

Section 32 report: Air quality management

for the Proposed Natural Resources Plan for the Wellington Region



greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao



Issues and Evaluation Report



Section 32 report: Air quality management

for the Proposed Natural Resources Plan for the
Wellington Region

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1. Overview and purpose

This report provides an analysis of the appropriateness of the objectives, policies and methods in the proposed Natural Resources Plan for the Wellington Region (the proposed Plan) for air quality as required under section 32 of the Resource Management Act 1991.

This report should be read in conjunction with:

- Section 32 report: Introduction
- Section 32 report: Discharges to land

1.1 Background

The Resource Management Act 1991 (RMA) requires that air quality is protected while allowing people and communities to provide for their social, economic and cultural well-being. The Resource Management Act 1991 further requires regional councils to control the amount and content of all discharges into the air from industrial and trade premises and manage air quality elsewhere.

The proposed Plan has objectives and provisions to safeguard the life-supporting capacity of air. The proposed Plan is based on the operative Regional Air Quality Management Plan for the Wellington Region (Air Plan) with similar provisions for the control of discharges from outdoor burning, industrial scale generators, discharges from trade premises, and agrichemicals and fumigants.

The proposed Plan was made operative in 2000, and has been effective in managing the impacts of industry on air quality over this time; however, the proposed Plan has not been fully effective for the management of domestic fires in regional towns (GWRC 2008). The requirements for managing air quality changed in 2004 with the introduction of the national environmental standard for air quality. This regulation brings into focus the management of ambient air quality (defined in section 5.1.1) and the discharges of PM₁₀ (a specific size of particulate matter, discussed further in section 2.2.3).

1.2 Report methodology

The structure of the report is shown below:

Issues statements (section 2 of this report): this is a refinement of the main issues identified by the community related to air quality management

Regulatory context (section 3 of this report): this is an identification of the relevant national and regional legislation and policy direction

Evaluation of the objectives (section 4 of this report): this is an evaluation of the extent to which the proposed objectives are the most appropriate way to achieve the purpose of the Resource Management Act 1991, as required by section 32(1)(a)

Assessment of the policies and other methods (section 5 of this report): this is an assessment of the efficiency and effectiveness of the provisions as to whether they are the most appropriate way to achieve the objectives, in accordance with section 32(1)(b) and section 32(2).

2. Resource Management Issues

Issues analysis was undertaken for the proposed Plan. The issues analysis developed for air quality were derived from information received from the effectiveness review of the Air Plan (GWRC 2008), the state and trends monitoring report on air quality (GWRC 2012) and consultation on the issues undertaken as part of the regional plan consultation programme in 2010 and 2011 (Parminter 2011, GWRC 2014). Details of the consultation programme for the proposed Plan are described in the section 32 report Introduction, and further detail on the Greater Wellington Regional Council website under the heading 'Regional plan review'.

The following issues were identified for air quality:

2.1 Issue 2.1: Odour, smoke and dust

Odour, smoke and dust have adverse effects on amenity values and people's wellbeing. These effects are generally localised and result from industrial and trade premises, landfills, sewage treatment plants, backyard burning, and land use activities such as earthworks and rural burn-off.

Odour, smoke and dust discharges from industrial manufacturing plants, sewage treatment plants, fish processing plants, meat works, solvent plants and wastewater treatment plants are prevalent discharges to air according to the WRC's pollution control database. In particular odour complaints are the most prominent complaint received and occur from both consented and permitted activities. Discharges to air of odour, smoke and dust can affect people's health in some cases, and cause reduced amenity and wellbeing.

2.2 Issue 2.2: Domestic fires

Fine particulate matter predominantly discharged from domestic fires, occasionally reaches concentrations that can harm people's health.

Discharges from domestic fires of fine particulate matter in some locations in the region such as Masterton, Wainuiomata, Upper Hutt, and Raumati South reaches concentrations that exceed the national environmental standard for air quality. Fine particulate matter, especially particles 10 microns and smaller has been shown to affect people's health. Research has also shown that particulate matter less than 2.5 microns is more hazardous than the standard of 10 microns in terms of health effects. Recent monitoring of fine particulate matter in Wainuiomata by WRC (2013 http://www.gw.govt.nz/assets/council-publications/Wainuiomata_arsenic_in_air_investigation_2012.pdf) has also shown that the fine particulate matter contains traces of arsenic, mostly likely from the burning of treated timbers. Arsenic is harmful to human health.

