Bay of Plenty)
- Ngāti Whare
- Tūhoe.

4.2.3 Council has contacted tangata whenua (above) regarding the intention of PC6. No issues or concerns were raised by iwi relating to proposed PC6.

² 10 February 2022, phone conversation between BOP representative and Council Officer

³ 24 February 2022, phone conversation between EBOP branch representative and Council Officer

⁴ www.whakatane.govt.nz/absd

⁵ Beacon article dates 7 and 16 April 2021; 24 September 2021; 1, 6 and 13 October 2021. RNZ published a story based on the Beacon articles on 12 October 2021. Bay of Plenty Times published a story based on the Beacon articles on 14 October 2021.

5 Statutory Policy Context

The relevant sections of the RMA, District Plan and other legislation and guidance documentation are discussed below:

5.1 Resource Management Act (RMA)

5.1.1 Section 5 sets out the purpose of the RMA, which requires an integrated planning approach and direction to promote the sustainable management of natural and physical resources. Guidance as to how the overall sustainable management purpose is to be achieved is provided in the other sections, including sections 6, 7 and 8 of Part 2 of the RMA:

5 Purpose (emphasis added)

- 1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- 2) *In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, **which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—***
 - a) *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
 - b) *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
 - c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

5.1.2 The overarching purpose of the RMA (section 5(1)) is to promote sustainable management of natural and physical resources. “Sustainable management” amongst other things, means to ‘avoid, remedy or mitigate any adverse effects of activities on the environment’. Managing noise from ABSD use falls within Council’s function of managing adverse effects on the environment.

5.1.3 The assessment contained within this report considers PC6 provisions in the context of promoting the purpose of the RMA, to achieve sustainable management.

5.1.4 Section 16 (noise) in Part 3 (“Duties and restrictions”) of the RMA relates to the ‘duty to avoid unreasonable noise’. It imposes a general duty on all occupiers of land to control the emission of noise from that land. Section 16(1) imposes a duty on every occupier of land and user of the coastal marine area, to ensure that noise levels are kept at a reasonable level by adopting the best practicable option, as defined in Section 2 (purpose and principles) of the RMA.

5.1.5 In relation to an ‘emission of noise’, the term “best practicable option” as defined in section 2(1) of the RMA, “means the best method for preventing or minimising the adverse effects on the environment having regard (among other things) to:

- (a) the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and*
- (b) the financial implications, and the effects on the environment, of that option when compared with other options; and*
- (c) the current state of technical knowledge and the likelihood that the option can be successfully applied.”*

- 5.1.6** Section 9 (Restrictions on use of land) of the RMA, recognises that no person may use land in a manner that contravenes a district rule unless the use is expressly allowed by a resource consent or an existing use right. This means a resource consent is only required for an activity that generates noise if required by a rule.
- 5.1.7** The District Plan permits ABSDs use that complies with the permitted planning controls. This approach is consistent with section 16 (Duty to avoid unreasonable noise) of the RMA, such that unreasonable noise is noise that exceeds the relevant rules. It is noted that even by complying with the District Plan noise controls, the duty in s16 of the RMA (unreasonable noise) may not necessarily be met. For example, an orchardist may still need to do more if the noise is unreasonable and a practicable option is available to reduce it.
- 5.1.8** Council is able to issue notices relating to excessive noise (Section 326 of the RMA), where “any noise that is under human control and unreasonably interferes with the peace, comfort and convenience of any person”. Such notices are more common in urban than in rural environments.

5.2 Existing Use Rights

- 5.2.1** Section 10 of the RMA addresses existing use rights for the use of land managed under a district plan. Under section 10(1)(a) of the RMA, land may be used in a manner that contravenes a rule in a district plan or proposed district plan (i.e. PC6) if:
1. The use was lawfully established before the rule became operative or the proposed plan change was notified; and
 2. The effects of the use are the ‘same or similar in character, intensity and scale to those which existed before the rule became operative or the proposed plan was notified’.
- 5.2.2** Section 10(2) of the RMA details that existing use rights do not apply when use has been discontinued for a continuous period of more than 12 months. Continuous seasonal use of an ABSD meets the threshold, but sporadic use of an ABSD does not.
- 5.2.3** Council recognises that existing use rights **will apply** where an ABSD is being used in compliance with the existing District Plan (2017) noise rules (rule 11.2.6) of 100dB L_{zpeak} at the notional boundary.
- 5.2.4** Council recognises it is the responsibility of the person using the land (i.e the orchardists) to demonstrate existing use rights apply. Therefore, ABSD use could continue at an existing orchard where it complies with both the District Plan (2017) rules (11.2.6) and s10 of the RMA.
- 5.2.5** If existing orchards cannot comply with the existing District Plan provisions and s10 of the RMA, existing use rights will not apply. Use of the ABSD would then be assessed against the proposed amendments detailed in PC6.

5.3 Section 32 requirements

- 5.3.1** The following identifies the relevant sections and clauses of the RMA as they relate to PC6.
- 5.3.2** Before a proposed plan change can be publicly notified the Council is required under s32 of the RMA to carry out an evaluation of alternatives, costs and benefits of the proposal. With regard to the Council’s assessment of the proposed PC6, s32 requires the following:

(1) *An evaluation report required under this Act must—*

- (a) *examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act; and*
 - (b) *examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by—*
 - (i) *identifying other reasonably practicable options for achieving the objectives; and*
 - (ii) *assessing the efficiency and effectiveness of the provisions in achieving the objectives; and*
 - (iii) *summarising the reasons for deciding on the provisions; and (c) contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.*
- (2) *An assessment under subsection (1)(b)(ii) must—*
- (a) *identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—*
 - (i) *economic growth that are anticipated to be provided or reduced; and*
 - (ii) *employment that are anticipated to be provided or reduced; and*
 - (b) *if practicable, quantify the benefits and costs referred to in paragraph (a); and*
 - (c) *assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.*
- (4A) *If the proposal is a proposed policy statement, plan, or change prepared in accordance with any of the processes provided for in Schedule 1, the evaluation report must—*
- (a) *summarise all advice concerning the proposal received from iwi authorities under the relevant provisions of Schedule 1; and*
 - (b) *summarise the response to the advice, including any provisions of the proposal that are intended to give effect to the advice.*

5.3.3 Subsection (3) which relates to a proposal (an amending proposal) that “will amend a standard, statement, regulation, plan, or change that is already proposed or that already exists” and (4) relating to a proposal that “will impose a greater prohibition or restriction on an activity to which a national environmental standard applies” are not relevant to PC6. Therefore, no assessments under these subsections are included within this S32 evaluation.

5.4 Section 35 requirements

5.4.1 Section 35 of the RMA specifies the duty to gather information, monitor and keep records. In particular s35(2)(b) requires every local authority to monitor the efficiency and effectiveness of policies, rules or other methods in its policy statement or plan for its region or district.

5.4.2 PC6 is proposed on the basis of:

- compliance (in terms of permitted activity status and complaints)
- District Plan efficiency and effectiveness

5.5 Section 74 requirements

5.5.1 In accordance with Section 74(2A) of the Act, Council must take into account any relevant planning document recognised by an iwi authority that has been lodged with Council. No iwi/hapū management plans lodged with Council raise any specific issues relevant to PC6.

5.6 New Zealand Standards

5.6.1 There are two New Zealand Standards (NZS) and one Australian/New Zealand Standards (AS/NZS) relevant to the assessment of noise.

5.6.2 NZS 6802:2008 sets out a procedure for the assessment of noise for compliance with noise limits and provides guidance for the setting of noise limits for consent conditions, rules or national environmental standards. NZS 6802:2008 provides guidance on how sound should be rated.

5.6.3 AS/NZS 2107:2016 provides recommended design sound levels for a range of building uses. The standard provides design criteria for conditions affecting the acoustic environment within occupied spaces. These guideline values are intended to ensure that building interiors remain healthy, comfortable and productive for the occupants and users.

5.6.4 NZS 6801:2008 defines basic quantities to be used for the description of sound in community environments and the procedures to enable consistent measurement of environmental sound for all conditions. These procedures are referenced by other Acoustic Standards (above). NZS 6801:2008 provides guidance for local authorities with responsibility for the control of noise within their districts and regions under the Resource Management Act 1991.

The District Plan noise controls have been developed in accordance with these standards and defer to the standards for recommended sound levels, assessment and technical information.

5.7 Operative District Plan Provisions for Audible Bird Scaring Devices

5.7.1 The District Plan identifies the need to manage environmental effects relating to ABSD noise such as the degree and scale of impacts, the health and safety of people and the interference with the amenity of the area.

5.7.2 An overview of the different types of sound and measurement is set out in **Section 6** below.

5.7.3 The District Plan defines ABSD as “a noise emitting device being used for the purpose of disturbing or scaring birds including a gas gun, avian distress alarm and firearm, when being used specifically for bird scaring”.

5.7.4 ABSDs are typically used in the rural zone. The need to sustain the productive potential of the rural zone for rural activities is supported in Objective Rur1 and Policy 2 in Chapter 7 of the District Plan. Objective Rur3 recognises the need to ensure development is located to enable communities to provide for their economic wellbeing and health and safety while mitigating adverse effects. Policies 1 and 3 of Objective Rur3 enable farming and horticultural land use activities while avoiding significant adverse effects.

5.7.5 ABSD use is managed through the General Provisions detailed in Chapter 11 of the District Plan. The main objective of this chapter aims to “maintain and enhance the health and safety of people and communities from nuisance effect and adverse effects on the environment” (Objective Gen1). Policy 1 seeks “to avoid, remedy or mitigate the adverse effects of intrusive noise, odour, glare of vibration”.

5.7.6 Rule 11.2.6.1 states ‘generic’ noise limits for all receiving zones such as residential, rural, mixed use, active reserve, cultural and industrial zones. Exceptions to rule 11.2.6.1 are detailed in rule 11.2.6.2 (below).

