

HGI Plan Review: section 32 report for noise

1.0 Executive summary

This report summarises the evaluation undertaken by the council of proposed district plan provisions relating to noise from activities on the Hauraki Gulf islands, in terms of section 32 of the Resource Management Act.

The main conclusions are:

- section 16 of the RMA requires occupiers of land to adopt the best practicable option to ensure the emission of noise from that land does not exceed a reasonable level;
- the noise controls proposed are council's indication of what it considers is a reasonable level of noise for most activities;
- the controls proposed seek to differentiate between short term noise events, which by their nature are usually louder than other events, arising from activities such as construction, sports events, aircraft landings, special events and blasting, and controls for ongoing noise arising from domestic, commercial and industrial activities;
- nearly all of the controls proposed are based on recognised New Zealand noise standards.

2.0 Introduction

2.1 Purpose of this report

This report is to meet the section 32 requirements of the Resource Management Act.

2.2 Proposed plan provisions

The plan provisions seek to avoid unreasonable or excessive noise from land use activities on the Hauraki Gulf Islands. The proposed general noise provisions will control the amount of noise that can be produced by an activity in a land unit or settlement area when that noise affects a residential use in the same or an adjacent land unit or settlement. These levels will depend on the characteristics of the land unit or settlement area e.g. use and density of population. In addition controls are proposed for:

- noise arising from construction activities
- the amount of vibration that can arise from blasting or pile driving activities;
- the noise from blasting and quarrying activities;
- the noise generated within the industrial land unit;
- the amount of noise insulation required for residential uses in Onetangi, Oneroa, Ostend and Matiatia;
- events where amplified entertainment is used;
- aircraft movements through controls on the number of movements and limitations on the maximum noise level where there is a residential use nearby;
- Claris and Okiwi airfields to keep noise sensitive activities out of the high noise areas around these airfields;
- generator noise.

Many of the proposed noise rules are similar to those in the operative Plan. The general noise provisions that apply to all land units and settlement areas have in many cases been increased slightly to reflect the growth in population and activities in the gulf islands, particularly on Waiheke.

Reference should be made to the section 32s prepared for the land units and settlement areas for specific comment on noise levels.

2.3 Consultation

This section of the report briefly outlines the consultation that the council has undertaken to date and identifies any issues raised of particular relevance to the issue of noise.

2.3.1 Consultation to date

The council undertook consultation in 2005 in preparation for drafting the proposed Plan.

Initial consultation

The main consultation period was from April to July 2005. Consultation during that period consisted of:

- public meetings, workshops, nga hui, and one on one meetings
- a photographic exercise on Waiheke
- inviting written feedback on a consultation document which contained issues and options papers on a wide range of topics.

Focus groups

At the close of consultation, the council analysed the feedback forms received. From these, key issues were identified that subsequently became topics for focus groups on Waiheke. The four topics for the focus groups were:

- landscape
- transport
- sustainability
- future planning (including subdivision, growth, and providing for business activity).

An additional workshop was also held on Great Barrier to give a further opportunity to discuss issues raised through the feedback forms.

Telephone survey

The council commissioned an independent research company to undertake a phone survey in late 2005. The survey was of a randomly selected sample of 1002 on-island residents and off-island ratepayers of Waiheke, Great Barrier and Rakino. The questionnaire used for the survey was designed to get responses on the key issues that had emerged from the consultation process and stakeholder feedback.

The survey provided a means of canvassing the views of a wide range of people who may not have been previously involved in the consultation process.

Consultation with other stakeholders

During the preparation of a proposed plan, the council has also consulted with the following parties:

- the Auckland Regional Council ('ARC')
- the Department of Conservation ('DOC')
- tangata whenua
- network utility authorities
- Ministry for the Environment (MfE).

Public notification

Notification of the Plan provides an opportunity for further public participation through the formal submission and appeal process.

2.3.2 Issues raised during consultation

There were two issues and options papers released that related to noise: helicopters and noise of generators – Great Barrier Island. Of the 13 people/groups who gave feedback on helicopters approximately half sought to restrict the location and number of helicopter movements in all land units or to limit aircraft movements in more land units. Feedback on the noise of generators from seven people/groups suggested that most believed the noise of generators should be controlled.