2.3 Issue 2.3: Mobile sources

People's health and amenity values are adversely affected by the discharges from mobile sources, including motor vehicles, trucks, and motor cycles.

Mobile sources, in particular motor vehicles, make up a large proportion of air pollution in the Wellington region. The Air Pollutant Emissions (Inventory) in the Wellington region (2001) suggests that the transport sector contributes 36% of the region's non-methane volatile organic compounds (NMVOC); 85% of the total nitrogen oxides; 94% of sulphur oxides; 79% of carbon monoxide; and 23% of PM₁₀. Other emissions from the motor vehicles include other hazardous air pollutants such as benzene.

2.4 Issue 2.4: Localised sources

People's health and amenity values are adversely affected by the discharge to air of substances from localised sources and include industrial and trade premises and agricultural spray drift.

Localised sources for discharges to the air include discharges from industrial and trade premises, waste management processes, intensive indoor productive (farming) activities and off-target agricultural spray drift. The discharges to the air can have varying adverse effects on air quality, including odour, dust, particulates, and reduced visibility due to smoke or haze. The adverse effects need to be managed if the discharge to the air is noxious, dangerous, offensive, or objectionable, and therefore affecting people's health and well-being.

3. Regulatory and policy context

3.1 National statutory requirements

3.1.1 Resource Management Act 1991

The Resource Management Act 1991 provides the basis for the protection of the air resource in New Zealand. Section 5 requires that air is safeguarded for its life-supporting capacity, while people and communities are able to provide for their social, economic, and cultural well-being.

Section 6 requires regional plans to recognise and provide for matters of national importance. Air quality management is only indirectly related to any of the matters mentioned in section 6, as these are about: protection and preservation of natural character, outstanding features and landscapes and significant indigenous flora and fauna; maintenance and enhancement of public access; the relationship of Māori and their culture and traditions; the protection of historic heritage; and the protection of customary activities.

Section 7 requires the management of natural and physical resources and also requires that particular regard is made to various other matters. In relation to air quality, section 7(c) the maintenance and enhancement of amenity values; and 7(f) the maintenance and enhancement of the quality of the environment; are the most relevant considerations. Air is integral to nature's capacity to support life, and to provide amenity for the public. Air discharges can affect people's health and the standard of amenity. The management of air discharges involves

maintaining of air quality where it is acceptable and enhancing air quality where it is less than acceptable.

Section 15 controls discharges into the air. Section 15(1)(c) sets restrictions for all discharges of contaminants into the air from industrial and trade premises.

Sections 15A and 15B set restrictions for discharges into the air in the coastal marine area.

3.1.2 National policy statements

National policy statements (NPS) are instruments issued under section 52(2) of the RMA. The national policy statements state the objectives and policies for matters of national significance. They must be given effect to in regional plans and regional policy statements. There are four operative national policy statements in place:

- National Policy Statement on Electricity Transmission 2008
- National Policy Statement on Renewable Electricity Generation 2011
- New Zealand Coastal Policy Statement 2010
- The National Policy Statement for Freshwater Management 2014

3.1.3 National environmental standards

National environmental standards (NES) are standards for maintaining a clean, healthy environment. The government sets standards where appropriate so that everyone in New Zealand has clear air to breathe, clean water to drink, and clean land to live on. The national standards prescribe technical standards, methods of management of standards or other requirements for environmental matters. Each regional, city or district council must enforce the same standards. In certain circumstances, councils can impose stricter standards.

The following national standards are in effect:

- National Environmental Standard for Air Quality 2004
- National Environmental Standard for Sources of Drinking water 2008
- National Environmental Standard for Telecommunication Facilities 2008
- National Environmental Standard for Electricity Transmission Activities 2009
- National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2012.

(a) National Environmental Standard for Air Quality

The Resource Management (National Environmental Standard for Air Quality) Regulations 2004 (NESAQ) is a regulation issued under sections 43 and 44 of the RMA, and applies nationally. The regulation prescribes technical standards, methods and other requirements for the management of ambient air quality. Regional councils and unitary authorities must enforce the standard, and in some circumstances can impose stricter rules in their regions if warranted.