5.7.7 Rule 11.2.6.1 identifies a range of activities that are exempt from the ‘generic’ noise limits. Each exempt activity has individual and specified noise restrictions. These activities include temporary military training activities, prospecting, community events, Whakatāne Airport, Edgcombe Dairy Manufacturing site. ABSDs are also identified, with specified noise limits and controls applied.

5.7.8 Rule 11.2.6.2 (Table 11.2 for specific activity noise limits) recognises ABSDs are a permitted activity providing they comply with the following noise controls:

- hours of operation are from half an hour before sunrise to half an hour after sunset;
- maximum sound from a device is 100dB L_{zpeak} ⁶;
- devices can operate at a frequency of three events per minute with a limit of 12 individual events per hour;
- a notice advising of device operation is fixed to the road frontage of the orchard containing the details of the person responsible for its operation; and
- Variable noise devices (such as distress call) that are used over a short or variable time duration may not exceed 50dBA SEL⁷.

Refer to **Section 6** (below) for an overview of types of sound measurement.

5.7.9 Where the use of an ABSD does not comply with the permitted criteria in the District Plan, it becomes a Restricted Discretionary Activity. Council then requires a resource consent application be made in order to consider the activity, subsequent environmental effects and mitigation measures.

5.7.10 Chapter 3 of the District Plan details the general information requirements (Rule 3.5.4) relevant to ABSD use for inclusion in a resource consent application:

- Suitability of device with location against a manufacturing statement or assessed by a suitably qualified person;
- Other methods and alternative crop management options; and
- The proposed operating conditions and practices to help manage effects on the environment.

5.7.11 Further to the general provisions, Council specifically restricts its discretion for ABSD assessment in rule 11.4.5, to:

- alternatives and the best practicable options;
- noise level and effects on the people (or activities) who will experience the noise, along with any proposed mitigation;
- cumulative adverse noise effects from existing ABSD;
- frequency, timing and operating conditions when the device may operate; and
- the location of ABSD.

⁶ 100dB L_{zpeak} is the 100 decibel Z weighting peak sound pressure limit. ABSDs are measured in the L_{peak} level as this measurement responds better to short duration events such as gunshots. The Z weighting refers to the frequency weightings (A,C or Z) used in sound level meters. The correct weighting is given to ensure that the meter is similar to what is heard and Z weighting is often used for environmental noise.

⁷ SEL or Sound Exposure Level is the summation of A weighted sound energy at a location over its true duration. SEL sound measurement is able to measure the net impact of an entire event such as the nature of distress calls which can be long in duration. This can be compared to an average sound measure.

5.8 Review of other Council ABSD controls

5.8.1 In accordance with s.74(2)(c) of the RMA, Council has reviewed the plan change for consistency with the plans or proposed plans of adjacent territorial authorities. Refer to Table 1 for relevant objectives polices and rules of adjoining territorial authorities.

5.8.2 Adjoining territorial authorities (except Taupo District Council and Tauranga City Council) manage the use of ABSD's in communities, including:

- **Limiting sound** – the permitted noise baseline set by Opotiki (ODC), Gisborne (GDC) and Western Bay of Plenty (WBOPDC) District Councils are 65dB_{SEL}⁸. Whereas, Rotorua (RDC) and Wairoa (WDC) District Councils permitted baseline is 100L_{Zpeak} and 122dB_{Cpeak} respectively.
- **Activity status** – ABSD use is permitted by all councils where they comply with the permitted standards, otherwise the activity is generally a restricted discretionary activity.
- **Operation restrictions** – Hours of operation and / or the frequency of events are restricted by Councils. ODC and WDC are the only Councils which restrict use to periods when crops are at risk from bird damage.

5.8.3 Assessment of ABSD controls used by other Councils nationally has been restricted to those using 'peak' measurements, due to the accuracy for measuring pulse sounds. Refer to Table 2 for the summary of ABSD rules by Auckland, Waipa and Hastings Councils. For completeness Whakatāne, Rotorua and Wairoa provisions are also included.

5.8.4 In assessing ABSD controls used by Auckland, Waipa and Hastings Councils, compared to the District Plan controls, the following is noted:

- a) the permitted level of 100dB L_{Zpeak} is more permissive, as 85dB is predominantly used as the permitted level;
- b) the hours of operation are consistent;
- c) non compliance with the permitted controls is consistent with requiring a resource consent for either a restricted discretionary or discretionary activity resource consent.

5.8.5 Further controls used to manage the effects of ABSD use on the wider community include:

- a) clarifying ABSD events and 'cluster events';
- b) limiting devices permitted within a defined hectarage (specifically Waipa and Hastings);
- c) restricting use for when horticultural crops are at risk from bird damage;
- d) introducing buffer zones to restrict ABSD use close to noise sensitive activities, residential zones and roads.

Table 1: Summary adjoining Territorial Authority Audible Bird Scaring Rules

Council	Objectives and Policies	Rules
<p>Opotiki District Council</p>	<p>8. RURAL ZONE</p> <p>8.2.3 OBJECTIVE</p> <p>Avoid, remedy or mitigate adverse environmental effects of activities undertaken within the Rural Zone, while recognising and providing for rural production activities and their anticipated effects</p>	<p>8.3.3 RESTRICTED DISCRETIONARY ACTIVITIES</p> <p>8.3.3.1 The activities listed below may only be established after resource consent has been granted by Council. The Council may refuse consent or grant consent and impose conditions only in relation to the matters over which it has restricted its discretion in 8.5. The activities must comply with the Zone Standards in Section 8.6, unless otherwise stated.</p> <p>5. Audible bird scaring devices not complying with 8.6.6.1 (1))</p> <p>8.6 ZONE STANDARDS</p> <p>8.6.6.1 Noise</p> <p>4. An audible bird scaring device shall:</p> <ul style="list-style-type: none"> a. Be operated only from half an hour before sunrise to half an hour after sunset. b. Not exceed 65dB at any point within the notional boundary of any dwelling on another site in the Rural Zone or at any point within a Residential Zone (excluding any dwelling/s located on the same site as the device is being operated), unless the adjacent landowner has provided written approval to the activity and a copy has been provided to the Council. c. Only be operated when the horticultural crop is at risk from bird damage. d. Non-compliance shall be assessed as a Restricted Discretionary Activity

<p>Rotorua District Council</p>	<p>Objective Reverse sensitivity</p> <p>NOISE-O2</p> <p>Existing and permitted activities in the Central City, Rural and Industrial Zones are protected from noise reverse sensitivity.</p> <hr/> <p>Policy Appropriate noise environment</p> <p>NOISE-P5</p> <p>Exempt from the maximum permitted noise level requirements those activities which are an integral part of accepted management practices of activities associated with production land in rural areas (well drilling, audible bird scaring devices, frost fans) as well as other activities (in any zone) clearly of a temporary nature (e.g. Construction works, emergency back-up generators).</p>	<p>NOISE-S1 Noise generated and received within the same zone</p> <p>6. Rural Zones:</p> <p>c. Audible bird scaring devices</p> <ul style="list-style-type: none"> i. Noise from audible explosive bird scaring devices shall only be operated between sunrise and sunset, and shall not exceed 100 dB LZpeak, when measured at any point within the notional boundary to any dwelling in the Rural zone, or at any point within the site boundary of any residential-zoned site. ii. Discrete sound events of a bird scaring device including shots or audible sound shall not exceed 3 events within a 1 minute period and shall be limited to a total of 12 individual events per hour. iii. A legible notice is fixed to the road frontage of the property on which the device is being used, giving the name, address and telephone number of the person responsible for the operation of any such device(s).
<p>Gisborne District Council – Tairāwhiti Resource Management Plan</p>	<p>DD4.4.1 All Rural Zones Policies</p> <ol style="list-style-type: none"> 1. When preparing plans or considering applications for plan changes, resource consents or designations in all rural zones regard shall be given to the following general policy as well as any specific policy relating to the zone: <ul style="list-style-type: none"> i. any adverse effect that the activity may have on existing rural activities; i. whether covenants, buffer zones or separation distances between activities would assist in mitigating adverse environmental effects. 6. Any resource consent in the rural zone to operate a bird scaring device shall take into account the following: <ul style="list-style-type: none"> • whether there is an operational necessity to operate the bird scarer above the limits provided and, if so, whether: 	<p>Rule Table DD4.6.1A – All Rural Zones</p> <p>Permitted Activities</p> <p>Rule number: 4.6.1A(7)</p> <p>Rule: Operation of audible devices (excluding firearms) for the purposes of bird scaring between sunrise and sunset</p> <p>Status: Permitted</p> <p>Zone: All Rural zones</p> <p>Activity Standards; Matters of Control or Discretion</p> <p>Percussive or explosive devices</p> <ul style="list-style-type: none"> a) The maximum sound exposure level (SEL) of 65dBA as measured at any residential zone boundary or notional boundary of any rural dwelling is not exceeded; and

	<ul style="list-style-type: none"> i. there are adequate mitigation measures to ensure that there are no potential adverse health effects. These mitigation measures may include shielding of devices, selection of the most appropriate type or types of device, location and position of device/s; ii. use is made of protocols, codes of practice and industry guidelines; iii. amenity values of neighbours have been maintained; iv. consideration of the cumulative effects of the number of bird scarer devices being used within single landholdings and the potential for adverse health effects. 	<ul style="list-style-type: none"> b) Maximum number of events shall not exceed 6 events in any 60 minute period; and c) An event shall not exceed three shots within a one minute period. provided that: <ul style="list-style-type: none"> i. The limit on the maximum number of events may be waived if the written consent of all adjoining property owners and/or occupiers is obtained and submitted to the consent authority prior to the commencement of the activity. ii. Where any device is located more than 500m from the notional boundary of any rural dwelling, Rule DD4.6.1(7)b) and c) shall not apply. <p><u>Note:</u> All sound measurement for audible bird scaring devices is based on guidelines in the <i>NZ Standards NZS6801: 1999 Measurement of Environmental Sound</i>.</p> <p>Amplified signals, air horns or sirens</p> <ul style="list-style-type: none"> a) The maximum sound exposure level (SEL) of 65 dBA as measured at the boundary of any residential zone boundary or the notional boundary of any rural dwelling is not exceeded; and b) The maximum number of events shall not exceed 10 events per system in any 60 minute period and each event shall not exceed 20 seconds; and c) The number of devices shall not exceed one device per single landholding and all speakers for that one device shall be driven off the same control unit provided that additional devices may be installed where the ratio of all such devices does not exceed one device per 8 hectares per single landholding. provided that the limit on the maximum number of events and/or duration of each event may be waived if the written consent of all adjoining property owners and/or occupiers is obtained and submitted to the consent authority prior to the commencement of the activity. <p><u>Note:</u> All sound measurement for audible bird scaring devices is based on guidelines in the <i>NZ Standards NZS6801: 1999 Measurement of Environmental Sound</i>.</p>
--	--	--

