

# **RESOURCE MANAGEMENT ACT 1991**

## **HURUNUI DISTRICT COUNCIL**

### **HURUNUI DISTRICT PLAN**

#### **PROPOSED CHANGE NUMBER 18: FROST CONTROL FANS**

##### **Decision Report by the Council**

#### **1.0 Introduction**

1.1 This report records the decision of the Hurunui District Council on Plan Change No 18 to the Hurunui District Plan. Pursuant to the resolution of the Council on 28 May 2009 the above hearing was heard by the full Council at the Hurunui District Council Chambers, Amberley on the 18<sup>th</sup> and 20<sup>th</sup> August 2009. The members in attendance were Acting Mayor Malthus (Chair), Crs Black, Dalley, Daly, Doody, Meikle and Smart.

1.2 This report:

- (i) Describes the plan change;
- (ii) Briefly outlines the plan change process; and
- (iii) Records the Council's decision on the plan change, including its decision to accept or reject each submission.

1.3 The Council's decision to accept or reject each decision requested in submissions is attached in Appendix 1.

#### **2.0 Outline of the proposed Plan Change**

2.1 Proposed Plan Change 18 is a Council initiated plan change to the District Plan to introduce specific provisions to manage the effects of frost control machines. In summary, the amendments proposed are to:

- (a) Insert a policy which identifies the appropriate effects and circumstances for the use of frost control fans;
- (b) Insert specific rules to permit the establishment and operation of frost control fans;

- (c) Insert performance standards for frost control fans, including maximum noise level, separation distances and time of use of the wind machines;
- (d) Amend Rule A1.2.7(a) for maximum height of structures to exclude rotor blades on frost control fans;
- (e) Amend Rule A1.2.9 (i) for exemptions to noise standards, to include specific reference to frost control fans; and
- (f) Insert a specific rule requiring noise insulation for new dwellings in close proximity to frost control fans.

### **3.0 Plan Change Process**

3.1 The following submitters appeared at the hearing:

Mr D McGregor, Ms K. Newland, Mr P Parish, Mr M Hunt and Mr S Dent for Waipara Valley Winegrowers and New Zealand Winegrowers (54/F31), Mr I Donaldson for Pegasus Bay Vineyards and Winery (69), Ms B Gould (57/F27), Ms L Weastell (56), Ms T Allardyce for R Sutherland of Teece Family Vineyards (84/F29), Mr J. Dufour for The Mudhouse Wine Group (7), Mr N McGirr for Common Sense Inc. (62), Ms L Wharfe, Mr G. Martin and Mr J. Richards for Horticulture New Zealand (80/F37), Mr G. Williams (F11), Mr S Meckiff for Waiata Vineyard (34/F26), and Mr P Hulsman (77).

3.2 Mr. G. R. Naish for Black Estate (3) did not attend the hearing in person but provided written evidence in support of his submission that was tabled.

3.3 The Council was assisted at the hearing by Mrs L White, the reporting officer, Mr S Camp, an acoustic consultant, and Mr A Feierabend, Manager Environmental Services.

3.4 The Plan Change was notified on 6 December 2008. Twenty-three of the submissions (8-29) were *pro forma* submissions, in that the same submission was used by the submitters. One submission supported the plan change in entirety, 11 supported it in part, 24 opposed it in entirety and 48 opposed it in part. In addition to the primary submissions outlined above, 37 further submissions were also received.

3.5 We note that there appeared to be some confusion in submissions regarding the application of any new rules to already established frost control fans. As we endeavoured to clarify for those at the hearing, we record here that any existing fans which have been legally established as a permitted activity or with a resource consent, and are operated in accordance with the conditions of that consent, have existing rights

and will not be affected by any changes, which will only apply for applications for new frost control fans.

#### **4.0 Plan Change Decision**

##### *Procedural matters*

- 4.1 During the hearing, Mr P. Parish (submitter 33 and presenting on behalf of 54/F31), raised a point of order as to whether the verbal evidence presented by Ms L. Weastell (submitter 56) was new evidence, and as such should be disallowed. The Council was satisfied that the evidence presented merely expanded on the original submission, which the submitter was entitled to do. We therefore did not support the point of order made.

##### *Sufficiency of Information*

- 4.2 Mr McGregor (for submitter 54) questioned the lack of information available on the effects of frost control fans and sought as first relief rejection of the Plan Change or adjournment of the hearing to enable further investigation of the matter. We have taken into account the evidence provided to us, including the advice of two acoustic experts, and consider it sufficient to enable us to make a decision on this Plan Change.

##### *Wider rural issues*

- 4.3 We note that submitters 32 & 80 consider that the issue of frost control fans should be part of a wider rural review. We record here that we have previously considered this and resolved to proceed with a plan change relating to frost control fans separate from any wider rural review, to ensure a timely resolution to this particular issue.

##### *Noise Levels*

- 4.4 We consider that the major adverse effect from the use of frost control fans, is noise. We accept that trying to determine what noise level is 'acceptable' and 'appropriate', is very subjective, and will likely be different for each person. We consider that the issue of noise is primarily one of balancing the economic interests of rural production activities requiring frost protection on an infrequent basis, and the necessity of residents to avoid sleep disturbance. There seemed to be general agreement between submitters and both acoustic experts (Mr Camp of Marshall Day Acoustics for the Council and Mr Hunt of Malcolm Hunt Associates for submitter 54) that the World Health Organisation's (WHO) recommended level of 30dBA  $L_{eq}$  inside bedrooms is an appropriate level to aim towards.

- 4.5 In forming our opinion on appropriate noise levels, while we accept that some people choose to sleep with windows open on frosty nights, we considered it reasonable to allow for some attenuation of sound due to windows being closed, or at least only open a small amount.
- 4.6 In considering the 60dBA  $L_{eq}$  noise level presented by Mr Hunt, we noted that the two airport noise studies he cited showed an average outdoor-to-indoor noise reduction of 27.7dB and 28.2dB with windows closed. Based on this evidence, we were not satisfied that allowing for a 30dB reduction by building attenuation would consistently result in a level of 30dBA indoors, and that this higher level could have adverse effects on the amenity of rural residents. We considered this was particularly important when noting that this level would be the basis for permitted and controlled activity standards (to be discussed further in this report), which could not be declined by the Council. However, in reaching this conclusion, we accept that the 55dBA  $L_{eq}$  limit errs on the conservative side. As such, we decided that it would be appropriate to set 55dBA  $L_{eq}$  as the permitted or controlled activity standard, with a higher standard of up to and including 60dBA  $L_{eq}$  as a fully **discretionary** activity, and above 60 dBA  $L_{eq}$  as **non-complying**, subject to a restriction on frequency of use.
- 4.7 In coming to a decision on these noise levels, we have also given consideration to special audible character penalties. Based on the advice of Mr Camp, outlining the problems associated with undertaking an objective assessment of 'special audible character', we agree that it is best to set a limit which stipulates that no further penalty be applied for special audible character, and have allowed for this in the aforementioned noise limits.

#### *Activity Status*

- 4.8 We became aware that the proposed setback rule (500m for one fan, or up to five fans within 500m and 1000m of any dwellinghouse) was unclear to some in regards to its purpose. The intention of the setback requirement was to provide a distance at which it could be certain that 55dBA  $L_{eq}$  would be met, (including taking into account cumulative effects) thus enabling an easily understood permitted activity status. Proposed fans within either of these setbacks, but able to demonstrate through the consent application process that the noise level would be met, would be assessed as a restricted discretionary activity. Several submitters raised concerns that:

- The restricted discretionary status did not provide certainty for applicants that consent would be granted
- The use of a setback is not necessary if the noise level is met.