The NESAQ includes design standards for new woodburners and prescribes technical standards for the monitoring of air and the creation of airsheds. An

‘airshed’ is defined in the NESAQ to refer to the distribution of a geographical area for the purpose of measuring air quality. In the NESAQ a ‘polluted airshed’ is further defined as having more than 1.0 average exceedance of the ambient PM₁₀ standard. At the time of notification of the proposed Plan the only airshed identified in the Wellington Region as being polluted above the acceptable level is the Masterton Urban Area airshed.

3.2 Regional level

3.2.1 Regional Policy Statement for the Wellington region

The Regional Policy Statement for the Wellington region (RPS) became operative in April 2013.

The RMA requires every regional council to prepare a regional policy statement to provide an overview of resource management issues in the region and having policies and methods to achieve integrated management of the region’s natural and physical resources.

The RPS identified the following significant regional management issues for air quality:

- Impacts on amenity and well-being from odour, smoke and dust
- Health effects from the discharges of fine particulate matter

The presence of odours, smoke and dust in the air can affect people’s amenity values and wellbeing. These effects are usually localised and result from a range of land uses and activities or land uses such as rendering plants, spray painting, landfills; sewage treatment plants; smoke from domestic fires and backyard burning, and dust from earthworks, quarries and land clearance.

Fine particulate matter discharged from domestic fires and other sources can reach concentrations that can affect people’s health. This tends to occur primarily in valleys where levels of fine particulate matter build up, particularly during periods of calm cool weather.

The RPS has two objectives for the management of air quality in the region and these are:

Objective 1 – the discharges of odour, smoke and dust do not adversely affect amenity values and people’s well-being; and

Objective 2 – human health is protected from unacceptable levels of fine particulate matter.

The RPS provides the policy direction that the proposed Plan must give effect to (see section 4.1 of the RPS).

The policies and methods of the RPS to meet the objectives for air quality are:

Policy 2 (plan requiring) directs regional plans to include policies, rules and methods to manage air quality issues in the region.

Policy 2 directs that regional plans have provisions to protect or enhance the amenity values of neighbouring areas from the effects of discharges of odour, smoke and dust, and that people's health is protected from the effects of discharges of dust, smoke and dust, and fine particulate matter.

Method 6 requires that the regional council produce information on methods to reduce air pollution.

Method 26 requires the regional council in collaboration with city and district councils and main stakeholders to create an action plan for polluted airsheds.

Method 31 is a protocol for the management of dust from earthworks sites.

3.2.2 Regional Air Quality Management Plan (2000)

The Regional Air Quality Management Plan for the Wellington Region (2000) (Air Plan) includes 25 policies, 23 rules and 31 methods of managing air quality. The main issues identified in the Air Plan are the lack of regional air information; the adverse effects caused by discharges from industrial and trade processes; the adverse effects caused by discharges from domestic sources; discharges from mobile sources; the spray application of chemicals; effects from odour; discharges of dust and smoke; and global air quality issues.

The Air Plan sets standards for discharges into the air from industrial and trade premises and processes, and from rural areas, particularly from agrichemicals. The Air Plan's overall objective is to protect people's amenity, health and well-being by ensuring discharges into the air do not have adverse effects on people and the environment. The Air Plan was developed before the NESAQ, and prior to the development of industry best practice guidelines for activities such as the use of agrichemicals.

3.2.3 Effectiveness report on the Air Plan

The Effectiveness Report Regional Air Quality Management Plan (GWRC 2008) suggested that for the most part the Air Plan has been effective. The report noted that there were many permitted activity rules that were compliant or had a low number of complaints. Rules fitting this category were Rules 1 and 2 (agricultural processes), Rule 4 (agricultural processes), Rules 12 (metallurgical processes), Rule 16 (abrasive blasting), and Rule 20 (landfilling and composting).

Activities allowed by Rule 5, which permits discharges from a wide range of food production processes like coffee roasting and deep fat frying at fast food outlets, also had widespread application with few effects. These rules allow people to provide for their social and economic well-being, there are few complaints about their effects on people and communities, and air quality investigations have not shown any level of pollution that could adversely affect amenity values or people's health. These rules were deemed to be helping achieve Objective 2 of the Air Plan and so were at least partially effective.