	<p>DD4.4.4 Rural Lifestyle Policies</p> <p>When considering subdivision and land use consent, regard shall be given to the maintenance and enhancement of the character and amenity of the peri-urban environment.</p> <p>Principal reasons:</p> <ul style="list-style-type: none"> All rural zones 6: The policy is designed to ensure that the adverse effects of bird scarers are avoided, remedied or mitigated. This is consistent with sections 5, 7 and 16 of the Act. 	<p>Rule Table DD4.6.1A – All Rural Zones</p> <p>Discretionary Activities</p> <p>Rule number: 4.6.1A(26)</p> <p>Rule: Operation of audible devices (excluding firearms) for the purposes of bird scaring where the activity does not comply with rule DD4.6.1A(7).</p> <p>Status: Discretionary</p> <p>Zones: All Rural zones</p>
<p>Taupo District Council</p>	<p>No rules exist</p>	
<p>Tauranga City Council</p>	<p>No rules exist</p>	
<p>Wairoa District Council</p>		<p>Chapter 14: Conservation and Reserve Zone</p> <p>14.8 PERFORMANCE STANDARDS / CONDITIONS FOR PERMITTED ACTIVITIES</p> <p>NOISE</p> <p>14.8.2 Impulse noise resulting from use of small arms, explosives, explosives simulators or gas gun bird scarers shall not exceed 122dBC (peak).</p> <hr/> <p>Chapter 15: Coastal Zone</p> <p>15.8 PERFORMANCE STANDARDS / CONDITIONS FOR PERMITTED ACTIVITIES</p> <p>NOISE</p> <p>15.8.2 Impulse noise resulting from use of small arms, explosives, explosives simulators or gas gun bird scarers shall not exceed 122dBC (peak).</p> <hr/> <p>Chapter 16: Rural Zone</p> <p>16.8 PERFORMANCE STANDARDS / CONDITIONS FOR PERMITTED ACTIVITIES</p>

		<p>NOISE</p> <p>16.8.2 Impulse noise resulting from use of small arms, explosives, explosives simulators or gas gun bird scarers shall not exceed 122dBC (peak).</p>
<p>Western Bay of Plenty District Council</p>	<p>18. Rural</p> <p>18.1 Significant Issues</p> <p>4. Rural <i>farming</i> practices, including horticulture, can have effects which may influence the well-being of people living in close proximity to and who may be unfamiliar with the operational requirements of primary production which have effects which are to be anticipated and expected in the Rural Zone. These practices include spray drift, the use of agrichemicals, noise from frost fans, shading from shelterbelts, pumping of water for irrigation, bird scarers, general use of farm machinery both on and off farm, the harvesting of crops which may occur at various times including at night, the weekend and public holidays. These practices have the potential to create noise, dust and odour either of a temporary or intermittent nature beyond the boundary or the property concerned. These are legitimate <i>farming</i> practises which may nevertheless experience <i>reverse sensitivity</i> effects. Because these practices are an accepted and integral part of primary production they should not be unreasonably constrained by other activities.</p>	<p>4C.1.3.5 Audible Bird Scaring Devices – Performance Standard for Permitted Activity</p> <p>Audible bird scaring devices shall be a Permitted Activity subject to compliance with the following performance standards.</p> <p>An audible bird scaring device:</p> <ol style="list-style-type: none"> a. Shall only be operated from half an hour before sunrise to half an hour after sunset. b. Shall be set to operate at no greater frequency than 12 times in any period of one hour, that is 12 single discharges or four groups of three discharges. c. Shall not be operated for any continuous period exceeding two seconds. d. Shall only be operated when the horticultural crop is at risk from bird damage. e. Shall not exceed 65dB ASEL at the <i>notional boundary</i> of any Rural, Rural Residential, Future Urban or Lifestyle <i>dwelling</i> or at the boundary of any Residential Zone (excluding any <i>dwelling/s</i> located on the same site as the device is being operated). f. Where those persons who experience noise levels over 65dB ASEL as described in e. above, have provided written approval to <i>Council</i> then the activity shall be permitted. <p>Use of any audible bird scaring device not in compliance with the above performance standards shall fall to be considered as a Restricted Discretionary Activity.</p>

Table 2: Summary of Audible Bird Scaring Rules for Councils using L_{zpeak} ⁸

Council	dB noise limit	Notional boundary restrictions	Use / time limits	Discharge frequency	Buffer zones / restrictions	Exclusions	Non compliance with rule
Whakatane	100dB LZpeak	Notional boundary of 20m applies	1/2hr before sunrise to 1/2hr after sunset	events per 1-minute period limited to total of 12 individual events / hour	none	short or variable sound events are limited to 50dBA SEL.	Restricted discretionary activity
Rotorua	100 dB LZpeak	Notional boundary	none	3 events per 1 minute period limited to a total of 12 individual events per hour	none	none	
Auckland	85 LZpeak	Notional boundary	none	none	none	Not applicable to ABSD generating sound less than 70dB LZ peak	none
Waipa	85dBA unweighted peak level	Residential Zone or dwelling on any Rural Zone property	between sunrise and sunset	six clusters (3 shots) per device per 60-minute intervals	1 device per 10ha of crop (max)	none	Discretionary activity
Wairoa	122dBC (peak)		none	none	none	Only applies to rural, coastal and recreational and reserve zones	
Hastings	<85dBCpeak	Residential zone Rural zone	1/2hr after sunset to 1/2hr before sunrise	none	1 device permitted per 4 hectares or part there of.	none	none
	>85dBCpeak to 100dBCpeak	Residential Zone		< 4 events / hour, or 12 total individual shots / hour (event includes 3 individual shots in 1 minute)		Not exceed 100dBCpeak at Residential Zone boundary.	
	>85dBCpeak - 115dBCpeak	Rural zone		none		Not exceed 115dBCpeak at Rural Zone boundary.	none
	Category A device			≤ 4 noise events / hour (noise event = 3 discharges within a 30 second period)		Within 100m of a public road.	

⁸ Information gathered from NZKGI and individual Councils

6 Review of Sound

6.1 Types of Sound Measurements

- 6.1.1** The District Plan measures the peak sound level (L_{peak}) from ABSDs. L_{peak} represents the true peak of the sound pressure wave or the maximum value reached by the sound pressure. It is useful for capturing impulsive sounds, such as gun shots and blasting operations. It is the most accurate measure to use for single short impulse sounds like ABSDs.
- 6.1.2** Some Councils measure the maximum sound (L_{MAX}). This measures the highest sound (maximum) level during a single noise event (such as a vehicle passing by), where the sound level changes over time (i.e. car noise is loudest when passing directly by you, quieter on approach and driving away). L_{MAX} ignores the number and duration of these events and cannot be totalled into a one-hour or a 24-hour cumulative measure of impact. This is not an accurate way to measure impulse sound.
- 6.1.3** Other Councils measure the exceedance over a set timeframe. For example L_{10} , is the level exceeded for 10% of the time and is useful for short-term measurement, L_{90} is for exceedance 90% of the time and is used to describe the background noise such as a pool pump or air conditioner. This is not an accurate way to measure impulse sound.
- 6.1.4** Types of sounds are heard differently and noise frequency weightings can be used to adjust how sound is heard. These weightings include:
- An 'A' weighting adjusts the sound pressure level readings to reflect the sensitivity of the human ear. A-weighting is commonly used for assessing potential hearing damage caused by loud noise, including repetitive noise at work.
 - A 'C' weighted frequency considers the effect of low-frequency sounds on the human ear compared with the A-weighting.
 - 'Z' weighted sound is the actual noise made, it is flat unweighted and how the sound is heard by the human ear (Z for zero). This is the most accurate environmental measure for determining ABSD noise.

6.2 Logarithmic Scale

- 6.2.1** Sound is measure on a logarithmic scale using a base of 10 (a decibel scale - dB), rather than a linear scale. When sound doubles it equates to a rise of 3dB (using a logarithmic scale), or every increase of 3 dB represents a doubling of sound intensity. This means that a small increase in the number of decibels results in a significant change in the amount of sound heard by the human ear.
- 6.2.2** The use of the dB unit makes it easier to measure decibels and monitor sound changes. Table 3 below summarises the change in sound intensity:

Table 3: Sound Intensity Changes

Sound intensity change in dB	Change in sound energy (loudness of sound)
3 dB increase	sound energy is doubled
10 dB increase	sound energy is increased by a factor of 10
20 dB increase	sound energy is increased by a factor of 100

- 6.2.3** Due to sound pressure being a logarithmic scale, sound does not double by adding two dB readings together. For example, in a factory, if one machine's noise level is measured at 90 dB(A) and then a

second machine starts also measuring 90 dB(A), the resulting noise is not 180 dB(A). This is because 3dB represents a doubling of the noise, therefore the result is 93dB⁹. Therefore, where multiple ABSDs are used in an area, the increased sound that is heard relates to the intensity.

- 6.2.4** In the 2021 field monitoring (see **section 7** below) several monitoring sites measured above 110dB L_{zpeak} and would have sounded 10 or more times louder than a device at 100dB L_{zpeak} .