4.9 We understand that any frost control fan requires a building consent, and that at the time of building consent, a planning officer checks the compliance of the proposal with the District Plan, before issuing a 'Project Information Memorandum' (PIM). In order to issue a PIM, the officer would need to be satisfied that the required noise level would be met. In this regard, we consider that the use of a setback, outside which the permitted activity status in terms of noise is certain, to be appropriate. Without the setback, every applicant would need to provide acoustic evidence of meeting the permitted activity standard in order to obtain a PIM and we consider this to be overly onerous on operators, and essentially creates the same hurdles as requiring every fan to obtain resource consent. We are also aware of other councils, whose rules rely largely on noise levels, facing difficulties in terms of proving compliance, after fans have been installed. We wish to avoid this situation.

4.10 However, we also accept that providing for a breach of the setback rule as a restricted discretionary activity, where noise levels are demonstrated to comply, is uncertain, both for applicants, and for neighbours. We consider that provided the noise level is set at an appropriate level and the frequency of use is restricted (which we will discuss shortly), this type of activity is acceptable, and consent should be granted. For these reasons, we consider it appropriate to provide for this as a **controlled** activity between 150 – 500metres.

4.11 While we accept that the main issue associated with the use of frost control fans is noise, we also consider that there are visual amenity and safety effects from frost control fans. In this regard, we consider that it is appropriate to require a setback limit of 150m from any fan to the boundary of any dwelling under separate ownership, within which setback the activity would become **non-complying**. Mr Camp advised us that at this distance, he considered that all existing frost control fans on the market would not meet the required noise limit, but should quieter technology be developed, we consider this distance sufficient to ensure the effective use of the fan while addressing these amenity matters.

*Waipara Wine Growing Area vs District-wide*

- 4.12 We received submissions both for and against having differing standards for within and outside the Waipara Wine Growing Area (WWGA). While we accept that this area has a historic and recognised nature, on balance we agree with submitters who argued that the requirement for residents to avoid sleep disturbance is the same throughout the District, and the use of two separate sets of standards would not guarantee this. We are also mindful that the District Plan does not provide for separate objectives and policies for the WWGA. Therefore we believe the same standards should apply District-wide.

*Frequency of Use*

- 4.13 It became apparent during the hearing process that the proposed Plan Change related largely to the use of frost control fans for viticulture. We consider it important that this Plan Change addresses *all* primary production activities which might require the use of frost control fans, in order to ensure that it is 'future proofed' for such activities. For this reason, we accept submissions which highlighted the need to control the frequency of use of these fans, and note that the noise levels recommended in acoustic evidence were based on limited use of these machines.
- 4.14 One option presented to us (submitter 56) was to address this through limiting the seasonal use of frost fans, for example from the second week in October to the second week in April, or thereabouts. Use outside these limits would then need to go through a consent process. We acknowledge that there were several further submissions in opposition to this approach, and we also consider that it would be difficult to determine the start and finish of the frost season.
- 4.15 Based on the evidence provided in submission 54 relating to the usage of frost fans (for viticulture), we consider a maximum number of nights per year to be appropriate to control frequency. We consider that a limit of 20 nights (for a permitted or controlled activity) is sufficiently high to allow for the use of frost fans for viticulture, at the 55dBA  $L_{eq}$  noise limit, while ensuring the protection of residential amenity. Where more use is anticipated, we consider consent should be required where the noise generated will be more than 45 dBA  $L_{eq}$  at the notional boundary of any dwelling on a separate lot, and have allowed for a level of up to 55 dBA  $L_{eq}$  as a **discretionary** activity.

*Height limits*

- 4.16 We note that there was general support by submitters for the increase in height limit for frost control fans to 12m not including blades. We generally consider the visual effects of this increase in height to be appropriate given their slim profile and their location in the rural area, with other structures such as telephone poles. However, we also consider that there are some adverse visual effects from frost control fans, including their height, both individually and cumulatively, and as discussed above, have included a **non-complying** status for a fan within 150 metres from the boundary of any neighbouring dwelling.

*Frost Protection Methods*

- 4.17 We accept the argument that frost control fans are an efficient and increasingly popular way to protect crops from frost damage. We note that not all submitters agree on the use and effectiveness of other forms of frost protection, but we consider that provided that the rules relating to the establishment and use of these machines balances the economic interests of those who choose to use this frost protection option, with the amenity of rural residents, that the use of this type of frost protection is up to individual operators.

- 4.18 That being said, we do not consider that use of frost control fans in *any* circumstances is appropriate nor that the amenity of rural residents should yield to this. We accept the argument of submitter 56, that the Objectives and Policies of the Hurunui District Plan are not currently weighted heavily towards rural production activities, and that they allow for 'mixed use' of the General Management Area. For this reason we consider that there will be situations where the use of a frost control fan is not appropriate due to the adverse effects on the local environment, and that in those circumstances alternative frost protection methods will be required.

*Boundaries and Dwellings*

- 4.19 We considered submissions which requested that the setback distance and/or noise level apply to the boundary of an adjoining site rather than the notional boundary of any dwelling. We consider that this approach would be inconsistent with the general noise standards within the General Management Area and would be overly restrictive on growers, particularly given that there is no certainty that the adjoining land would ever be developed. We note that the permitted and controlled activity standards for setbacks and noise levels take into account dwellings for which a building or resource consent

has been granted. Future development will also be captured by the reverse sensitivity/acoustic insulation provisions for new dwellings discussed below.

*Acoustic insulation*

- 4.20 It appeared to be generally agreed amongst submissions relating to this matter that it was appropriate to address potential reverse sensitivity effects from new dwellings locating near established frost control fans by requiring acoustic insulation to minimise noise effects. There appeared to be some concern over the exact wording of the requirement, and we have relied on the expertise of Mr Camp in relation to the final wording of this rule.

*Policy 10.9*

- 4.21 With regard to the addition of Policy 10.9(a) and two paragraphs to the explanation of under this policy, on balance we agreed with the advice of Mrs White that the original wording was appropriate, but have made consequential changes to it relating to the WWGA and in reference to horticulture activities.

*Other provisions*

- 4.22 While there was not universal agreement amongst submitters in relation to the temperature limit, we consider that this is an effective way to allow for the use of frost control fans when necessary to protect from frost, while limiting the potential for over-use. As the 2<sup>0</sup> limit was generally acceptable to growers, we consider it appropriate. In relation to where this measurement is taken from, it was disappointing to us that submitters who disagreed with the proposed wording did not provide a suitable alternative for us to consider. We have therefore accepted the advice of Mr Camp that the temperature be measured in relation to the bud height of the crop being protected.

- 4.23 We accept that the maintenance hours put forward in the proposed Plan Change are too restrictive, and consider it reasonable to accept the requests of submitters to extend these to be within the hours of 7.30am to 6.00pm.

- 4.24 Given that there was only one submission against the requirement for a log book to be maintained and general support from operators, we consider this requirement to be appropriate and useful for compliance monitoring.