Where the plan had not been that effective was in relation to activities that cause offensive and objectionable odour beyond the boundary of the property, and in combustion processes that cause particulate matter, and in particular

PM₁₀, which is particulate matter with an equivalent aerodynamic cross section less than 10 microns, which breaches the NESAQ. Many complaints related to activities with resource consents where the effects of odour may have been better controlled by setting activity based controls on the process rather than setting an “effects-based” condition about the effect at the property boundary.

Complaints about smoke were second to odour almost every year since the pollution hotline was established in 2000. Sources tended to be residential (domestic fires) or industrial (burning metal or timber) rather than generators or boilers and most incidents attended were compliant at the time of the on-site investigation and no action was necessary.

Domestic fires are the source of most of the PM₁₀ in winter throughout the region wherever there are many houses and topography restricts the dispersion of the smoke. This is particularly so in the airsheds where PM₁₀ concentrations approach or exceed the NESAQ. Permitted activity rules deemed to be ineffective in achieving the objectives in the Air Plan are parts of Rule 5, which allows processing of large amounts of plant and animal matter, rules about combustion – 6, 18 and 19, Rule 10 (sorting and storage of bulk products), and Rule 21 (sewage treatment).

4. Appropriateness of proposed objectives

The next stage in the section 32 analysis is to evaluate the objectives for the proposed plan with regard to air quality. The objectives are evaluated according to section 32(1)(a) of the RMA, and summarised in the Appendix, Table A1. The Act requires that the evaluation must examine the extent to which the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA.

The appropriateness test applied consists of four standard criteria: relevance, usefulness, reasonableness and achievability. These criteria are:

- *Relevance* – is the objective related to addressing a resource management issues? Will it achieve one or more aspects of the purpose and principles of the RMA?
- *Usefulness* – will the objective guide decision-making? Does it meet sound principles for writing objectives?
- *Achievability* – can the objective be achieved with tools and resources available, or likely to be available, to the local authority?
- *Reasonableness* – what is the extent of the regulatory impact imposed on individuals, businesses or the wider community?

The operative objectives have been analysed against the appropriateness criteria to provide guidance as to what degree the objectives required amendment (if any) to achieve the purpose of the RMA, and give effect to the relevant statutory documents. In response to this assessment, some amendments have been proposed.

A brief description of each of the proposed objectives is provided below.

4.1 Proposed objectives

4.1.1 Objective O39

Ambient air quality is maintained or improved to the acceptable category or better in Schedule L1 (ambient air quality).

Note

‘Ambient air quality’ is defined in the *2011 Users guide to the revised National Environmental Standards*, to be... “in the open air everywhere people may be exposed”. Areas where this objective applies and NESAQ standards apply are:

- Residential area outside houses
- Roadside verges
- Rural areas
- Parks, beaches, lakes and coastal marine area
- Central business area outside offices and shops
- Industrial area

Areas which are not ambient air and not covered by this objective or the NESAQ are:

- Inside buildings, such as houses, offices, schools or day care facilities
- Inside tunnels
- Inside vehicles
- Areas covered by discharge to air permits

Relevance

This objective is directed towards ambient air quality in the region. This objective is related to Issue 2.2, and gives effect to Objective 2 and Policy 2 of the RPS, section 5 of the RMA, and the NESAQ for polluted airsheds. This objective will drive the reduction of PM₁₀ in polluted airsheds and other airsheds that are not exceeding at the time of writing. The objective is based on the Ministry for the Environment National Ambient Air Quality Guidelines (MfE 2002). The performance categories in the guidelines have been developed to include priority and hazardous air pollutants contaminants. The categories for each contaminant are derived from the national guidelines, and national and international measuring techniques.

Usefulness

The objective is useful for monitoring ambient air quality, and is a more complete list of ambient contaminants that can affect people’s health and well-being. Hazardous air pollutants are not specifically included in the RPS (although hazardous air pollutants are inferred from RPS Issue 2, Objective 2 and Policy 2) or the RMA; however, hazardous air pollutants are defined in national monitoring and international literature and monitoring. Providing an explicit list of hazardous pollutants is useful as the hazardous contaminant can be recognised and measured according to international guidelines.

Achievability

The objective states that ambient air quality is maintained or improved to the acceptable category or better. Schedule L1 lists all categories of air quality as defined by the national guidelines. The contaminant categories are defined for a 24 hour period and the annual average. The NESAQ requires that polluted airsheds can only exceed the 'Alert' 24 hour period level once per 12 month reporting period. The Schedule shows that to reach the acceptable category or better is for some polluted airsheds a significant achievement.