7 Field Monitoring

- 7.1** Prior to developing PC6, Council assessed the use of ABSDs in order to understand compliance with the existing District Plan rules and any issues with implementation.
- 7.2** Field monitoring was undertaken for two weeks, from Monday 27 September to Friday 8 October 2021. The intended start date was delayed due to Covid. Regardless of the initial delay, monitoring still coincided with peak budding season for the main kiwifruit varieties grown in our District (Gold3 and Green14).
- 7.3** The monitoring programme was intended to remain dynamic and responsive to environmental conditions and community concerns.
- 7.4** The monitoring sites were initially identified on the basis of community complaints (in past years), proximity to kiwifruit orchards and urban settlements (such as Coastlands, Awakeri, Edgecumbe, Matata). The monitoring routes are detailed in Figure 1 and Figure 2 below. The monitoring results are detailed in Table 6 and Table 7 below.
- 7.5** For ease of monitoring, two routes were identified for the western and eastern parts of the Rangitāiki Plain. The intention was to monitor each route on a daily basis, alternating morning and afternoon site visits. However, due to the time needed to complete each monitoring circuit and limited staffing resources, monitoring frequency was amended to every 2 days.
- 7.6** In addition to changing the monitoring route frequency, monitoring sites for each route altered over time, due to:
- lack of ABSD activity in some areas of the district. This was verified by discussions with orchard owners, local residents and the lack of community complaints from orchards close to developed urban areas (ie Coastlands);
 - duplication of monitoring sites within a similar location and soundscape area;
 - relocating sites closer to areas where ABSDs were in use; and
 - new community complaints received during the monitoring timeframe.

7.7 Field Monitoring Communication

- 7.7.1** A communication plan was developed to ensure the community was well informed of what was happening, when and why. The main communication avenues included:
- Letter mail out to all orchard and property owners within 500m of existing horticultural sites (identified using GIS aerial photography). A total of 3960 letters were posted to residents, with approximately 203 letters returned. Where possible addressee duplications were limited.

⁹ 90dB + 90dB = 93dB

- Council webpage, including ‘frequently asked questions’ to help improve understanding within the general community.
- Public Notice advising of the ABSD monitoring programme in the Beacon on Friday 24 September 2021.
- An article highlighting the ABSD monitoring programme in the Ko Konei insert of the Beacon on Friday 1 October 2021.
- An article on the ABSD monitoring in the District in the rural outlook section of the Beacon on Wednesday 13 October 2021. This article also featured in RNZ (online) on 12 October and the Bay of Plenty Times on 14 October 2021.

7.7.2 Additional community concerns were published in the letters to the editor section of the Beacon on 1 October and Wednesday 6 October 2021. These articles highlighted opposing community views of ABSD concerns, that it is part of country living and rural sounds and the other that ABSDs are noise pollution and require better management.

7.7.3 During the monitoring programme, Council received 15 calls from the general community raising concerns relating to ABSD use. Queries raised were categorised as being:

- generic in nature and were referred to the ABSD page of Council’s website;
- specific queries and were responded to on an individual basis.; and
- compliance concerns and calls relating to site specific ABSD use were monitored (if not already included within a monitoring route).

7.8 Field Monitoring Outcomes

7.8.1 The two monitoring routes were divided between the east (route one) and west (route two) of the Rangitāiki Plains (see figures 1 and 2 below).

7.8.2 The field monitoring process included:

- two council officers visiting each location in each monitoring route.
- recordings were taken at the road boundary. In two instances on McLean Road, observations were taken on private property down a right of way due to compliance concerns from residents.
- setting up an acoustic sound meter as close as possible to the pre-determined monitoring site.
- recording base information for each site on each visit, such as wind direction, speed, visibility, potential for rain and including general observations of ambient noise.
- sound observations (reading) were recorded from an acoustic sound meter¹⁰ each time an ABSD (boom or explosion) went off. Recordings included both individual explosions and cluster events (usually 3 explosions with a minute of each other).
- recordings were taken over a 15 minute period, as a representative sample of ABSD use for an hour.

¹⁰ Sound meter used details

Equipment	SLM	Mic	Callibrator
Make	Bruel & Kjar	Bruel & Kjar	Bruel & Kjar
Model	2250L	4950	4231
Serial #	3008578	3016864	43014741

Figure 1: ABSD Monitoring Route One



Figure 2: ABSD Monitoring Route Two



- 7.8.3** Not all ABSD explosions were recorded during the monitoring, as:
- a. despite explosions being audible by the human ear, at times the acoustic sound meter failed to register them due to:
 - the distance being too great between the ABSD location and the monitoring site,
 - background noise interference which was greater than the ABSD explosion, such as machinery or passing vehicles,

- b. the explosion occurred during monitoring setup and then did not occur within the following 15 minute monitoring timeframe, and
- c. the weather was not conducive to monitoring due to strong winds and rain.

7.8.4 The total monitoring results from the field data is summarised in Table 4. The total monitoring results show that the ABSD sound was above the permitted 100dB level 18% of the time.

Table 4: Total Monitoring Results

Routes	Total observations	Highest decibel reading	Number of observations =>100dB
Route one	204	114	31
Route two	94	121	24
Total for both routes	298	121	55

7.8.5 There were six locations where ABSD observations were equal to or greater than 100dB. Of these, two sites were at the permitted limit and two were significantly over (see Table 5).

Table 5: Monitoring Sites with Observations =>100dB

Route / Site	Site Address	Times visited	Total observations	Number of observations =>100dB	Highest decibel reading
1.9	174 Galatea Rd, Te Teko	5	51	18	114
1.10	74 Orchard Rd, Awakeri	5	61	13	106
2.1	439 West Bank Rd, Edgecumbe	6	35	1	100
2.11	102 Otakiri Road, Edgecumbe	6	12	1	101
2.12	566 West bank Road, Edgecumbe	3	19	14	121
2.13	494 East Bank Road, Edgecumbe	1	7	5	104

7.8.6 The scale of non-compliance might appear low in terms of the number of sites with observations above the permitted sound level. Since sound is measured on a logarithmic scale, the impact on the surrounding environment and residents means that:

- sites with observations at 110dB, the sound energy increases by 10, and
- sites with observations at 120dB, the sound energy increases by 100.

7.8.7 The complete monitoring summaries for routes one and two are included in Table 6 and Table 7 below.

Table 6: Route One Monitoring Summary

Site Details		Monitoring Dates (September to October 2021)			Summary of Observations (‘null’ means no ABSD readings taken)				Site retired / included explanation
Nos	Location	From	To	Times visited	Total observations	Highest decibel	Observations =>100dB	Average LzPeak	
1.1	5 Selwyn Rd, Poroporo	27 Sept	1 Oct	3	null	null	null	null	Retired - confirmation from orchardist, local residents no ABSD used.
1.2	428 Te Rahu Rd, Poroporo	27 Sept	1 Oct	3	null	null	null	null	
1.3	271 Rewatu Rd, Poroporo	27 Sept	4 Oct	4	null	null	null	null	
1.4	45 Leader Rd, Poroporo	27 Sept	1 Oct	3	null	null	null	null	
1.5	32 Mauder Rd, Te Teko	27 Sept	1 Oct	3	null	null	null	null	Retired - audible from 57 Paul Road, TeTeko
1.6	57 Paul Road, TeTeko	27 Sept	7 Oct	5	4	84	0	75	
1.7	88 Mac Donald, TeTeko	27 Sept	7 Oct	5	9	89	0	83.2	
1.8	310 Mac Donald, TeTeko	27 Sept	7 Oct	5	25	88	0	78.6	
1.9	174 Galatea Rd, Te Teko	27 Sept	7 Oct	5	51	114	18	91.2	
1.10	74 Orchard Rd, Awakeri	27 Sept	7 Oct	5	61	106	13	90.7	
1.11	132 Keepa Rd, Coastlands	27 Sept	1 Oct	3	null	null	null	null	No complaints from Coastland residents.
1.12	93 Western Drain Rd, Awakeri	5 Oct	5 Oct	1	14	96	0	83.6	Included due to community complaint on frequency and volume levels.
1.13	125A & B McLean Rd, Awakeri	5 Oct	5 Oct	1	32	96	0	83.5	

Table 7: Route Two Monitoring Summary

Site Details		Monitoring Dates (September to October 2021)			Summary of Observations (‘null’ means no ABSD readings taken)				Site retired / included explanation
Nos	Location	From	To	Times visited	Total observations	Highest decibel	Observations =>100dB	Average LzPeak	
2.1	439 West Bank Rd, Edgecumbe	27 Sept	8 Oct	6	35	100	1	88.5	
2.2	275A Colebrook Rd, Edgecumbe	27 Sept	30 Sept	2	null	null	null	null	Retired - audible from 213 Gow and 439 West Bank Rd.
2.3	213 Gow Rd, Edgecumbe	27 Sept	4 Oct	4	null	null	null	null	Retired - audible from 439 West Bank Rd.
2.4	147 Pikowai Road, Pikowai	27 Sept	28 Sept	2	null	null	null	null	Retired - in valley floor
2.5	112 Hauone Road, Pikowai	27 Sept	28 Sept	2	3	67	0	64.3	Retired - in valley floor
2.6	34B Hauone Road, Pikowai	27 Sept	8 Oct	6	7	81	0	72	
2.7	33 Burt Road, Matata	27 Sept	8 Oct	6	3	96	0	95.3	
2.8	84 Hallett Rd, Otakiri	27 Sept	8 Oct	6	null	null	null	null	
2.9	57 Johnson Rd, Otakir	27 Sept	30 Sept	3	null	null	null	null	Retired – audible from 84 Hallett Rd.
2.10	379 Hallett Rd, Otakiri	27 Sept	30 Sept	3	null	null	null	null	Retired – audible from 84 Hallett Rd.
2.11	102 Otakiri Road, Edgecumbe	27 Sept	8 Oct	6	12	101	1	92.9	Check monitor dates
2.12	566 West bank Road, Edgecumbe	6 Oct	11 & 12 Oct	3	19	121	14	103	Included due to community complaint on frequency and volume levels.
2.13	494 East Bank Road, Edgecumbe	12 Oct	12 Oct	1	7	104	5	98.7	

8 Desktop Acoustic Modelling

8.1 Acoustic desktop modelling was undertaken to determine the distance ABSD sound travels beyond an orchard and the implications of this on local communities. Desktop modelling aimed to:

- verify the monitoring results were within the range expected,
- provide information (contour maps) to determine the extent noise travels, and
- suggest appropriate amendments to the existing ABSD rule supported by acoustic reasoning.