- 4.25 We have also had regard to other matters in submissions relating to:

- the use of helicopters;
- enforcement procedures, including relocation of non-complying frost control fans;
- owners/managers residing on site;
- automatic shutdown.

We are satisfied with the rationale behind the recommendations in the reporting officer's Section 42A report regarding these matters (paragraphs 6.7 & 6.8, 7.61, 7.62, 7.65 & 7.66 of that report), and accordingly adopt those recommendations.

- 4.26 With regards to submitter 74's request that anemometers be fitted to frost control fans to stop operation over 8kph, we heard further from winegrowers at the hearing that fans should not be operated in such conditions and accordingly agreed that such a rule was not necessary. We also consider that the 150m setback provision outlined earlier in this report which is intended in part to address any safety issues resulting from the use of these fans may better address the request of the submitter.

*Economic Impact*

- 4.27 We are mindful of the submissions which outline the economic importance of the wine industry, both directly and in terms of supporting industries. We agree that any changes to the District Plan in relation to frost control fans must balance the importance of this industry to the District, with the amenity values of rural residents. We believe that the changes we have agreed upon have appropriately struck this balance.

**5.0 Section 32 analysis**

- 5.1 The Council is required to re-evaluate the Plan Change in terms of section 32 prior to making a decision on the Plan Change. Section 32 requires an examination of "whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives."
- 5.2 As the objectives of the Hurunui District Plan are not altered by this plan change, the most relevant objective against which to examine the plan change is Objective 10 which states "A healthy and safe environment within the District and maintenance and/or enhancement of amenity values which the community wishes to protect".

5.3 The submissions to the plan change and the presentations by submitters varied from retaining the existing District plan provisions, to seeking more relaxed rules for frost control fans than proposed Plan Change, to greater controls than were proposed. In arriving at the new solutions, we have considered those matters required under section 32 and the full range of alternatives available to us, and have concluded that the amended plan change, as detailed herein, is the most appropriate policy and rule framework to achieve the objectives of the District Plan. We consider that the policy and rules proposed ensure that the amenity values for rural residents are not compromised, while retaining a balance between these values and the importance of the wine and wider horticulture industry to the District's economic wellbeing.

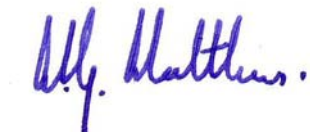
## **6.0 RMA considerations**

6.1 In accordance with section 74 of the Act we have had regard to the range of matters specified in so far as they are relevant in this case.

## **7.0 Conclusions and recommendations**

7.1 Having considered the range of resource management issues outlined in this report we conclude that subject to modifications and additions to the wording of rules as shown in Appendix A to this report, the proposed Change should be adopted. We find that the introduction of specific provisions to manage the effects of frost control fans is a more appropriate method to achieve the objectives and policies of the district plan and the purpose of the RMA, than the current provisions

7.2 The amendments we have made are intended to provide certainty for frost control fan operators and rural residents about when the use of these machines is appropriate, and to provide an acceptable balance between the reasonable use of these machines for frost control purposes and the need to protect the amenity of rural residents.



Acting Mayor M Malthus

CHAIRMAN

Decision dated: 24 September 2009

**Appendix 1: Decision on Submissions**

<b>Sub #</b>	<b>Name</b>	<b>Oppose / Support</b>	<b>Decision requested</b>	<b>Decision</b>
1	C. A. Austin	Oppose	A fair set of regulations that don't destroy the wine industry.	Accept
2	S. McKenzie	Oppose in part	Look into possibility of noise from frost fans could be substantially modified.	Reject
			That frost fans in their present form may not be erected in proximity to an existing dwelling and also away from boundaries where subdivisions could occur and dwellings be built, as this devalues land.	Accept in part
			That viticulturists be strongly encouraged to look at other alternatives for frost protection or planting vines less susceptible to frost.	Reject
3	Black Estate Ltd	Oppose	Withdraw Plan Change 18 and re-think proposals based on modern technology and consistency with decibel ratings and setback distances with other NZ wine growing districts.	Reject
4	M. Elrick	Support in part	Consult with wine industry (local, national and international) experts regarding maximum noise levels & height restrictions of wind machines for frost protection.	Accept in part
5	T. G. Porter	Oppose in part	A1.2.9 - Frost fans are a normal agricultural practice and should remain exempted.	Reject
			A1.2.9(i) should be amended to be similar to other regions, e.g. 65dB in Otago.	Reject
			A1.2.9(i)(iv) is excessively onerous.	Reject
			C1.2.4(a) - Permitted activities with equitable standards are preferable as resource consents will not proportionately protect the environment.	Accept in part
6	T. & P. Bunting, Dallington Downs Vineyard Estate	Oppose	No change to the Plan.	Reject
7	Mud House Wine Group NZ	Oppose in part	Make the dba level 65dba.	Reject

<b>Sub #</b>	<b>Name</b>	<b>Oppose / Support</b>	<b>Decision requested</b>	<b>Decision</b>
8 - 29	P. Kerdemelidis, T. Hobbs, D. McKnight, M. Harris, B. Hobbs, E. Hobbs, A. Wano, E. Wano, A. Florance, D.Sparks, M. Talaga, C. Short, L. P. Hartnett, S. M. Quinn, S. Y. Adams, R. M. Densem, J. Richards, J. Pritchard, J. E. Florance, S. Woodfield, H. Erceg, K. Florance,	Oppose in part	Any wind machine or wind machines operating simultaneously on a property shall not exceed 65dBa at the notional boundary of a dwelling house located on a separate lot under different ownership, or 65-60dBa at 300m.	Reject
			Wind machines shall only be operated for frost protection when the local air temperature is 2 <sup>0</sup> C or below.	Accept in part
			Wind machines shall not exceed 12 metres in height (excluding the blades).	Accept
			Wind machines shall only be operated for maintenance, testing and normal agricultural practice other than frost protection between 8am and 6pm. Outside of these is for emergencies only.	Accept in part
			A log book of operation of wind machines will be kept.	Accept
30	E. Gardner	Oppose	No change to the Plan.	Reject
31	G. B. Miller	Oppose	HDC work with NZ winegrowers and other interested parties to formulate a more workable plan, with the industry Code of Practise being a starting point.	Reject
32	Mount Cass Vineyards	Oppose	No change to rules governing use of Frost fans for normal agricultural practices.	Reject
33	P. & F. Parish	Oppose in part	Support for joint NZWG & WWG submission.	Accept in part
34	Waiata Vineyard Waipara	Oppose in part	Any wind machine or number of wind machines operating simultaneously on a property shall not exceed 65dBa at the notional boundary of a dwelling house located on a separate lot under different ownership. Or 65-60dBa at 300m.	Reject
			Wind machines shall only be operated for frost protection when the local air temperature is 2 <sup>0</sup> C or below.	Accept in part
			Wind machines shall only be operated for maintenance, testing and normal agricultural practice other than frost protection between 8am and 6pm. Outside of these hours is for emergencies only.	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
			A log book of operation of wind machines will be kept.	Accept
			Where any new residential or accommodation activity is located within 500 metres of an existing vineyard, the activity or any building associated with that activity shall be constructed so as to ensure that habitable spaces within the building shall achieve an indoor design sound level of 30 dBa.	Accept in part
			Existing wind machines remain under the status quo - noise exemptions - as being considered normal agricultural practice.	Accept
35	H. C. Bauer	Oppose	More fair regulations that allow the stimulation of growth in the District via continued use of frost fans in the area for viticulture without unduly harsh restrictions.	Accept
36	L. G. Hudson	Oppose in part	No change to Plan, or	Reject
			Follow regulations stipulated in other wine-growing regions, or	Accept in part
			Include fair regulations allowing for the continued success of Waipara as a grape growing region	Accept
37	R. Collins	Oppose	Seek more information on frost fighting by working with local growers and NZ wine industry.	Reject
38	P. I. Donaldson	Oppose	A different Plan Change based around less severe rules on noise and relevant rulings in relation to distances, to avoid stifling progress and increase wealth in District.	Accept in part
39	H. J. Price	Oppose	Council should commit to a proven workable set of guidelines that can be followed nationwide.	Reject
			Converse with local winegrowers to help sort out the inappropriate draft copy.	Accept in part
40	P.E. Lidgard	Oppose	No change to current situation.	Reject
41	P. W. Grater	Oppose	Investigation and monitoring the proposed rather than a ban or restriction on the most productive means of sustaining the sole source of income for the region.	Reject
42	R. Milne	Oppose	A fairer set of regulations that allows the stimulation of growth in the District via continued use of frost fans without unduly harsh restrictions.	Accept