Reasonableness

The objective provides a complete list of pollutants that can affect ambient air quality. This list is compiled from national monitoring and reporting and international literature. It is reasonable for the proposed Plan to achieve the acceptable or better for some or all of these contaminants as by doing so human health is protected as required by RPS Objective 2, and the life-supporting capacity of air.

4.1.2 Objective O40

Human health, property, and the environment are protected from the adverse effects of point source discharges of air pollutants.

Relevance

This objective is related to Issue 2.1, Issue 2.2, and Issue 2.4, and gives effect to RPS Objective 1, and Policy 1, and Policy 2. The objective provides for people's well-being and health and safety, and safeguards the life-supporting capacity of air. Point source discharges can occur from multiple sources, the most common being industrial and trade stacks and vents, and domestic chimneys. Point source discharges also contribute to poor local ambient air quality. The discharge of contaminants from point sources can be benign contaminants such as steam or water vapour, but can include hazardous air pollutants as defined in Schedule L1 (ambient air) and L2 (hazardous air pollutants). This objective aims to protect people's health and property from the adverse effects of this type of discharge.

Usefulness

This objective is useful as the point source discharge can be controlled through provisions to protect human health and the environment. Point source discharges can then over time be progressively reduced as they are controlled at the point of release of the discharge.

Achievability

Point source discharges for some industries can be defined and people's health and well-being can be protected by placing controls on the discharge. This is well accepted by industry and achievable for many industrial and trade discharges. Point source discharge from domestic situations can also be located and controlled by regional and district plans. Specific emissions from industrial point sources can be measured in the flue and modelling used to estimate impacts on ambient air quality. This information can then be used to reduce the effect of the discharge by changes in emission control equipment.

Reasonableness

This objective is reasonable for the proposed Plan to achieve. Point source discharges can be defined and controlled by the proposed Plan. Emission control equipment fitted to many point source discharges is improving which in turn reduces the adverse effects on people's health and well-being.

4.1.3 Objective O41

The adverse effects of odour, smoke and dust on amenity values and people's well-being are reduced.

Relevance

This objective is related to Issue 2.1, and Issue 2.4, and gives effect to RPS Objective 1, Policy 1, and Policy 2. The objective gives effect to the RMA by reducing the adverse effects of discharges on people's amenity values and health and safeguarding the life-supporting capacity of air.

Usefulness

This objective is useful to reduce discharges that affect amenity values and well-being. Odour is a chronic issue in the region and control to reduce odour complaints over the long term is not only useful but necessary in some situations.

Achievability

This objective requires the reduction in discharges that affect amenity values and people well-being. Discharges of this type are recorded by WRC as a pollution incident where it can be shown if there is any reduction in the discharge. It is difficult to place any more certainty on the reduction other than to suggest that a reduction from the current trend in incident complaints is achievable over the life of the proposed Plan.

Reasonableness

This objective is reasonable for the proposed Plan to achieve. Provisions in the proposed Plan have controls to protect amenity values and well-being, and it is reasonable to accept that people's well-being should be protected from the adverse effects of odour, smoke and dust.

4.2 Summary of evaluation

The assessment of the three proposed Plan objectives above shows that they fulfil the standard criteria test for evaluation.

Objective O39 is similar to Objective 4.1.1 in the Air Plan, except that this objective gives effect to the RPS, NESAQ and takes into account the latest standards for air quality available nationally and internationally for ambient contaminants. This makes Objective O39 more relevant and useful. Achieving ambient air quality targets is perhaps the most difficult aim of the proposed Plan for air quality. Ambient air quality can be affected by pollutants from multiple sources and when contaminants are in the air column they can be transported and concentrate in other locations depending on the air movements and topography.

Objective O40 is directed towards point source discharges. This type of discharge relates to most if not all industrial discharges. This objective is similar to the existing objectives, except it takes into account other known point sources such as hazardous air pollutants, which have the potential to have detrimental health effects and significant adverse effects on the environment.

Objective O41 aims to reduce the adverse effects of odour, smoke and dust on people's amenity. This objective is more relevant and useful compared with the existing objectives as there is certainty around the type of discharge the proposed Plan is aiming to reduce. Since the Air plan was made operative odour discharges affecting people's amenity have been well documented and remain as the largest incident recorded. This objective to reduce the incidence of odour complaints over the course of the proposed Plan is more relevant and useful for people and communities than the Air Plan.