8.2 Acoustic desktop modelling was initially undertaken by Acoustic Engineers to support the field monitoring and initial assessment of noise effects. This modelling was peer reviewed by Hegley Acoustic Consultants, who prepared a report proposing text changes to the District Plan based on acoustic modelling. Refer to **Appendix 3** for Hegley Acoustic Consultants report.

8.3 The sites used for desktop modelling were identified and based on:

- noise complaints relating to ABSD use from residents in 2020 and in previous years,
- established kiwifruit orchard areas,
- established berry fruit orchards, and
- proximity to residential areas.

8.4 Summary of desktop modelling results

8.4.1 The sites used for modelling, by each consultant are detailed in Table 8 (below). Initially 8 sites were included in the desktop modelling to support the field monitoring recordings and to understand the wider effects of different kiwifruit orchards on the surrounding environment. There was little knowledge of the extent of ABSD use by Council prior to the monitoring study, hence more sites were assessed via the desktop study

Table 8: Acoustic Desktop Modelling Sites

Desktop Acoustic Modelling Sites by Consultant	
Acoustic Engineers	Hegley Acoustic Consultants
108 Shaw Rd, Whakatāne	60 Orchard Road, Edgecumbe
45 Leader Road, Poroporo	565 West Bank Road, Edgecumbe
271 Rewatu Road, Poroporo	271 Rewatu Road, Poroporo
288 Rewatu Road, Poroporo	-
49 Willow Lane, Edgecumbe	-
191 Gow Road, Edgecumbe	-
996 State Highway Road, Edgecumbe	-

8.4.2 Five sites were omitted from modelling by Hegley Acoustic Consultants, due to site inactivity during the field monitoring and duplication of similar site type. These sites were 288 Rewatu Road, Poroporo and Edgecumbe sites at 49 Willow Lane, 191 Gow Road, 996 and 927 State Highway Road.

8.4.3 The three sites included in Hegley Acoustic Consultants modelling were:

- **60 Orchard Road**, which was representative of how orchards are clustered in existing locations on the Rangitāiki Plains. Noise complaints were received during the field monitoring for orchards in this vicinity and it is close to the community of Awakeri.
- **565 West Bank Road**, which was identified as a site of non-compliance during field monitoring. Noise complaints were received during field monitoring and noise from the site was recorded exceeding the District Plan permitted noise criteria of 100dB L_{Zpeak} (or proposed L_{Cpeak}) at the notional boundary.
- **271 Rewatu Road**, which was included for consistency between acoustic desktop models. This site is close to Whakatāne township and is in the vicinity of noise complaints from Poroporo residents in 2020.

It is noted that this orchard is not the site complaints originated from in 2020 and ABSD use on this orchard is uncommon. In addition, the landowner allowed Council officers and Acoustic Engineers (consultant) to use this site to verify acoustic modelling for the initial desktop analysis.

8.4.4 The acoustic modelling (from both acoustic engineer companies) identified that ABSD sound travels well beyond the distance of existing horticultural property boundaries. Hegley Acoustic Consultant's figures for 271 Rewatu Road (refer to Figures 3 to 5 below) identify the differences in:

- how directional sound travels across flat land, (note this diagram is generic in reference),
- how sound travels with a 1m ground contour and the free rotation of a gas gun, and
- how sound travels with a 1m ground contour with the gas gun fixed in one direction.

8.4.5 The contours detailed in figures 3 to 5 below indicate few orchards are expected to comply with the existing 100dB L_{Zpeak} (or proposed L_{Cpeak}) criteria at the notional boundary in the District Plan.

Figure 3: Example of the gas gun directivity effects, dB L_{Cpeak}

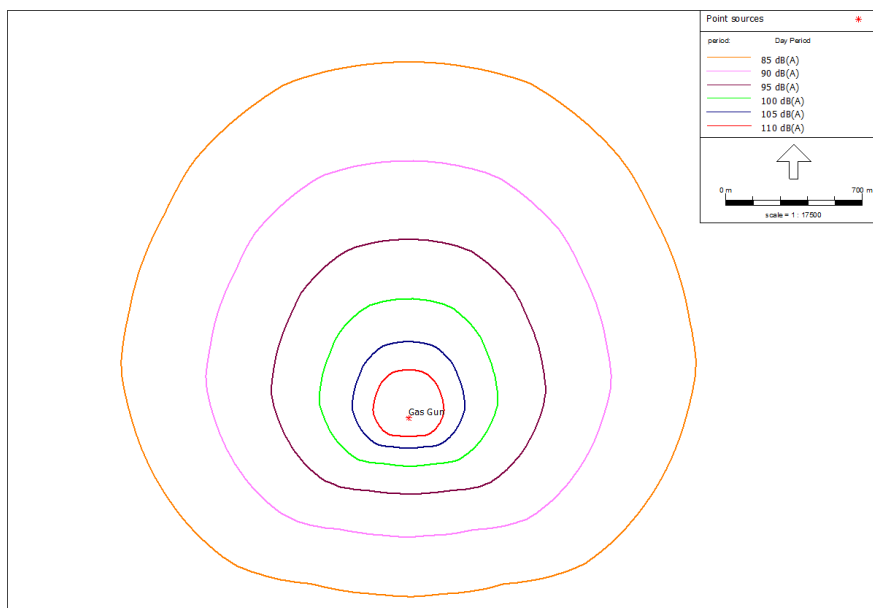


Figure 4: Gas gun at 271 Rewatu Road and free to rotate during firing

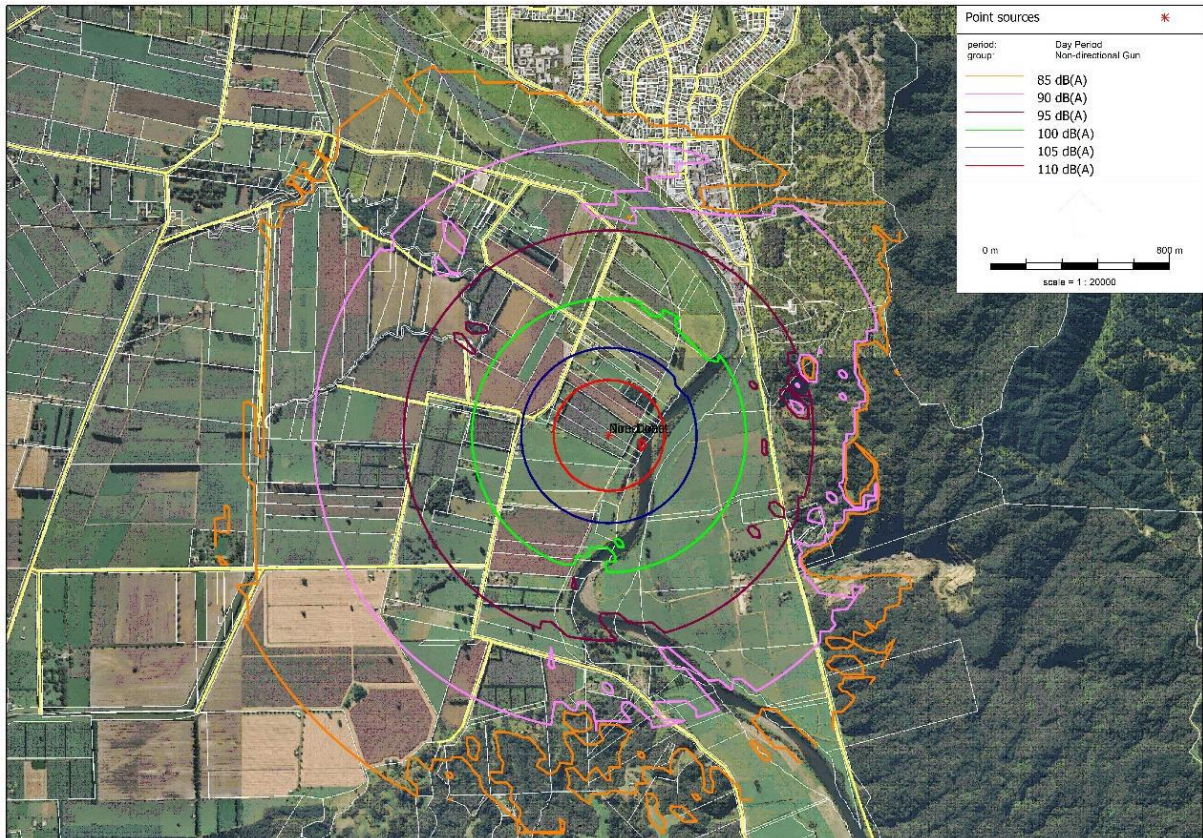
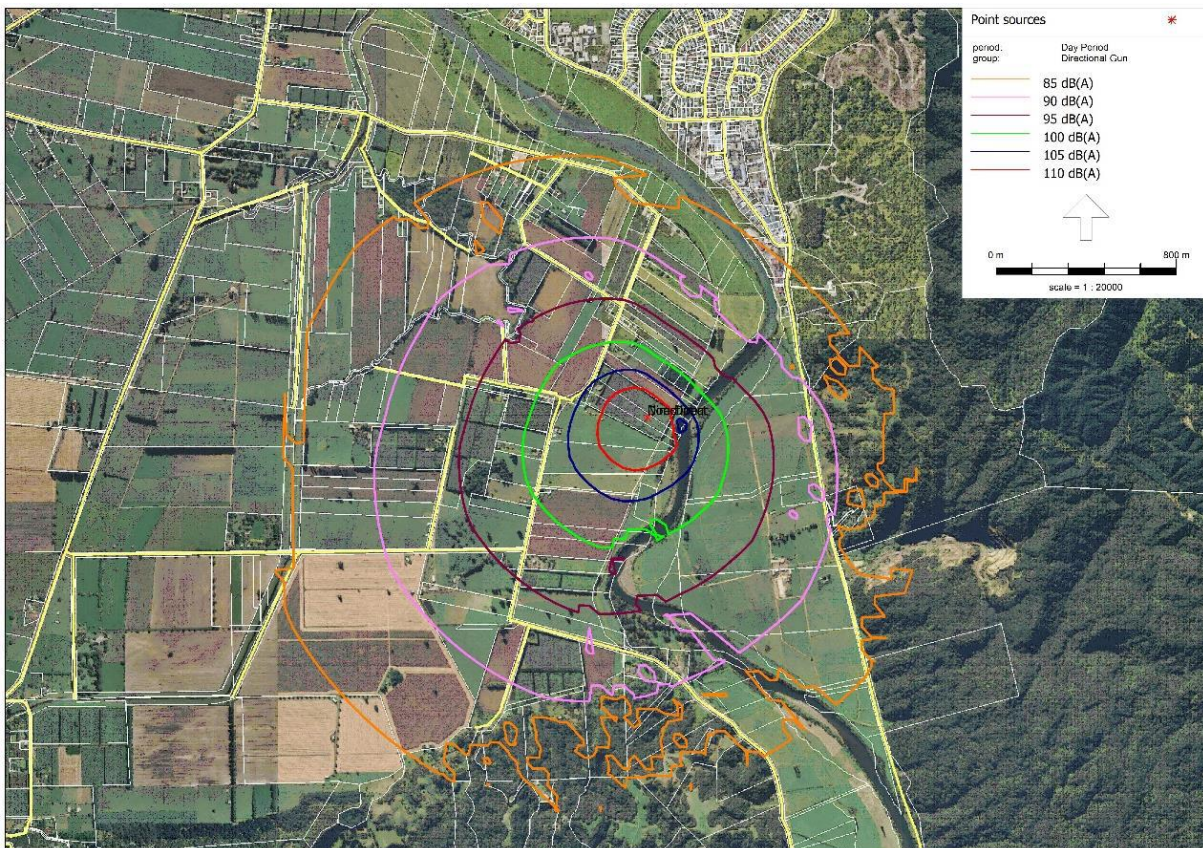