<b>Sub #</b>	<b>Name</b>	<b>Oppose / Support</b>	<b>Decision requested</b>	<b>Decision</b>
43	J. Cundal	Oppose	No change to current Plan as proposed regulations too restrictive and should instead be modelled on those of Central Otago or Marlborough.	Reject
44	L. M. Giovanella	Oppose	No change to current situation.	Reject
45	A. Anderson	Oppose	No change to current Plan as proposed regulations too restrictive and should instead be modelled on those of Central Otago or Marlborough.	Reject
46	A. Freeth	Oppose	Formation of a special council to investigate issues as they arise rather than a blanket restriction on all users.	Reject
47	O. A. D. Jackson	Oppose	Formation of a special council to investigate issues as they arise rather than a blanket restriction on all users, whether they are responsible users of wind machines or not.	Reject
48	P. Kedge	Oppose	A fairer set of regulations that allows for the stimulation of growth in the Waipara area so that viticulturists can use frost fans without harsh restrictions.	Accept
49	M. Lloves	Oppose	A fairer set of regulations that allows each application to be considered as they are made rather than a blanket decision on all users.	Accept in part
50	P. C. Clausen	Oppose	More fair set of regulations that allow existing businesses to continue to operate their established vineyards, which are what makes region special.	Accept
51	R. M. Wharfe	Oppose	No change to current situation.	Reject
52	R. M. Croft	Oppose	Promote a set of regulations that would be fair and produce growth in the District rather than put unduly harsh restrictions on the use of frost fans in the region.	Accept
53	M. G. Donaldson	Oppose in part	Make no change to the Plan, or	Reject
			Bring in fair regulations to continue the success of Waipara as a grape growing region.	Accept
54	Waipara Valley	Oppose in part	The Plan Change proceed but incorporating the amendments proposed in the submission	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
	Winegrowers Inc & the New Zealand Winegrowers		<p>Operation of wind machines shall be a permitted activity provided that:</p> <p>(i) Any wind machine (or number of wind machines operating simultaneously on a property) within the Waipara Wine Growing Area shall be constructed and operated such that any noise emission measured at the notional boundary of a dwelling house located on a separate lot under different ownership shall not exceed 65 dBA <math>L_{eq}</math>; and</p> <p>(ii) Any wind machine (or number of wind machines operating simultaneously on a property) in all other areas of the district shall be constructed and operated such that any noise emission measured at the notional boundary of a dwelling house located on a separate lot under different ownership shall not exceed 60 dBA <math>L_{eq}</math>; and</p> <p>(iii) Any wind machine is located no less than 300 metres from any residential or Rural Lifestyle Area boundary or within 100 metres of the notional boundary of any dwelling house not located on the property; and</p> <p>(iv) Wind machines shall only be operated for frost protection when the air temperature reaches 2°C or lower; and</p> <p>(v) Wind machines shall not exceed 12 metres in height (excluding the blades); and</p> <p>(vi) Wind machines shall only be operated for maintenance, testing and normal agricultural practises other than frost protection between the hours of 8:00am and 6:00pm, maintenance operation outside of these hours shall only occur for emergency circumstances; and</p> <p>(vii) Operators of wind machines shall keep a log of operating dates including the length of time each operation occurs for. This log shall be made available at Council's request for compliance purposes.</p>	<p>Reject</p> <p>Reject</p> <p>Reject</p> <p>Accept in part</p> <p>Accept</p> <p>Accept in part</p> <p>Accept in part</p>
			Failure to comply with the above rules shall mean that restricted discretionary resource consent is required.	Reject
			Include the following rule in the District Plan: "Where any new residential or visitor accommodation activity is located within 500 metres of an existing vineyard, any building associated with that activity shall be constructed so as to ensure that habitable spaces within the building shall achieve an indoor design sound level of 30 dBA $L_{eq}$ ".	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
55	Frostboss Windmachines Ltd	Oppose in part	That the noise levels be measured in accordance with Industry Standards, that is dBA <sub>L-10</sub> .	Reject
			That the distance requirement stay at 300m from the notional boundary but be compliant at 55dBA <sub>L-10</sub> .	Reject
			That quieter and less intrusive wind machine options be explored.	Reject
56	J. G. & L. M. Murchison	Support in part	Apply the same rules for frost fans over the whole General Management Area.	Accept
			Delete the words from 'but not to an extent' to the end of the explanation to Policy 10.9.	Reject
			Add the following sentence to Policy 10.9: "The use of frost control fans should be limited to those times when unseasonable early or late frost events may damage crops. The policies and rules are not intended to provide for frost control fans to be used throughout autumn and winter months when frosts are expected to be a regular occurrence, as a means to protect frost vulnerable crops".	Reject
			Rewrite Rule A1.2.9 as a controlled activity and make the following amendments: (1) Add a standard and term that limits the use of frost protection devices to the period from the second week in October to the second week in April, or thereabouts (inclusive); (2) Add a standard and term requiring the owner or manager reside on-site when frost control occurs; (3) Amend condition (ii) so that the setback distance for frost control fans is 500m from the boundary of any property (not held in the same ownership), excluding formed, legal road and railway lines; (4) Add matters of control, including but not limited to: - location and number of frost control protection devices on the property; - the frequency with which the frost protection device may operate and a review condition to this effect; - the approval of a neighbourhood communication and complaints action plan; - the regular reporting of the use of frost control fans is undertaken and submitted to the Council; (5) Any frost control fan which does not comply with the rules for a controlled activity should be a discretionary activity, provided it complies with the standards and	Accept in part Reject Reject Accept in part Reject Accept