Overall, the proposed objectives are more relevant and useful in achieving the purpose of the RMA than the Air Plan and it is proposed that they replace the existing operative objectives. Appendix Table A1 is a summary of the evaluation of the proposed objectives for air quality.

5. Efficiency and effectiveness of the proposed provisions

Section 32(1)(b)(ii) and section 32(2) of the RMA requires that the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed option for air quality be assessed for effectiveness and efficiency.

The following is an assessment of the effectiveness and efficiency of the proposed Plan. The assessment is based on information provided through the proposed natural resources regional plan submission process, industry stakeholders, consultants, and the national science working group for air quality, and other information obtained as part of the section 32 evaluation.

The proposed Plan for air quality has three objectives that relate to four main activity areas for managing discharges into air. The areas are:

- Outdoor burning
- Domestic fires
- Industrial discharges
- Agrichemicals and fumigation

The following is an assessment of the effectiveness and efficiency for these four groups for the proposed Plan.

5.1.1 Outdoor burning

Outdoor burning in rural and urban areas can have adverse effects beyond the boundary of the property from smoke, odours, particulate deposition, and the discharge may be noxious, dangerous. Open burning is a source of smoke, dust and particulates, particularly PM₁₀ affecting ambient air quality; however the impact of open burning on the level of emissions for PM₁₀ has not been quantified (GWRC 2012).

The Air Plan does not permit the open burning of some organic and non-organic materials (certain plastics, treated wood and other wastes). The burning of organic waste (for example tree waste, untreated timber and cardboard) is still practiced in urban and rural areas.

Further management is required to manage the impacts of outdoor burning in rural and urban areas. The level of intervention in the proposed Plan to meet Objective O39 has been considered across the options listed below.

(a) Reasonably practicable options

Option 1 – Status quo – operative Air Plan

This option would involve continuing with the operative Air Plan for provisions that restrict outdoor burning in urban and rural areas. The effectiveness report on the Air Plan shows that the Air plan has been relatively effective in managing the effects of outdoor burning. However this option was not considered the most appropriate for achieving the proposed Plan air objectives because:

- The Air Plan does not provide a clear policy about outdoor burning for barbecues, backyard fires, and other cooking devices
- The Air Plan is not clear about the burning of pyrotechnics (fireworks) in the controlled circumstances or in the coastal marine area
- The burning of animals and plant materials is not provided for in the Air Plan
- The controlled burning for firefighting or for defence purposes is not provided for in the Air Plan
- The list of materials that is allowed to be burnt in the open is not exhaustive, and there are materials that could be burnt where a noxious or dangerous discharge could result affecting people's health and well-being
- The operative Air Plan is not clear about the burning of substances for frost prevention

Option 2 – outdoor burning provisions in the proposed Plan

This option would involve the following plan provisions:

- Extend the list of known substances (based on the list in Rule 19 of the operative Air Plan) that can cause significant health effects from the burning of certain materials
- Permit the burning of certain cooking devices in all areas
- Permit the burning of pyrotechnics
- Permit the burning of animals and plants for biosecurity purposes
- Permit the burning of fuels in certain frost prevention devices

This option is a carry-over of the operative Air Plan provisions with improved levels certainty around what is allowed to be burned in the open and the level of control required.

Relevant proposed Plan provisions for outdoor burning

Option 2 is the preferred option for outdoor burning and has been identified as the preferred option for the proposed Plan because:

- The proposed Plan provides for biosecurity and firefighting in recognition of the net benefit that these activities will provide for the region and New Zealand against the negligible cost and effects on the environment
- The proposed Plan does not permit the burning of waste and other hazardous waste materials in the open. This will have some cost for the community in having to either bury waste or take waste to a transfer station. However the potential benefits to the environment and human health from not burning waste out-weighs the costs of burying the waste or taking it to a transfer station
- The proposed Plan permits commercial fireworks and domestic fireworks to enable community well-being.

The following table summarises the relevant objectives for outdoor burning and the linkage to the policies and rules.