3.0 Resource management issues and objectives

3.1 Issues

Noise is usually defined as unwanted sound. Noise can cause annoyance, speech and sleep disturbance, decrease in concentration, reduction in efficiency, physiological disturbances and in the worst instances can cause hearing loss. In most urban areas road traffic noise has been identified in community surveys to be the environmental pollutant affecting the greatest amount of people.

Annoyance has been found to depend on intensity, frequency, duration, tonal content, localisation, distance and information content. The characteristics of the environment has a considerable part in determining the degree of annoyance. This may include the type of neighbourhood the noise is produced in, the time of the day at which the noise is produced and the day of the week at which the noise occurs. Finally, the characteristics of the individual and their expectations is the most important factor in determining the level of individual annoyance. Therefore it is not possible to predict the annoyance of an individual by noise, from a measurement based on the physical parameters of the noise alone.

Noise measurements taken on Waiheke and Great Barrier have shown that background noise levels, particularly at night time can be particularly low and in many areas are not significantly affected by road traffic noise or large scale commercial/industrial activities. Noise sources are more likely to be the noise of the sea, wind noise, the noise of individual vehicles both near and far, the noise of cicadas, crickets, birds and dogs as well as occasional noise from residential and commercial activities. Near to or in commercial areas it is common that there will be the noise of fans and engines from refrigeration or heating equipment. Generators are a significant contributor to night time noise on Great Barrier Island.

Council is required to give recognition to these background noise levels but to recognise that the noise levels imposed, including those at night time, must enable reasonable residential and commercial activities to occur, especially in areas of higher population.

The significant resource management issue which needs to be addressed in the Plan are:

- i. How to encourage more sustainable management of natural and physical resources;
- ii. How to ensure that growth and development occurs in a manner that is consistent with sustainable development.

Noise is a by-product of growth and development and may be the environmental “pollutant” that affects the greatest number of people. The control of noise will therefore be consistent with sustainable development.

3.2 Objectives

There are no specific objectives for noise, but noise is included within the general objectives of the plan and the objectives for land units and settlement areas. The control of noise is consistent with the general objectives of the plan “to manage land use activities to ensure that adverse effects are avoided, remedied or mitigated” and to “enable the growth of the local economy, including business and employment.”

4.0 Statutory requirements under part II, sections 16, 31, 32, 72, 74, 76 and 326 of the Resource Management Act

Section 16 of the RMA outlines the duty to avoid unreasonable noise. Section 16 states:

- (1) Every occupier of land (including any premises and any coastal marine area) shall adopt the best practicable option to ensure the emission of noise from that land does not exceed a reasonable level.
- (2) Subsection (1) does not limit the right of any local authority or consent authority to prescribe noise emission standards in plans made, or resource consents granted, for the purposes of any of sections 9, 12, 13, 14, 15, 15A and 15B.

Section 31 sets out the council’s functions for the purpose of giving effect to the Act. The council’s functions include:

- (a) The establishment, implementation, and review of objectives, policies and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district:
- (d) The control of the emission of noise and the mitigation of the effects of noise.

Section 72 states as follows:

The purpose of the preparation, implementation, and administration of district plans is to assist territorial authorities to carry out their functions in order to achieve the purpose of this Act.

Section 74(1) of the RMA states as follows:

A territorial authority shall prepare and change its district plan in accordance with its functions under section 31, the provisions of Part II, its duty under section 32, and any regulations.

The following provisions of section 76 are also relevant:

- (1) A territorial authority may, for the purpose of –
 - (a) Carrying out its functions under this Act; and
 - (b) Achieving the objectives and policies of the plan, - include rules in a district plan.
- ...
- (3) In making a rule, the territorial authority shall have regard to the actual or potential effect on the environment of activities, including, in particular, any adverse effect.

Section 326 defines the meaning of excessive noise:

1. In this Act, the term excessive noise" means any noise that is under human control and of such a nature as to unreasonably interfere with the peace, comfort, and convenience of any person (other than a person in or at the place from which the noise is being emitted), but does not include any noise emitted by any—
 - (a) Aircraft being operated during, or immediately before or after, flight; or

- (b) Vehicle being driven on a road (within the meaning of section 2(1) of the Land Transport Act 1998]; or
- (c) Train, other than when being tested (when stationary), maintained, loaded, or unloaded.