Figure 5: Gas gun at 271 Rewatu Road firing in one direction



8.4.6 Hegley Acoustic Consultants recognise that with the appropriate onsite management the noise level and the number of neighbours affected could be reduced by;

- directing the gas gun (impulsive bird scaring device) firing direction, the noise contours around an orchard can be controlled with the appropriate orientation of the gas gun.
- limiting the hours of use; a specific time when the gas guns may be used would provide more certainty for everyone rather than adopting the variable times of sunrise and sunset.
- limiting the frequency of use,
- using other deterrents, further control may be achieved by using a combination of gas guns and alternative methods such as electronic bird scarers, reflective tape and spray deterrents.

8.4.7 However, Hegley Acoustic Consultants also recognise that irrespective of the mitigation measures identified in 8.2.6 above, orchardists are unlikely comply with the existing District Plan 100dB L_{Zpeak} noise limit. Orchardists relying solely on ABSD use as the primary bird deterrent means they could believe they comply with the 100dB L_{Zpeak} noise limit. Compliance is unlikely due to the nature of impulsive sound and ease of travel (as demonstrated in Figures 3-5 above).

8.5 Desktop modelling recommendations

8.5.1 Hegley Acoustic Consultants also recommends the District Plan permitted noise level be **reduced** to 85dB L_{Cpeak} . The use of any impulsive devices would be permitted up to 85dB L_{Cpeak} , beyond this an operator / orchardist would need to seek a resource consent for a restricted discretionary activity. This would ensure the potential noise impacts from the use of impulsive bird scaring devices are assessed against other alternative bird deterrents to ensure that the emission of noise is reasonable for the receiving built and natural environment.

8.5.2 Hegley Acoustic Consultants also recommend that impulsive audible bird scaring device that does not comply with the proposed permitted 85dB L_{Cpeak} noise limit, should be a **restricted discretionary activity**. Adopting a restricted discretionary activity approach for all impulsive audible bird scaring devices¹¹ will enable noise effects on the surrounding environment and potentially affected parties to be assessed.

8.5.3 Additional recommendations proposed by Hegley Acoustic Consultants include:

- limiting the frequency, hours of use, time of year and operating conditions,
- identifying the location of devices in orchards and / or exclusion areas,
- requiring an acoustic report to identify the 85dB contour for the purposes of identifying affected parties
- managing the potential effects on significant indigenous biodiversity sites

8.5.4 The proposed wording for the relevant rule changes is detailed in **Appendix 2**. PC6 planning options and their assessment is detailed in Section 9 (below).

¹¹ Assuming existing use rights under section 10 of the RMA don't apply.

9 Evaluation of Planning Options for ABSD Use

9.1 The Section 32 (s32) requirements of the RMA are identified in section 5.4 (above) of this report.

9.2 The following s32 analysis is integral to ensuring transparent, robust decision-making on PC6, by:

- assessing the appropriateness of the proposals in achieving the purpose of the RMA;
- assessing the benefits and costs, and risks of proposed amendments to ABSD rules on the community, the economy and the environment; and
- documenting the rationale for the proposed amendments changes, so stakeholders and decision-makers can understand the rationale for policy choices.

9.3 The planning options considered for PC6 include:

- Planning option 1 – Status Quo / Do Nothing
- Planning option 2 – Restricted discretionary activity status for ABSD use
- Planning option 3 – Non-complying activity status for ABSD use

9.4 Planning Option 1 – Status Quo / Do Nothing

9.4.1 Within the District Plan, Council has a number of objectives and policies (see Table 10 and Table 11 below) aimed at managing the use of the rural zones. Objectives and policies Rur1 and policy 2; Rur3 and policies 1 and 3 provide for rural activities, their productive potential, the management of development effects on the rural environment and the need to avoid significant adverse effects on the environment.

9.4.2 The general provisions in the District Plan (see section 5.7 above), identifies the main objective and policy to limit the impact of nuisance and adverse effects on people and communities. These adverse effects include intrusive noise.

9.4.3 The general provisions of the District Plan identify permitted noise limits (Rule 11.2.6) for all zones, including rural activities. To managing the effects of certain noise activities, specific exemptions apply for activities that have characteristics requiring different noise limits. ABSD use has specific noise controls and assessment criteria (Rule 11.2.6.2).

9.4.4 The sound from impulsive ABSD devices, such as LPG guns, is permitted to 100dB L_{zpeak} . The number of events is limited to 3 within a minute and a total of 12 individual events per hour (Rule 11.2.6.2).

9.4.5 Generally, monitoring of the existing ABSD rules relies on public complaints. When Council receives a noise complaint from a resident, a monitoring officer investigates the extent of the noise. If it exceeds the permitted noise limit, Council engages with the landowner to make them aware of their responsibilities under the District Plan. ABSD noise enforcement has not occurred.

9.4.6 Retaining the existing ABSD permitted noise limit (status quo) of 100dB L_{zpeak} is not supported for the reasons set out in paragraph 9.2.7 (below) and the information provided in the preceding report. That is, the impacts of ABSD noise extend well beyond the notional boundary and do not sufficiently avoid, remedy or mitigate the adverse effects of unreasonable noise on residents.

9.4.7 As part of the Council's obligations under s16 of the RMA, it needs to "adopt the best practicable option to ensure that the emission of noise from that land or water does not exceed a reasonable level". The field monitoring has identified that a number of orchards do not comply with the

permitted ABSD noise level in the District Plan. The acoustic desktop modelling also identifies few orchards could comply with the permitted ABSD District Plan noise rule at the notional boundary.

9.4.8 Under section 32(1)(b)(ii), the efficiency and effectiveness of the amended provisions in achieving the objectives are evaluated as follows:

Table 9: Status Quo / Do Nothing – Section 32 Summary

S32 Assessment Criteria	Overall Assessment
Relevant District Plan rules	Noise Limits - 11.2.6.2; Specific Activity Noise limits – 11.2.7.1.h; Restricted Discretionary activity assessment criteria – 11.4.5.1
Costs (Environmental, Economic, Social and Cultural)	<p>A financial cost applies when undertaking any change to the District Plan, as a legislative process is required to be followed. By retaining the existing provisions, Council avoids incurring this financial cost.</p> <p>The 2021 field monitoring identified non-compliance with the existing noise controls. Monitoring costs are expected to increase as Council undertakes further compliance monitoring and enforcement where non-compliance is documented.</p> <p>Noise can produce a number of negative social and behavioural effects as well as annoyance. The World Health Organisation (WHO)¹² recognises the effect of nuisance noise on the community is difficult to assess as individuals' tolerance levels will vary. WHO identify that noise above 80 dB(A) may reduce increase aggressive behaviour, with stronger reactions observed when noise contains impulses, such as with shooting noise. Council is right to seek to manage the impacts of ABSD noise, even though the cost to community health and wellbeing can be hard to quantify.</p>
Benefits (Environmental, Economic, Social and Cultural)	<p>Horticulture industries can continue to use ABSDs as a bird deterrent, providing their use complies with the proposed noise limit of 85dB L_{zpeak} at the notional boundary or residential boundary.</p> <p>ABSDs are primarily used by kiwifruit orchardists during kiwifruit budding season. Existing use of ABSDs can continue where the use complies with the existing permitted District Plan rules as provided for in S10 of the RMA.</p>
Effectiveness / Efficiency	<p>Including noise controls in the District Plan is an efficient way to assess the effects and manage the impacts of noise.</p> <p>The acoustic desktop modelling demonstrates the extent ABSDs can be heard from an orchard. The affected parties from ABSD use in orchards extend beyond those adjoining along the notional boundary, to properties much further away (ref to section 8 and figures 3-5).</p>

¹² World Health Organisation - <https://www.who.int/docstore/peh/noise/Comnoise-1.pdf>

	The permitted noise level is considered too permissive to be effective to manage the wider environmental noise impacts from ABSD use in orchards.
Risks of Acting/ Not Acting if there is uncertain or insufficient information about the subject matter	<p>The risk of not acting is that section 5 Purpose and section 7 Other Matters of the RMA will not be achieved, as the current noise limit is not sufficient to avoid or mitigate any adverse effects of ABSD use in the rural zone or other adjoining zones.</p> <p>Rural zoned land is increasingly being converted from dairy farming to predominantly kiwifruit horticulture use. These conversions are large in scale and while they appear to rely predominantly on netting to protect the vines and fruit, the use of ABSDs as a seasonal bird deterrent is possible.</p> <p>Council can expect the number of noise complaints from the community due to ABSD use to increase as kiwifruit orchards increase. Both the field monitoring and desktop modelling demonstrates that ABSD noise can impact the wider surrounding environment and residents.</p> <p>Therefore failing to manage the environment and social impact of ABSD noise on the receiving environment and community could result in continuous complaints from affected parties.</p>

9.4.9 Outcome: Retaining the existing ABSD permitted noise limit (status quo) is not supported.

9.5 Planning Option 2 – Restricted Discretionary Activity Status for Impulsive ABSD Use

9.5.1 Within the Rural Zone (Chapter 7) of the District Plan, Council has a number of objectives and policies (see Table 10 and Table 11 below) aimed at managing the use of the rural zones productive land capacity and to manage the impact on the surrounding environment.