Table 1: Provisions in the proposed Plan relating to outdoor burning

Objective:	O39: Ambient air quality is maintained or improved to the acceptable category or better in Schedule L1 (ambient air) O41: The adverse effects of odour, smoke and dust on amenity values and people's well-being are reduced
Policies:	Policy P4: Minimising adverse effects Policy P52: Managing ambient air quality Policy P55: Managing air amenity Policy P56: Outdoor burning Policy P57: Burning of specified materials
Rules:	Rule R1: Outdoor burning – permitted activity Rule R2: Frost prevention devices – permitted activity Rule R3: Outdoor burning for firefighter training – permitted activity Rule R4: Pyrotechnics – permitted activity Rule R5: Outdoor burning of specified materials – prohibited activity
Method:	N/A

(b) Effectiveness

Objective O39 and Objective O40 in the proposed Plan for air quality are relevant to the provisions for outdoor burning. Objective O39 is about meeting ambient air quality standards that are set by the national guidelines for air quality and from overseas guidelines. Objective O40 concerns the nuisance effects of smoke from outdoor burning affecting people's amenity and well-being. The following provisions are examined for effectiveness to meet the objectives.

Proposed Policy P52 and the associated Schedule L1 is a key strategic policy to manage ambient air quality and meet Objective O39. In outdoor burning the main discharges are smoke, dust and particulates affecting PM₁₀ for ambient air quality. According to recent research by the Wellington Regional Council the impact of open burning on the level of PM₁₀ emissions has not been quantified (GWRC 2012). However, the activity does have localised effects on amenity

values and people's well-being and these are discussed below in relation to amenity values and human health.

Proposed Policy P55 and Policy P56 are the main policies managing outdoor burning in the region. The policies require that the adverse effects of outdoor burning are minimised by the use of good management practices. The adverse effects of on people's amenity values from offensive and objectionable odours, and smoke are also minimised by the proposed Plan provisions.

Proposed Policy P4 provides guidance to proposed Policy P55 which requires that adverse effects be minimised. That is, adverse effects are to be reduced to the smallest amount practicable and include consideration of alternative locations, timing of the activity, the use of good management practice and ensuring the scale of the activity is as small as practicable. It is intended that Policy P4 be used to guide a resource consent assessment of environmental effects for proposed Policy P55.

Proposed Policy 57 is also related to open burning as the burning of specified materials can have significant adverse effects on people's health and the environment. This is achieved by not allowing the burning of specified materials, and managing the effects of smoke on people's amenity values.

The Air Plan acknowledges the potential for adverse health and nuisance effects that can arise from activities such as outdoor burning and incineration, particularly of waste materials and hazardous substances. The Air Plan relies on the promotion by territorial authorities of the Health Act 1956 and other similar statutes to control localised nuisance and wider health effects of discharging contaminants to the air. The burning of timber treated with copper chrome arsenic is categorised as a discretionary activity, in recognition of the known adverse effects associated with the release of this toxin into the air resource.

Since the adoption of the Air Plan, more evidence has become available, both internationally and nationally, indicating that burning waste materials at low temperatures is one of the biggest sources of dioxins in our air. The NESAQ has been developed in response to such threats to air quality and to public and environmental health impacts. Given the weight of evidence, and the national policy directive to maintain far greater controls over the release of dioxins into our environment, the existing approach is deemed inappropriate. Whilst relatively cheap to administer for both resource users and the WRC, the lack of regulatory oversight, the costs to the wider public and the environment have been demonstrated to be considerable and long term.

The proposed Plan policy and rules package has been devised in response to the international and national evidence demonstrating that burning waste materials at low temperatures is one of the biggest sources of dioxins in our air and soil resource. The requirement upon regional authorities to reduce dioxins in the environment is in international statutes and the NESAQ.

Proposed Rules R1 to Rule R4 permits open burning under certain conditions, or in respect of specific activities, namely firefighter training, fireworks and the

use of frost protection devices. In so doing, the WRC seeks to support the social benefit that can accrue from certain types of outdoor burning, for example the benefit to the community in enabling firefighters to undertake essential training, and the social and economic benefits of controlled outdoor burning to protect vineyards from frost. The rules package also recognises that outdoor burning in controlled circumstances in a domestic or primary production context can be a convenient and effective means of disposing of garden waste, untreated wood and other non-hazardous and non-waste materials.