2. Without limiting subsection (1) "excessive noise"—

- (a) includes noise that exceeds a standard for noise prescribed by a national environmental standard; and
- (b) may include noise emitted by
 - (i) a musical instrument; or
 - (ii) an electrical appliance; or
 - (iii) a machine, however powered; or
 - (iv) a person or group of persons; or
 - (v) an explosion or vibration.

In achieving the purpose of the Act, the council must carry out an evaluation under section 32 of the RMA before publicly notifying a district plan or a plan change. Section 32(3) and (4) state as follows:

- (3) An evaluation must examine –
 - (a) the extent to which each objective is the most appropriate way to achieve the purpose of the Act; and
 - (b) whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives
- (4) For the purposes of this examination, an evaluation must take into account –
 - (a) the benefits and costs of policies, rules, or other methods; and
 - (b) the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.

The statutory requirements, including section 32 matters, are assessed below under the following headings:

- The extent to which each objective is the most appropriate way to achieve the purpose of the Act
- Whether the policies, rules, or other methods are the most appropriate for achieving the objectives
 - having regard to their efficiency and effectiveness
 - taking into account the benefits and costs of policies, rules, or other methods
 - taking into account the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.

4.1 The extent to which each objective is the most appropriate way to achieve the purpose of the Act

4.1.1 The purpose of the Act

Section 5 states that the purpose of the Act is ‘to promote the sustainable management of natural and physical resources’. Section 5(2) states:

- (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 wellbeing 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.

Environment is defined in Section 2 of the RMA as including:

- (a) Ecosystems and their constituent parts, including people and communities; and
- (b) All natural and physical resources; and
- (c) Amenity values; and
- (d) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters:

Section 6 of the RMA identifies matters of national importance, which need to be recognised and provided for in achieving the purpose of the Act. There are no matters of particular relevance to the proposed controls on noise.

Section 7 deals with ‘other matters’ which, in achieving the purpose of this Act, persons exercising functions and powers under the Act shall have particular regard to. The matters that are of particular relevance to the control of noise are identified below:

Clause		
(a)	Kaitiakitanga	
(aa)	The ethic of stewardship	
(b)	The efficient use and development of natural and physical resources	
(ba)	The efficiency of the end use of energy	
(c)	The maintenance and enhancement of amenity values	✓
(d)	Intrinsic value of ecosystems	
(f)	Maintenance and enhancement of the quality of the environment	✓
(g)	Any finite characteristics of natural and physical resources	
(h)	The protection of the habitat of trout and salmon	
(i)	The effects of climate change	
(j)	The benefits to be derived from the use and development of renewable energy	

Section 8 provides that in achieving the purpose of the Act, all persons exercising functions and powers under it, in relation to managing the use, development and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti O Waitangi).

Section 9 outlines the restrictions on the use of land stating among other things that land cannot be used in a manner that contravenes a rule in a district plan or a proposed district plan unless the activity is expressly allowed by a resource consent, or is an existing use. However section 9(8) states that “the application of this section to overflying by aircraft shall be limited to any noise emission controls that may be prescribed by a territorial authority in relation to the use of airports.” An airport is defined as any defined area of land or water, intended or designed to be used, whether wholly or partly, for the landing, departure, movement or servicing of aircraft.

4.1.2 Appropriateness in achieving the purpose of the Act

Whilst there are no specific objectives for noise, the adequate control of the effects of noise is included within the general objectives of the plan and within the objective for the land units and settlement areas. The control of noise is consistent with the general objective of the plan “to manage land use activities to ensure that adverse effects are avoided remedied and mitigated” and to “enable the growth of the local economy, including business and employment.”

4.2 Whether the policies, rules, or other methods are the most appropriate for achieving the objectives

The proposed rules will meet the general objectives of the Plan by managing the noise arising from land use activities so that the adverse effects of noise are avoided or mitigated. The noise rules will be set at levels that will enable the sustainable growth of the economy, including business and employment. The proposed rules will also permit reasonable residential and recreational activities to occur at reasonable time.