Sub #	Name	Oppose / Support	Decision requested	Decision
			terms for a noise limit of 55dBa <sub>L<sub>Aeq</sub> 10min</sub> ; (6) Any consequential amendments required to give effect to the decisions requested.	
57	B.Gould	Support in part	Greater protection for residents - changes do not go far enough to protect quiet rural environment.	Accept in part
58	K. McCauley	Oppose	Reject proposed Plan Change 18.	Reject
59	M. W. Poole & F. A. Ainsley	Oppose in part	Reword the explanation of words under Policy 10.9 such as "limited period", and words in 11th paragraph such as "slightly higher noise levels" as they are considered misleading. In addition, "Accordingly, limits..." should be quantified or removed as maintaining the effectiveness of these devices should not over-ride the health and safety requirements of residents.	Accept in part
			Restrict height of frost fan tower to 10m (not including blades).	Reject
			Noise limits to be reduced to 30dB LAeq (10) inside bedrooms of affected dwellings.	Accept in part
			Acoustic insulation levels to be set correctly.	Accept in part
			Maintain a maximum number of fans within set distances of dwellinghouses.	Reject
			Any fan that fails to comply with permitted activity status requires mandatory consent from affected parties.	Reject
			One set of rules for the entire Hurunui District - 45dB LAeq at notional boundary.	Accept in part
			Add discretionary parameter "using best available technology".	Reject
			Enforcement rules and complaints procedure needs to be stated.	Reject
60	L. & M.	Oppose in	Reword explanation of "limited period" under Policy 10.9.	Reject

<b>Sub #</b>	<b>Name</b>	<b>Oppose / Support</b>	<b>Decision requested</b>	<b>Decision</b>
	Jennings	part	Noise limits to be reduced to 45dB LAeq(10) at notional boundary and include 30dB LAeq (10) inside bedrooms of affected dwellings.	Reject
			Add Discretionary parameter "using best available technology".	Reject
			Any fan that fails to comply with permitted activity status requires mandatory consent from affected parties.	Reject
			Enforcement rules and complaints procedure needs to be stated.	Reject
			Maintain a maximum number of fans within set distances of dwellinghouses.	Reject
61	J. K. & A. P. Chaney	Oppose in part	Reword the explanation of words under Policy 10.9 such as "limited period", and words in 11th paragraph such as "slightly higher noise levels" as they are considered misleading. In addition, "Accordingly, limits..." should be quantified or removed as maintaining the effectiveness of these devices should not over-ride the health and safety requirements of residents.	Accept in part
			Restrict height of frost fan tower to 10m (not including blades).	Reject
			Noise limits to be reduced to 30dB LAeq (10) inside bedrooms of affected dwellings.	Accept in part
			Acoustic insulation levels to be set correctly.	Accept in part
			Any fan that fails to comply with permitted activity status requires mandatory consent from affected parties.	Reject
			One set of rules for the entire Hurunui District - 45dB LAeq at notional boundary.	Accept in part
			Add discretionary parameter "using best available technology".	Reject
			Enforcement rules and complaints procedure needs to be stated.	Reject
62	Common Sense Incorporated	Oppose in part	Reword the explanation of words under Policy 10.9 such as "limited period", and words in 11th paragraph such as "slightly higher noise levels" as they are considered misleading. In addition, "Accordingly, limits..." should be	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
			quantified or removed as maintaining the effectiveness of these devices should not over-ride the health and safety requirements of residents.	
			Restrict height of frost fan tower to 10m (not including blades).	Reject
			Noise limits to be reduced to 30dB LAeq (10) inside bedrooms of affected dwellings.	Accept in part
			Acoustic insulation levels to be set correctly.	Accept in part
			Maintain a maximum number of fans within set distances of dwellinghouses.	Reject
			Any fan that fails to comply with permitted activity status requires mandatory consent from affected parties.	Reject
			One set of rules for the entire Hurunui District - 45dB LAeq at notional boundary.	Accept in part
			Add discretionary parameter "using best available technology".	Reject
			Enforcement rules and complaints procedure needs to be stated.	Reject
63	L. Horn	Oppose in part	Reword the explanation of words under Policy 10.9 such as "limited period", and words in 11th paragraph such as "slightly higher noise levels" as they are considered misleading. In addition, "Accordingly, limits..." should be quantified or removed as maintaining the effectiveness of these devices should not over-ride the health and safety requirements of residents.	Accept in part
			Restrict height of frost fan tower to 10m (not including blades).	Reject
			Noise limits to be reduced to 30dB LAeq (10) inside bedrooms of affected dwellings.	Accept in part
			Any fan that fails to comply with permitted activity status requires mandatory consent from affected parties.	Reject
			One set of rules for the entire Hurunui District - 45dB LAeq at notional boundary.	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
			Add discretionary parameter "using best available technology".	Reject
			Enforcement rules and complaints procedure needs to be stated.	Reject
64	R. Mahan	Oppose in part	Reword the explanation of words under Policy 10.9 such as "limited period", and words in 11th paragraph such as "slightly higher noise levels" as they are considered misleading. In addition, "Accordingly, limits..." should be quantified or removed as maintaining the effectiveness of these devices should not over-ride the health and safety requirements of residents.	Accept in part
			Noise limits to be reduced to 50dB LAeq (10) at notional boundary and include 30dB LAeq (10) inside of bedrooms of affected dwellings	Reject
			Any fan that fails to comply with permitted activity status requires mandatory consent from affected parties.	Reject
			Enforcement rules and complaints procedure needs to be stated.	Reject
65	Waipara Valley Vineyard Ltd	Oppose in part	Within the Waipara Wine Growing Area frost fans should be a permitted activity if:  (a) The noise of a single or multiple frost fans does not exceed 65dBA Leq at the notional boundary of an adjacent dwelling; and  (b) the frost fan(s) are no closer than 100 metres to the notional boundary of an adjacent dwelling.	Reject
66	Mount Brown Vineyard Ltd	Oppose in part	Within the Waipara Wine Growing Area limit the noise of a single or multiple frost fan(s) to 65dBA Leq at the notional boundary of an adjacent dwelling.	Reject
			Allow the installation of frost fan(s) at a distance not less than 100 metres from the notional boundary of an adjacent dwelling.	Accept in part
67	For Zero to Five Ltd	Oppose in part	Adopt submission made by the 'Waipara Valley Wine Growers & New Zealand Wine Growers'.	Accept in part
68	Longsmith Partnership	Oppose in part	Adopt regulations in line with those currently in Central Otago and Marlborough.	Reject
69	I. & C.	Oppose in	To bring in regulations which are about controlling noise at levels similar to those in Marlborough and Central	Reject

Sub #	Name	Oppose / Support	Decision requested	Decision
	Donaldson	part	Otago and ignore separation distances which are irrelevant.	
			To be more flexible in the other issues, such as the control of temperature of operation, hours of operation for maintenance and assessment criteria.	Accept in part
			To set up a Committee to monitor the best practise use of wind machines.	Reject
			To take account of the economic effects of the proposal and to make special allowances for the designated Waipara Wine Growing Area.	Accept in part
70	M. Gardner	Support in part	That Chapter C1, Resource Consent Procedures amended section "(xi)" be included in its entirety with particular attention paid to criteria 10 - "the unsuitability of the site due to being unusually frost prone".	Accept
71	FMR Group Ltd	Support in part	Retention of the Policy, Methods and Explanation as currently expressed under Policy 10.9.	Accept in part
			Retention of exclusion to Rule A1.2.7 as proposed.	Accept
			Insertion in Rule A1.2.9(i)(i) of reference to Rule A1.3(a)(v) (frost fan control fans outside the Waipara Wine Growing Area), as follows: "Normal agricultural practises undertaken for a limited duration, such as harvesting, but not the use of frost control fans (refer Rule A1.2.9(i) and Rule A1.3(a)(iv))".	Reject
			Amend Rule A1.2.9(i)(i) as follows: Noise of frost control fans when assessed at the notional boundary of any dwelling on a separate lot under different ownership shall not exceed:  (a) 50 dB $L_{Aeq, 10min}$ for frost control fans with special audible characteristics. This noise limit includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured or calculated noise levels; or  (b) 55 dB $L_{Aeq, 10min}$ for frost control fans without special audible characteristics.	Reject
			Remove proposed Rule A1.2.9(i)(ii).	Reject
			Remove proposed Rule A1.2.9(i)(iii).	Reject