9.5.2 The objectives and policies relevant to PC6 include:

Table 10: Chapter 7 Objectives and Policies relevant to PC6

Chapter 7 Rural Zone - Relevant Objectives / Policies	
Objective Rur1	To sustain the productive potential of the rural land and provide for rural production activities.
Policy 2	To provide for the growth and efficient operation of primary productive use and rural production activities in the Rural Zones.
Objective Rur3	To ensure that development is located and operated to enable people and communities to provide for their social, economic and cultural well-being and for their health and safety, while ensuring that adverse effects including cumulative effects on the rural environment are avoided, remedied or mitigated.
Policy 1	To enable rural activities such as farming, intensive farming, production forestry and mining to continue and prosper as part of the rural environment and provide

Policy 3	<p>for directly related rural service activities and rural processing, whilst avoiding significant adverse and/or cumulative effects on the surrounding environment.</p> <p>To ensure that land use activities that are sensitive to the effects of rural activities such as horticulture, farming, production forestry and mining (including the processing of minerals) do not constrain the operation of these rural activities including through the use of physical separation requirements.</p>
----------	---

9.5.3 The General provisions (Chapter 11) of the District Plan apply across all zones for activities such as development, subdivision, transportation and noise. The objective and policy relevant to PC6 is:

Table 11: Chapter 11 Objectives and Policies relevant to PC6

Chapter 11 General Provisions - Relevant Objective and Policy	
Objective Gen1	Maintain and enhance the health and safety of people and communities from nuisance effects and adverse effects on the environment.
Policy 1	To avoid, remedy or mitigate the adverse effects of intrusive noise, odour, glare or vibration.

9.5.4 PC6 continues to support the protection of rural land for rural production activities and growth of primary productive uses (Objective Rur1, Policy 2). PC6 enables farming (including horticulture) to continue to be located and operated in the district to support the rural economy and communities (Objective Rur3, Policy 1).

9.5.5 PC6 recognises that the permitted noise level (C) is not sufficient to avoid significant adverse effects on the surrounding environment. The effects of ABSD noise extend beyond the notional boundary of orchards onto surrounding rural farmland (predominantly). Noise controls are the most efficient means to control the adverse effects on people and communities. Physical separation requirements are not suitable due to the distance ABSD noise extends from its point of source before any significant reduction in noise is audible. (Objective Rur3, Policy 1 and 3)

9.5.6 PC6 aims to help reduce the nuisance effect of ABSD noise on the health of people and communities in addition to adverse environment effects. PC6 reduces the permitted noise limit of ABSDs to mitigate the adverse effects of the ‘intrusive noise’

9.5.7 The permitted ABSD noise is considered to be ‘intrusive’ (Objective Gen1, Policy 1) or ‘unreasonable’ (s16 RMA) due to:

- the high sound level of 100db L_{zpeak} (for impulsive noise events such as LPG guns),
- the intensity of the events which permits 3 events within a 1 minute period and limited to 12 individual events per hour, and
- the duration of operation, from half an hour before sunrise to half an hour after sunset (with no restriction on the time of the year for operation).

9.5.8 PC6 seeks to introduce a reduced permitted noise level for ABSD use of 85dB L_{cpeak} . This level is supported by acoustic modelling and is in accordance with other territorial authority noise levels (see sections 5.8, 7 and 8 above).

9.5.9 ABSDs will be permitted without the need for a resource consent, where use complies with the proposed permitted noise level of 85dB L_{cpeak} at the notional boundary. The notional boundary is

defined in the District Plan as “a line 20m from the façade of any rural dwelling, or the legal boundary where this is closer to the dwelling”.

9.5.10 Where ABSDs cannot comply with the PC6 proposed noise level, their use remains a restricted discretionary activity and a resource consent will continue to be required.

9.5.11 Council proposes amending the restricted discretionary assessment criteria to include:

- affected parties and activities within an 85dB L_{cpeak} noise contour from the orchard,
- the number of devices and the location of a device in an orchard and / or any exclusion areas to mitigate noise impacts,
- impacts on ecosystems in significant indigenous biodiversity sites,
- other management options and / or best practice options, and
- reference to Rule 3.5.4 of the District Plan.

9.5.12 Council will continue to include the existing restricted discretionary criteria detailed in 11.4.5 of the District Plan:

- best practicable options for crop protection,
- restricting notification to affected parties, and
- the frequency, time and operating conditions.

9.5.13 PC6 also clarifies the difference between impulsive and non-impulsive ABSD noise limits. Impulsive sound is defined as ‘transient sound having a peak level of short duration, typically less than 100 milliseconds’¹³.

9.5.14 While non-impulsive sound is not detailed in NZES, it applies to environmental or industrial type noise. Therefore, non-impulsive sound from devices related to horticulture (specifically the kiwifruit industry) generally include predator distress calls, which operate as broadband noise.

9.5.15 The non-impulsive sound level has been amended to specify the times of day and corresponding sound level for this type of sound. This takes into account the effect non-impulsive noise could have at night when residents could hear it more easily. Non-impulsive sound limit has changed from 50dBA SEL to:

- 07:00am – 10:00pm 50dB L_{Aeq} ,
- 10:00pm – 07:00am 40dB L_{Aeq} and 70dB L_{Amax} .

9.5.16 A number of orchards are in close proximity to identified Significant Indigenous Biodiversity Sites (SIBS). The purpose of the SIBS is to maintain, restore and enhance the range of indigenous habitats and ecosystems in our District from the adverse effects of development and land use activities. The objectives and policies relevant to PC6 are:

Table 12: Chapter 15 Objectives and Policies relevant to PC6

Chapter 15 General Provisions - Relevant Objective and Policy	
Objective IB1	Maintenance of the full range of the District’s indigenous habitats and ecosystems, including through restoration and enhancement.

¹³ Hegley Acoustic Report, 28 June 2022 (ref to Appendix 3)

Policy 1	To promote and encourage the protection, restoration and enhancement of indigenous biodiversity, using a range of methods such as subdivision incentives, assistance, education and ecological corridors, whilst giving priority to significant biodiversity sites.
Objective IB2	Areas of indigenous vegetation and habitats of indigenous fauna identified as significant in Schedules 15.7.1, 15.7.2 and 15.7.3 are protected.
Policy 2	To enable and encourage subdivision, land use and development that enhances indigenous biodiversity through the protection and enhancement of significant biodiversity sites.

9.5.17 Council identifies that ABSD use is intended to disturb birds from feeding and nesting close to orchards. The use of ABSDs could have a negative adverse effect on SIBS and the indigenous fauna protected.

9.5.18 Wildland Consultants review PC6 and recognise that while noise effects on indigenous fauna are not well understood, noise does affect different species in different ways. For example threatened or at risk species, such as the New Zealand Bittern are noise sensitive, which significantly affects nesting. Therefore, an effects based assessment on indigenous fauna at SIBS is proposed to be undertaken to evaluate the impacts of use of ABSD use.

9.5.19 The restricted discretionary assessment criteria include a new clause to consider the impact of ABSD use on SIBS and indigenous fauna.

9.5.20 Under section 32(1)(b)(ii), the efficiency and effectiveness of the amended provisions in achieving the objectives are evaluated as follows:

S32 Assessment Criteria	Overall Assessment
Relevant District Plan rules	Noise Limits - 11.2.6.2; Specific Activity Noise limits – 11.2.7.1.h; Restricted Discretionary activity assessment criteria – 11.4.5.1
Costs (Environmental, Economic, Social and Cultural)	<p>There is a financial cost to undertake PC6 to the District Plan. Council anticipates funding the following external expenses (where necessary) in processing PC6:</p> <ul style="list-style-type: none"> • notification of affected parties • hearing venue • hearing commissioners • legal support • expert witnesses <p>Further financial resources will be needed if the PC6 decision is appealed.</p> <p>However, retaining the existing ABSD District Plan provisions is likely to result in increased noise complaints, ongoing field monitoring and compliance costs.</p> <p>Existing and new residents of the rural community surrounding horticultural land (predominantly kiwifruit orchards) have raised concerns and complaints over the use of ABSDs since 2010.</p>