The following options are the main alternatives which the council has considered as a means of achieving the objectives

4.2.1 Option 1

Do nothing - have no provision in the district plan to address noise - Rely only on:

- Sections 16 and 326 – 327 of the RMA

Benefits	Costs
Would be the least cost option for both council and land owners	Protection of amenity less likely without set noise standards for day and night time.
Would provide developers and business owners the greatest flexibility in location	In the absence of numerical standards subjective response would be applied to noise complaints and there would be inconsistency in the application of sections 16 and 326-327.
Section 326 (meaning of excessive noise) and 327 (issue and effect of excessive noise direction) are useful for dealing with excessive noise from parties and other one-off events which the standard noise controls are not meant to cover.	Noise complaints and enforcement costs would likely increase markedly because no numerical standards to determine how much noise can be made or what is an acceptable level to be subjected to. More time would be spent in court disputing abatement notices.
	No community input into what would be reasonable levels of noise for activities
	Inability to meet the purposes of the Act.

The risk of acting or not acting

The risk of acting on this option would be the subjective assessment of whether noise is unreasonable or excessive. There would be a lack of community input into noise levels through submissions because of the lack of numerical standards and a general uncertainty both for those that are noise producers and for those who would receive unwanted noise.

The risk of not acting on this option is that sections 326 and 327 of the RMA are useful in dealing with one-off events like parties which are disturbing to neighbours.

4.2.2 Option 2

Land units / settlement areas combined with activity lists. This would put industrial, commercial, recreational and residential activities into specific land units or settlement areas depending on their expected noise outputs.

Benefits	Costs
Simplicity of controls – no need for Council to take noise measurements to determine compliance	Location of activities would be imposed upon developers and business owners.
Cost savings to land owners in not having to reduce or mitigate noise levels.	Complex and inflexible system, unlikely to cover all eventualities and achieve good environmental outcomes. Assumes all activities in a land unit or settlement area have a similar effect.
Provides certainty in location for activities.	Would not encourage noise reduction from some activities and might be contrary to section 16. May lead to gradual degradation of environment as noise levels rise, leading to increase in background noise in adjacent environments.
	Buffering between land units or differing land uses within settlement areas may be required to achieve reasonable levels in sensitive areas (e.g. between commercial areas and island residential areas or between different parts of settlement areas).
	No protection from noise between one property and another in the same land unit or settlement area.

The risk of acting or not acting

The risk of acting on this option would be an inflexible system, which would not encourage the control or reduction of noise from activities. On islands like Great Barrier with low population numbers and density this option would be impracticable and could unreasonably require the clustering of similar activities into one area of the island.

The risk of not acting on this option is that for intensively developed areas such as western Waiheke the use of specific land units for high noise activities such as industrial activities are a practical means of separating noisy activities from sensitive areas such as residential land units.

4.2.3 Option 3

Option 3: Use of the proposed rules based on recognised New Zealand and overseas standards.

Benefits	Costs
Provides certainty to noise producers and noise receivers what are acceptable and reasonable levels of noise.	Doesn't deal well with all subjective responses to noise.

Benefits	Costs
Provides easy standards to measure performance against - based on accepted New Zealand standards and German standards.	Standards can be overruled by the unreasonable or excessive noise provisions of section 16 and 326 of the Act.
Historically proven to protect amenity and health.	Noise standards are averaged for a land unit or settlement area -may be too high for some areas and too low for other areas depending on background noise levels.
Flexibility - applicant can choose means of reducing or mitigating the noise produced.	Controls can be inflexible for noisy activities of short duration
Prevents background noise creep.	Existing noise producers may limit the amount of noise that new noise producers can produce in the same area.

The risk of acting or not acting

There is little risk on acting on this option except that in some areas there will be a conflict between the low background noise levels found in the area and the noise levels proposed, which must be high enough to permit activities that are reasonable for the use of that land unit or settlement area. Noise readings taken on Waiheke and Great Barrier Island are included as **appendix A**

The risk of not acting on this option would be the lack of certainty on what are reasonable levels of noise for most activities. A number of New Zealand standards form the basis of the proposed noise controls

- NZS 6801: 1999: Acoustics - Measurement of Environmental Sound
- NZS 6802: 1999: Acoustics – Assessment of Environmental Noise
- NZS 6803: 1999: Acoustics – Construction Noise
- NZS 6805: 1992: Acoustics – Airport Noise Management and Land Use Planning
- NZS 6807: 1994: Acoustics – Noise Management and Land Use Planning for Helicopter Landing Areas.
- NZS 6808: 1998: Acoustics – The Assessment and Measurement of Sound from Wind Turbine Generators.