Sub #	Name	Oppose / Support	Decision requested	Decision
			Amend Rule A1.2.9(i)(iv) to include: "This condition does not apply to frost control fans being tested for product development purposes where advance notice has been provided to residents of all dwellings within 1000m of the frost control fan being tested."	Reject
			Amend proposed Rule A1.2.9(i)(v) to "...between the hours of 7.30am and 5.30pm weekdays. Maintenance test operation..."	Accept in part
			Retention of Rule A1.2.21 as proposed.	Accept in part
			Amend proposed Rule A1.3(a)(v) 'standards and terms' section as follows, and number as Rule (iv):  "Noise of frost control fans in the Waipara Wine Growing Area identified in Appendix E4, when assessed at the notional boundary of any dwelling on a separate lot under different ownership shall not exceed:  (a) 50 dB $L_{Aeq\ 10min}$ for frost control fans with special audible characteristics. This noise limit includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured or calculated noise levels; or  (b) 55 dB $L_{Aeq\ 10min}$ for frost control fans without special audible characteristics."	Reject
			Treat frost fans which do not meet the requirement of Rule A1.3(a)(iv) as a discretionary rather than non-complying activity.	Reject
			Remove proposed assessment criteria C1.2.4(a)(xi).	Reject
72	A. & M. Still	Oppose in part	Support for Waipara Valley Winegrowers submission.	Accept in part
			Noise standard of 65DBA acceptable.	Reject
			Machines should be able to be located within 100m of rural dwellings and 300m of urban dwellings as permitted activity.	Reject
			Frost fans should not be subject to any time restriction and should be solely governed by climatic need for protection.	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
73	Terrace Edge Vineyard & Olive Grove	Oppose in part	(Relief sought unclear)	Reject
74	D. W. Whalley	Support in part	Rule changes should include: (1) An anemometer fitted to frost fans to stop operation over 8kph; (2) A maximum blade tip speed as per previous submission; (3) Automatic shutdown when noise levels are in excess of 45/55 decibels	Reject
75	L. McGlone	Oppose in part	A fair decision based on a fair noise level and not distance related.	Accept in part
76	E. C & M. Orr	Oppose	Keep the noise level at 65dba inside the Waipara wine region.	Reject
			Do not link distance with decibel level.	Accept in part
			Keep the status quo.	Reject
77	P. E. Hulsman	Support in part	That the changes are implemented as detailed on attached pages	Accept in part
			Remove "any dwelling on" from proposed Rule A1.2.9(i)(i);	Reject
			Amend proposed Rule A1.2.9(i)(ii) to read "Frost control fans shall be located no closer than 150m from the notional boundary of or 400m of a dwellinghouse on a separate lot under different ownership or within 400 metres of an urban area; and";	Reject
			Amend proposed Rule A1.2.9(i)(iii) to read "...located between 300 and 600 metres of a dwellinghouse...";	Reject
			Add Rule A1.2.9(i)(viii) "Dwellings on the same lot and same ownership shall be no closer than 100m from any frost fan";	Reject
			Add Rule A1.2.9(i)(ix) "If the specified noise levels at the notional boundary cannot be achieved, the HDC will have the right to demand that the affecting frost fan be re-located within 9 months from notification";	Reject

Sub #	Name	Oppose / Support	Decision requested	Decision
			Add as a restricted discretionary activity: "Provided that the noise of the frost control fans in question does not exceed 55dBLEq 10min when assessed at the notional boundary of a neighbouring property as per rule A1.2.9(i)(i), frost control fans may be located between 400m and 150m of a dwellinghouse on a separate lot under different ownership or between 400m and 200m from an urban area. A total of no more than 5 frost control fans between 150m and 400m of a dwellinghouse on a separate lot under different ownership... (and as follows under proposed Rule A1.2.9(i)(iii)). If the specified noise levels at the notional boundary cannot be achieved, the HDC will have the right to demand that the affecting frost fan be re-located within 9 months from notification";	Accept in part
			Amend proposed Rule A1.2.21 to read: "..within 600 metres of any frost control fan within the Waipara Wine Growing Area identified in Appendix E4 or within 1200 metres of any...."	Reject
			Amend definition of frost control fan to: "Frost control fan means a device designed or adapted to control frost by fanning warmer air over the frost-affected surfaces."	Reject
			Add rule that the use of helicopters for frost protection between the hours of 8pm and 7am is only permitted with the consent from all neighbours living in dwellinghouses located less than 500m from the activity concerned. This is to be reviewed on an annual basis.	Reject
78	B. A. Halliburton	Support	To give full effect to the changes proposed in Plan Change 18.	Accept in part
79	R. D. & G. W. Gould	Oppose in part	That frost fans be required to be 1000m from any dwelling or future dwelling on our property, and of an acceptable height and noise level.	Accept in part
80	Horticulture New Zealand	Support in part	First relief sought: (a) withdraw this variation and notify the whole rural plan change to address the root cause of this issue (reverse sensitivity from rural residential land use next to 'production land' activity).	Reject
			Second relief sought: (b) adequately address the issues raised in the submission of Horticulture NZ & other rural industry submissions, within the context of frost fighting being a normal rural production activity, and develop new issues, objectives and policies within the rural plan that support rural production activities and generally address reverse sensitivity issues, as covered in	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
			Schedule to submission.	
			Develop a regulatory regime that works across the District, with no exceptions, exemptions of differing standards based on a particular rural production activity or a subregion of the rural zone.	Accept in part
			<p>Develop an effects based approach to regulation of frost fan use in rural zones based on:</p> <p>(a) a permitted activity rule with limited controls, where no verified complaints have been received from established residents; and</p> <p>(b) A verified complaint process should be established as a non regulatory method in the plan; and</p> <p>(c) A permitted activity rule with appropriate conditions based on good agricultural practise for rural production operations adjoining, or adjacent to rural residential neighbours; and</p> <p>(d) A default controlled activity rule that addresses rural operations that cannot meet the permitted activity baseline; and</p> <p>Recognise Dr Hunt's report and make appropriate amendments to the proposed plan and notified variation.</p>	Accept in part
			Amend Policy 10.9a as follows: "To provide for frost control fans as part of primary production activities, while avoiding, remedying or mitigating the generation of unnecessary noise levels."	Reject
			<p>Amend proposed explanation under Policy 10.9 as follows: "Some primary production activities have the potential to generate noise levels that rural residents may oppose. Frost control fans are on such example. Frost control fan use represents good agricultural practice by primary producers protecting crops from frost damage that can generate significant economic loss to the primary producer and the region.</p> <p>Generally, frost control fans are used intermittently in the winter on days when the temperature approaches freezing level at zero degrees. There is a limited period in which the noise levels from frost fans in the rural zone can be expected. Given the important role of primary production and the growing importance of viticulture and horticultural activities to the District, these periods of slightly higher noise levels are appropriate.</p> <p>However, these higher noise levels can conflict with the expectations of some rural residents. Accordingly, limits</p>	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
			are used on the establishment and operation of these machines and devices to ensure the noise levels do not result in unnecessary noise, but not to an extent which diminishes the effectiveness of these devices in serving the purpose for which they are designed.”	
			Use the conclusions in Dr Hunt's report to establish a permitted activity baseline for the use of frost fans.	Accept in part
			Any consequential amendments to give effect to the decision sought in the submission.	Accept
81	L. Dickson	Support in part	Consider whether limiting frost fans to operate at 55dB 500m from adjacent dwellings is enough, and whether it should be measured at the boundary.	Accept in part
			Adopt measurable standards that govern noise, times of use and temperature controls.	Accept in part
			Consent should be required for all frost fans and rigorous testing to ensure they meet noise limits	Reject
82	L. M. Robinson	Support in part	Do not change height rule - resource consent should be required for all frost fans.	Reject
			Exclude frost fans from Rule A1.2.9.	Accept
			Change wording of rule under which fans can operate as indicated.	Reject
			Set noise levels of all fans operation to 45 dB L <sub>Aeq 10min</sub> at notional boundary, with 30dB L <sub>Aeq 10min</sub> in bedrooms for District.	Accept in part
			Add new rule covering Frost fan generators.	Reject
			Lower start up temperature from 2 <sup>o</sup> C to 1 <sup>o</sup> C	Reject
			Apply buffer zones to land use for viticulture and primary production.	Accept in part
83	V. & S. Jennings	Oppose in part	Separation distance should be a minimum of 1000m for existing and future dwellings.	Reject
			The Council needs to set a noise level so that when frost fans are installed in compliance with District Plan rules there would be no objections from any neighbours when all fans in the area are running as their sleep would not	Accept in part