	<p>Complaints have identified the:</p> <ul style="list-style-type: none"> • Number of times an ABSD can discharge in an hour and over a day • Impact of multiple devices operating (particularly where orchards adjoin each other) • The impact of the noise within close proximity to the notional boundary, as the notional boundary does not mitigate the loudness of the sound <p>Other options exist to deter birds from kiwifruit buds, fruit and other berries at critical fruiting times. Reliance on ABSD use is not considered to be effective for sustained long periods of time. As such Council shouldn't permit ABSD use as the lowest cost deterrent for horticultural use, when other options exist which do not have the same noise impact well beyond the site of operation.</p> <p>Within the Rangitāiki Plains there are a number of Significant Indigenous Biodiversity Sites (SIBS) in the District Plan. Wildland Consultants considers that native fauna at these sites will be negatively impacted from the use of ABSD's by horticultural orchards within the 85dB L_{cpeak} noise contour.</p>
<p>Benefits (Environmental, Economic, Social and Cultural)</p>	<p>Undertaking PC6 allows Council to amend the District Plan to enable an assessment of the use of an ABSD and appropriate mitigation measures to be determined. These can include operating conditions, location and exclusion areas and impacts on residents within the 85dB L_{cpeak} noise contour of any site using an ABSD.</p> <p>Requiring all ABSDs to seek a resource consent as a restricted discretionary activity when they exceed 85dB L_{cpeak} at the notional boundary or any residential boundary, enables Council to consider the environmental, social and cultural impacts from their use. This is considered necessary as the sound from devices that do not comply with the proposed reduced noise level, can travel a significant distance beyond the operating site.</p> <p>PC6 also enables Council to take into account changes to legislative requirements which are expected to come into force, such as the NPSIB.</p> <p>PC6 will address a noise issue where the District Plan does not adequately take into account the adverse effects on the environment.</p>
<p>Effectiveness / Efficiency</p>	<p>Including noise controls in the District Plan are an efficient way to assess the effects and manage the impacts of noise.</p> <p>The acoustic desktop modelling demonstrates the extent ABSDs can be heard from an orchard. The affected parties from ABSD use in orchards extend beyond those adjoining along the notional boundary, to properties much further away (ref to section 8 and diagrams 3-5).</p> <p>The permitted noise level is considered too permissive to be effective to manage the wider environmental noise impacts from ABSD use in orchards.</p>

	PC6 will enable the use of ABSDs to continue at a reduced permitted noise level. Where use does not comply with the proposed noise limit, a restricted discretionary resource consent could enable their use where the impacts on the environment are managed and mitigated.
Risks of Acting/ Not Acting if there is uncertain or insufficient information about the subject matter	<p>The risk of not acting is that section 5 Purpose and section 7 Other Matters of the RMA will not be achieved, as the current noise limit is not sufficient to avoid or mitigate any adverse effects of ABSD use in the rural zone or other adjoining zones.</p> <p>Failing to manage the environment and social impacts of ABSD noise on the receiving environment and community is likely to result in ongoing noise complaints due to horticulture expansion and future residential growth and subdivision in the rural zone.</p> <p>Council anticipates the permitted status of ABSD use to be reviewed and amended to ensure the District Plan aligns with the requirements of NPSIB exposure draft.</p>

9.5.21 Outcome: PC6 is supported:

- a) as the preferred option.
- b) as it retains the existing ABSD permitted noise limit (status quo) of 100dB L_{zpeak} is not supported for the reasons set out in the report above. That is, the current provisions are too permissive, the impacts extend well beyond the notional boundary and do not sufficiently avoid, remedy or mitigate the adverse effects of intrusive noise on residents.
- c) as it is consistent with adjoining territorial authorities approach to managing ABSD's permitted noise level.

9.6 Planning Option 3 – Non-complying activity status for ABSD use

- 9.6.1** Within the District Plan a number of activities are considered as non-complying activities. A non-complying activity is an activity that is identified as such in the District Plan and is allowed only if a resource consent is obtained for the activity (Rule 3.3.7). Therefore, it is not permitted as of right.
- 9.6.2** Section 3.7 of the District Plan sets out criteria for Council to have regard to when considering a non-complying activity application. The most relevant of these criteria to ABSD use include noise effect (3.7.10), indigenous biodiversity (3.7.13) and reverse sensitivity (3.7.41). However, the existing criteria does not limit Council's discretion as per s104(1)(a) of the RMA to consider any actual or potential effects on the environment of allowing the activity.
- 9.6.3** The non-complying activity status could be limited to the use of impulsive ABSD's only. Therefore, only impulsive ABSD use would require a resource consent. Council could exercise full discretion as to whether or not to grant consent and what conditions to impose on the consent if granted (s87, RMA).
- 9.6.4** A non-complying consent would be fully notified and would be subject to a greater degree of scrutiny from both Council and the wider community. The cost to prepare and process an application for a non-complying ABSD activity would be significantly more than in *Option 2* above.
- 9.6.5** Surrounding territorial authorities treat (predominantly) ABSD use as a restricted discretionary activity. This provides some certainty to the horticultural industry that this type of bird deterrent can

be used where adverse effects are mitigated. This activity status could also encourage effective pest deterrent alternatives and innovation that complies with permitted planning standards. A non-complying activity could reduce this incentive.

9.6.6 Under section 32(1)(b)(ii), the efficiency and effectiveness of the amended provisions in achieving the objectives are evaluated as follows:

S32 Assessment Criteria	Overall Assessment
Relevant District Plan rules	Noise Limits (11.2.6.2); Specific Activity Noise limits (11.2.7.1.h); Assessment Criteria – Discretionary Activities / Non-Complying Activities (3.7)
Costs (Environmental, Economic, Social and Cultural)	<p>A financial cost applies when undertaking any change to the District Plan, as a legislative process is required to be followed. By retaining the existing provisions, Council avoids incurring this financial cost.</p> <p>The 2021 field monitoring identified non-compliance with the existing noise controls. Monitoring costs are expected to increase as Council undertakes further compliance monitoring and enforcement where non-compliance is documented.</p> <p>As a non-complying activity, any consent to use an impulsive ABSD would cost orchardists more than in Options 1 or 2 above, with less certainty that consent would be granted.</p> <p>Council considers the effects of an ABSD can be adequately assessed on affected parties and the environment if a Restricted Discretionary Activity status is applied.</p> <p>Orchardists could face increased costs to deter birds from harming fruit due to more costly alternatives, such as netting.</p> <p>Assessing ABSD use as a non-complying activity would require detailed supporting information from experts. The information requirements could be considered too onerous by horticulture industry. Resulting in a lengthy appeal process.</p> <p>Equally, alternatives used might cause adverse effects such as spray impacts on the environment and visual impacts from netting.</p> <p>Council is right to seek to manage the impacts of ABSD noise, even though the cost to the natural environment, community health and wellbeing can be hard to quantify. However, a non-complying activity is considered overly restricted as compared to Frost Fan use which can create noise disturbances, Frost fans are a Restricted Discretionary Activity in the District Plan.</p>
Benefits (Environmental, Economic, Social and Cultural)	Horticulture industries would not be able to use any impulsive ABSDs without consent. This is likely to reduce the number of impulsive ABSDs used as a bird deterrent, significantly reducing the impact of noise on the surrounding environment and affected parties.

	<p>However, orchards with existing use for ABSDs can continue where use complies with the existing permitted District Plan rules as provided for in s10 of the RMA.</p>
<p>Effectiveness / Efficiency</p>	<p>Including noise controls in the District Plan are an efficient way to assess the effects and manage the impacts of noise.</p> <p>The acoustic desktop modelling demonstrates the extent ABSDs can be heard from an orchard. The affected parties from ABSD use in rural zones extends far beyond those properties directly adjoining an orchard and the notional boundary. (ref to section 8 and diagrams 3-5).</p> <p>A non-complying activity status would require a resource consent for all impulsive ABSDs. This would significantly reduce the use of ABSDs, however this approach is consider to be overly restrictive.</p>
<p>Risks of Acting/ Not Acting if there is uncertain or insufficient information about the subject matter</p>	<p>The risk of not acting is that section 5 Purpose and section 7 Other Matters of the RMA will not be achieved, as the current noise limit is not sufficient to avoid or mitigate any adverse effects of ABSD use in the rural zone or other adjoining zones.</p> <p>Rural zone land is increasingly being converted from dairy farming to predominantly kiwifruit horticulture use. These conversions are large in scale and while they appear to rely predominantly on netting to protect the vines and fruit, the use of ABSDs as a seasonal bird deterrent is possible.</p> <p>Council can expect the number of noise complaints from the community due to ABSD use to increase as kiwifruit orchards increase. Both the field monitoring and desktop modelling demonstrates that ABSD noise can impact the wider surrounding environment and residents.</p> <p>Therefore, failing to manage the environment and social impact of ABSD noise on the receiving environment and community could result in Council failing to achieve objectives Rur1, Rur3 and Gen1.</p>

9.6.7 Outcome: Proposing non-compliance activity status for impulsive ABSD use is not supported, as it is not consistent with adjoining territorial authorities' approach to managing ABSD's permitted noise level. Equally, it requires all impulsive ABSD use to seek consent prior to use, when there may be sites that can operate ABSD's without adversely affecting the surrounding environment.

10 Preferred Option

10.1.1 The preferred option is Option 2 – Restricted Discretionary Activity Status for ABSD use.

10.1.2 The proposed amendments to the District Plan through Plan Change 6 are supported as they are considered the most appropriate way to achieve the purpose of the proposal because:

- a. Retaining the status quo (option 1) carries the risk of adverse environmental outcomes;
- b. Introducing a non-complying activity status (option 3) is considered to be overly restrictive on the horticulture industry;

- c. Option 2 enables Council to continue to provide a permitted threshold and introduce measures to assess, manage and mitigate adverse effects from ABSD use;
- d. Option 2 is efficient and effective in terms of section 7(b), (c) and (d) of the RMA while still achieving the Strategic Objectives Rur1, Rur3 and Gen1 of the District Plan; and
- e. Option 2 is in accordance with the functions of territorial authorities in s31 of the RMA and the sustainable management purpose of Part 2 of the RMA.

11 Appendices

Appendix 1 – Section 32 Report

Appendix 2 – Plan Change 6 District Plan track changes

- Introduce Restricted Discretionary Activity status for impulsive ABSDs

Appendix 3 – Hegley Acoustic Consultants

Appendix 4 – Wildland Consultants

12 References

1. New Zealand Standards
2. World Health Organisation, <https://www.who.int/docstore/peh/noise/Comnoise-1.pdf>