As there is some uncertainty in NZS 6802: 1999 with regard to the averaging of noise measurements, the plan proposes some provisions to clarify the averaging of measured noise levels. Advice was sought from an acoustical consultant on this matter and the proposed rule is included in clause 4.7(3).

In addition, the proposed vibration controls for blasting and pile driving activities are based upon the German standard, DIN 4150-3: 1999 – Structural vibration – effects of vibration on structures.

4.2.4 Conclusion

Option 3 is considered the most appropriate to achieve the requirements section 5, 7, and 31 of the Act. The proposed rules have to balance the low background noise levels found in many parts of the islands with levels that are high enough to permit reasonable recreational, commercial and industrial activities to occur within reasonable hours. NZS 6802:1999 sets noise level guidelines for the protection of health and amenity. The general noise levels recommended for land units and settlement areas are no higher than those provided for in NZS 6802.

4.3 Whether the proposed rules assist the council to carry out its function of control of actual or potential effects of the use, development or protection of land

The proposed rules will help to control the effects of the use and development of land, as noise is one of the most common effects of the use or development of land. Noise controls are proposed to protect residential properties from construction noise on adjacent land, from the day to day noise that are likely to occur from activities on land units and settlement areas and from the noise of temporary activities such as special functions and concerts etc.

Specific provisions have been included to control the noise of generators (wind, petrol and diesel) on Great Barrier Island. The noise from helipads and airstrips will be controlled by limitations on the number of movements in a week, and by noise limits to be met at adjacent residential boundaries. Noise management boundaries will be provided around Claris and Okiwi airfields and noise sensitive activities will be prevented from establishing within the noise management boundaries.

Residential units within Oneroa, Ostend and Matiatia, where there is a mix of activities, will be required to be insulated against noise from other adjacent activities. Noise controls at the boundary of the quarry and limits on the vibration from blasting activities will protect residential and other uses adjacent to the quarry. Noise controls are also proposed between activities in the industrial area (commercial 5), local shops (commercial 3) and in Oneroa and Ostend villages so that the noise of one activity within the land unit does not unduly affect another activity within the same land unit.

5.0 National planning documents

5.1 National and NZ coastal policy statements

Section 75(3) of the RMA states:

- (3) A district plan must give effect to –
 - (a) any national policy statement; and
 - (b) and any New Zealand coastal policy statement; and
 - ...

There is no mention of noise in the New Zealand coastal policy statement.

6.0 Regional planning documents

6.1 Regional policy statement

Section 75(3) and (4) of the RMA state:

- (3) A district plan must give effect to –
 - ...
 - (c) any regional policy statement.
- (4) A district plan must not be inconsistent with –
 - ...
 - (c) a regional plan for any matter specified in section 30(1).

There are no specific references to noise in the Auckland Regional Policy Statement other than as an environmental effect of transport.

Chapter 35 of the Auckland Regional Plan: Coastal deals with noise in the coastal marine area and is therefore of little relevance to the noise controls proposed.

7.0 Other documents

Section 29 of the Health Act defines nuisances and includes “where any noise or vibration occurs in or is emitted from any building, premises, or land to a degree that is likely to be injurious to health. Section 30 of the Act outlines the penalties for permitting or causing a nuisance.

8.0 Procedures for monitoring

The council will monitor the effectiveness of the proposed provisions as a means of achieving the general objectives and policies of the plan by:

- investigating noise complaints and monitoring the noise levels produced;
- monitoring resource consents including the number of applications granted consent, compliance with consent conditions, and the effectiveness of those conditions;

Conclusions

The plan provisions seek to avoid or mitigate the adverse effects of noise. Section 16 of the RMA requires occupiers of land to adopt the best practicable option to ensure the emission of noise from that land does not exceed a reasonable level. The noise controls proposed are council’s indication of what it considers is a reasonable level of noise for most activities. The controls proposed seek to differentiate between short term noise events, which by their nature are usually louder than other events, arising from activities such as construction, sports events, aircraft landings, special events and blasting, and controls for ongoing noise arising from domestic, commercial and industrial activities. The controls proposed are based on recognised New Zealand standards and a German standard for vibration.