Sub #	Name	Oppose / Support	Decision requested	Decision
			be disturbed.	
84	Teece Family Vineyard	Support in part	General support for the Waipara Valley Wine Growers Inc and New Zealand Wine Growers submission (WVWG & NZWG).	Accept in part
			Frost fans should be treated as a permitted activity subject to conditions and permitted activity status should be extended to the Cheviot Hills area and this area be included as a specially designated zone within the District Plan and accompanying maps.	Accept in part
			65dBA L <sub>eq</sub> threshold should be adopted rather than proposed 55dBA L <sub>eq</sub> , and apply in Cheviot Hills area as well as WWGA.	Reject
			That the separation distance under proposed Rule A1.2.9(i)(iii) be reduced from 500m to 300m and be applied to Cheviot Hills area.	Reject
			That the 2 <sup>o</sup> C trigger point in proposed Rule A1.2.9(i)(iv) apply to Cheviot Hills area and be amended and simplified to remove the requirement for air temperature testing at bud height as per WVWG & NZWG's submission	Accept in part
			That in line with WVWG & NZWG's recommendations the following rules be adopted in the Cheviot Hills area as well as the WWGA:  (a) Frost fan machines shall not exceed 12m in height (excluding blades); and  (b) The hours of maintenance will be between 8.00am and 6.00pm as opposed to 9.00am to 5.30pm on weekdays.	Accept in part
			That where any new residential or visitor accommodation activity (that is not on a separate lot under different ownership) is proposed within 500m of an existing vineyard, any building associated with the new activity will be constructed to ensure the habitable spaces within it achieve an indoor sound level no more than 30dBA L <sub>eq</sub> . That this requirement apply within the Cheviot Hills area also.	Accept in part
			Any consequential amendments to the Plan to accommodate the Cheviot Hills area as equitable to the Waipara Wine Area.	Accept

## Appendix 2: – Amendments to the District Plan

### Chapter headed “Protection & enhancement of environmental quality”:

Add a new policy under Policy 10.9 to read as follows:

*“Policy 10.9(a): To provide for frost control fans as part of primary production activities, while avoiding the generation of unnecessary or unreasonably high noise levels.”*

“Methods” under Policy 10.9:

Amend from “Policy 10.9 shall be implemented through” to read:

*“Policies 10.9 and 10.9(a) shall be implemented through”.*

“Explanation” under Policy 10.9:

Add ~~tenth and eleventh~~ and twelfth paragraphs to the “Explanation” to read as follows:

*“Some machines and devices used in primary production activities have the potential to generate noise levels which can create a nuisance to residential activities in the rural area. Bird scaring devices and frost control fans are two forms of equipment used by primary producers to protect crops from damage that can generate significant off-site noise emissions.*

*Generally, these machines and devices are used on a seasonal basis, and therefore have a limited period in which the potentially high noise levels in the rural environment can be expected. Given the important role of primary production and the growing importance of viticulture and horticulture activities to the District, these periods of ~~slightly~~ higher noise levels are appropriate, ~~particularly in the Waipara Wine Growing Area~~. However, these higher noise levels can conflict with the typically quiet rural environment at night time and early morning. Accordingly, limits are used on the establishment and operation of these machines and devices to ensure the noise levels do not result in unreasonable or unnecessary noise, but not to an extent which diminishes the effectiveness of these devices in serving the purpose for which are they designed.”*

### Chapter A1, Environmental Amenity

Amend Rule A1.2.7 Height (b) Exemptions by adding an exclusion for blades on frost control fans to read as follows:

*“Frost control fans up to 12m height (not including blades)”*

Amend Rule A1.2.9(i) Noise Exemptions (i) for normal agricultural practices to exclude frost control fans to read as follows:

*“Normal agricultural practices undertaken for a limited duration, such as harvesting, but not the use of frost control fans (refer Rule A1.2.9(i))”.*

Amend Rule A1.2.9(i) Noise Exemptions by re-numbering to “(j)”.

Amend Rule A1.2.9 Noise by adding a new rule “(i)” for frost control fans to read as follows:

*“(i) Frost control fans ~~in the Waipara Wine Growing Area as identified in Appendix E4 of this Plan – any frost control fan in the above area shall be constructed and operated in accordance with the following conditions:~~*

- (i) Where frost control fans operate for a maximum of 20 nights per year, the noise of frost control fans shall not exceed 55dB  $L_{Aeq, 10min}$  when assessed at the notional boundary of any dwelling on a separate lot under different ownership. The noise limit applies to the total noise from all frost control fans in the vicinity operating simultaneously. The noise limit includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured or calculated noise levels.
- (ii) Where frost control fans operate for a maximum of 20 nights per year, frost control fans shall be located no closer than 500 metres of a dwellinghouse on a separate lot under different ownership or within 500 metres of an urban area; and
- (iii) Where frost control fans operate for a maximum of 20 nights per year, there shall be a total of no more than five frost control fans located between 500 and 1000 metres of a dwellinghouse on a separate lot under different ownership on any other site or of an urban area (note: the total number includes frost control fans on all sites within that distance, including the application site. For the purpose of this rule, "frost control fan" includes a proposed frost control fan for which an approved building consent and/or resource consent has been granted.)
- (iv) Where frost control fans operate for more than 20 nights per year, the noise of frost control fans shall not exceed 45dB  $L_{Aeq, 10min}$  when assessed at the notional boundary of any dwelling on a separate lot under different ownership. The noise limit applies to the total noise from all frost control fans in the vicinity operating simultaneously. The noise limit includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured or calculated noise levels.
- (v) Where frost control fans operate for more than 20 nights per year, frost control fans shall be located no closer than 1500 metres of a dwellinghouse on a separate lot under different ownership or within 1500 metres of an urban area; and
- (vi) Where frost control fans operate for a maximum of 20 nights per year, there shall be a total of no more than five frost control fans located between 1500 and 2000 metres of a dwellinghouse on a separate lot under different ownership on any other site or of an urban area (note: the total number includes frost control fans on all sites within that distance, including the application site. For the purpose of this rule, "frost control fan" includes a proposed frost control fan for which an approved building consent and/or resource consent has been granted.)
- (vii) Frost control fans shall only operate when the local air temperature is 2°C or below. The thermometer used to measure the air temperature shall be located at a height above ground relevant to the height of the buds above ground on the plants being protected.
- (viii) Operation for maintenance purposes shall be restricted to between the hours of 9.00am and 5.30pm weekdays. Test operation may take place only for emergency maintenance purposes outside these hours.
- (ix) A written log shall be maintained, clearly recording the date and length of time each frost control fan is used. The log shall include the air temperature at which each frost control fan started operation, and include running for maintenance purposes. A copy of the log shall be made available to the Council upon request.

- (vii) For the purpose of this rule, “dwellinghouse” includes a proposed dwellinghouse for which an approved building consent and/or resource consent has been granted.

Amend Rule A1.2 Conditions for Permitted Activities by adding a new rule “A1.2.224 Acoustic Insulation near Frost Control Fans” to read as follows:

**A1.2.224 Acoustic insulation near frost control fans**

- (a) Any new dwellinghouse located on a separate lot under different ownership within 1000 metres of any frost control fan ~~within the Waipara Wine Growing Area identified in Appendix E4 or within 2000 metres of any frost control fan in any other area~~ shall be designed and constructed to ensure that the noise level inside any bedroom of the dwelling shall not exceed 30 dBA  $L_{Aeq}$  with all fans operating at normal duty, and shall incorporate a mechanical ventilation system in accordance with the New Zealand Building Code. Compliance with this standard shall be demonstrated by the production of a design certificate from an appropriately qualified and experienced acoustic engineer. The design certificate shall be based either on actual noise measurements with all fans operating at normal duty, or on an assumed noise level from any one frost fan as shown below, corrected for the number of fans present at the time.”

	Octave Centre Frequency (Hz)							
	63	125	250	500	1k	2k	4k	dBA
Design sound pressure level for one frost fan at 500 metres	64	61	49	44	45	38	27	50

- (b) For the purpose of this rule, “frost control fan” includes a proposed frost control fan for which an approved building consent and/or resource consent has been granted.

~~Amend Section A1.3(a) Restricted Discretionary Activities by adding a new rule “(v)” for frost control fans to read as follows:~~

Insert Section A1.X to add a new section for Controlled Activities for frost control fans to read as follows:

- ~~“(va) Frost control fans in the Waipara Wine Growing Area as identified in Appendix E of the Plan which do not meet the requirements in Rule A1.2.9(i), or any frost control fan in all other areas of the District.~~

**Standards and terms**

~~Noise of frost control fans in the Waipara Wine Growing Area identified in Appendix E4 shall not exceed the maximum noise limit under Rule A1.2.9 (i)(i) 55dB  $L_{Aeq, 10min}$  when assessed at the notional boundary of any dwelling on a separate lot under different ownership. The noise limit applies to the total noise from all frost control fans in the vicinity operating simultaneously. The noise limit includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured or calculated noise levels.~~

Frost control fans shall operate for a maximum of 20 nights per year.

Frost control fans shall be located no closer than 150 metres of a dwellinghouse on a separate lot under different ownership or within 150 metres of an urban area.

A dwellinghouse is defined as under Rule A1.2.9(i)(ix)

~~Noise of frost control fans outside the Waipara Wine Growing Area identified in Appendix E4 shall not exceed 45dB  $L_{Aeq, 10min}$  when assessed at the notional boundary of any dwelling on a separate lot under different ownership.~~

**Restriction on Discretion**

**Matters for Control**

~~In considering applications for resource consent under this rule, the Council shall restrict its discretion to the following matters:~~

The matters over which the Council reserves control for the purposes of assessment in relation to an application under this rule are:

Operational requirements of frost control fans

Noise mitigation measures

Cumulative effects of noise from other frost control fans in the vicinity

Hours of operation

~~Benefits of the use of the frost control fans, having regard to alternative methods.~~

Amend Rule A1.4 Discretionary Activities (unrestricted) by adding two new rules to read as follows:

(Y) Frost control fans which:

- operate for a maximum of 20 nights per year; and
- are located no closer than 150 metres of a dwellinghouse on a separate lot under different ownership or within 150 metres of an urban area; and
- do not exceed 60dB  $L_{Aeq, 10min}$  when assessed at the notional boundary of any dwelling on a separate lot under different ownership. The noise limit applies to the total noise from all frost control fans in the vicinity operating simultaneously. The noise limit includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured or calculated noise levels; and
- A dwellinghouse is defined as under Rule A1.2.9(i)(ix)

(Z) Frost control fans which:

- operate for more than 20 nights per year; and
- are located no closer than 150 metres of a dwellinghouse on a separate lot under different ownership or within 150 metres of an urban area; and
- do not exceed 55dB  $L_{Aeq, 10min}$  when assessed at the notional boundary of any dwelling on a separate lot under different ownership. The noise limit applies to the total noise from all frost control fans in the vicinity operating simultaneously. The noise limit includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured or calculated noise levels; and
- A dwellinghouse is defined as under Rule A1.2.9(i)(ix)

Amend Section A1.5 Non-complying Activities by adding a new rule “(eg)” for frost control fans to read as follows:

*“(eg) Frost control fans which are not provided for as a permitted, controlled, or discretionary activity. do not meet the requirements in Rule A1.3 (a)(v).*

Renumber existing sections A1.3 through to A1.5 as A1.4 through to A1.6.

## **Chapter C1, Resource Consent Procedures**

Amend Assessment Criteria C1.2.4 (a) Environmental Amenity by adding a new section “(xii)” for frost control fans to read as follows:

*“(xii) Frost Control Fans*

- *Whether there is an operational necessity to operate the frost control fans outside the permitted activity standards and, if so, whether;*
  - *The noise levels are likely to detract from the amenity or general environmental quality of the area in which they are received, including noise levels likely to cause sleep disturbance or result in adverse health effects;*
  - *Mitigation measures are the best practicable option; these mitigation measures may include shielding of devices, selection of the most appropriate type or types of device, and location and position of device/s;*
- *Hours of operation;*
- *Whether protocols, codes of practice and industry guidelines are used;*
- *The cumulative effects of multiple frost control fans in the vicinity;*
- *The proximity to residential areas or to residential dwellings in rural areas including the visual effects;*
- *The presence of topographic features or predominant climatic characteristics enhancing propagation of sound;*
- *The availability of inaudible or less noisy frost mitigation devices;*
- *The unsuitability of the site due to being unusually frost prone;*
- *Benefits of the use of the frost control fans, having regard to alternative methods.*

## Section D, Interpretation

Add a definition of “frost control fan” to Section D to read as follows:

*“Frost control fan means a land based device designed or adapted to control frost by fanning warmer air over the frost-affected surfaces, and includes the support structure.”*