The discharge of contaminants from outdoor burning that does not meet the conditions set out in the permitted activity rules, or are not covered by those rules is treated as a discretionary activity under proposed Rule R41, unless it is prohibited by proposed Rule R5. The prohibited rule status is assigned to the burning of specified materials, and reflects the scale of the potential and actual adverse environmental and health effects associated with pollutants in our air and soil resource that result from burning waste materials. The WRC considers that this is an appropriate response and underlines the seriousness of the deleterious effects of such activities to the community, and can assist the Council's enforcement procedures to be applied efficiently and effectively.

Evidence indicates that there are environmental and social costs associated with the burning of waste materials and hazardous substances. The proposed Plan policy approach may impose additional costs on individuals and business owners, including farmers, in appropriately disposing of waste materials that may have been burnt in the past. The WRC accepts that there may be ongoing costs in terms of education and raising community awareness within the community to emphasise the issues regarding the burning of waste materials and encourage the use of alternative methods. However, the WRC considers that the environmental and social benefits associated with appropriate disposal outweigh the costs associated with adhering to or promoting regulation, and the long-term effects of the policy accord wholly with the principle of sustainability in the RMA. The policy and rules package for open burning is assessed as being effective under the RMA to meet Objective O39 and Objective O40.

(c) Efficiency

Section 32(1)(b)(ii) requires an assessment of the efficiency of the proposal provisions. The assessment must identify the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed provisions, including opportunities for (i) economic growth and (ii) employment that are anticipated to be provided or reduced. If practicable, the benefits and costs must be quantified. However, the benefits and costs can also be qualitative where quantification is not possible.

The following table provides an assessment of the efficiency of the policies and rule for discharges into air from outdoor burning. This table should be read in conjunction with the tables in the Appendix which look at the overall costs and benefits of the proposed provisions for air quality.

Table 2: Evaluation of the efficiency of the provisions for outdoor burning

	Benefits	Costs
Environmental	Prohibiting the burning of hazardous materials will ensure air quality is improved and will contribute to meeting the NESAQ and proposed Objective O39.	Discharges into air from outdoor burning will continue in the proposed Plan however the effects will be appropriately managed at the boundary through good management practices.
Economic	Permitted the burning for biosecurity purposes will provide a benefit to land managers and other providers of stock.	There will be an economic cost for those land owners not able to burn waste in the open. This waste will either have to be buried (as per proposed Rule R89) or taken to a transfer station.
Social	The proposed provisions provide for community well-being through the use of fireworks and continued burning of non-hazardous materials such a non-green garden refuse.	There may be some social cost in not being able to burn waste and other rubbish in the open as was common in some areas.
Cultural	The proposed Plan provides for the burning of fireworks providing a cultural benefit both at a commercial and domestic scale.	There are no cultural costs anticipated from outdoor burning provisions.

(d) Risks of not acting

The RMA requires for section 32 an assessment of the risks of acting or not acting if there is uncertain or insufficient information about the subject matter.

In the case of open burning there is a risk to human health and the environment from the discharge of hazardous air pollutants from the burning of waste materials in the open air. This could affect people's health if they are nearby and discharges dioxins into the environment. This risk has been met with the provisions in the proposed Plan.

The other discharges into air from open burning if controlled in the manner that is intended would not pose a risk to human health or the environment.

(e) Summary of evaluation for outdoor burning

The proposed provisions for outdoor will reduce the nuisance effects from outdoor burning both in rural and urban areas, and reduce the effects of toxic air pollutants on human health and the environment. The provisions also provide for the use of fireworks and biosecurity that will provide for people's well-being. The provisions will meet the proposed objective for ambient air quality and for the discharge of odour, smoke and dust that affects people's amenity and well-being.

5.1.2 Domestic fires

Domestic fires are a major source of air pollutants in regional towns and other urban areas over the winter months, when there is a high usage of wood burners for home heating. Regional councils around New Zealand have

decided that regulation and education are the best ways to reduce the effects of domestic fires on ambient air quality. Regulations have tended to be applied for cities and medium-sized towns where there are a high number of exceedances and the respective councils have decided that regulation will act as a trigger for people to convert to cleaner forms of heating. The regulations are sometimes implemented with a subsidy from the regional councils to assist low income households with the conversion process.

The operative Air Plan permits domestic fires in Rule 6, where the heating capacity is less than 2MW and the discharge complies with the conditions of the rule. In most cases a domestic fire would be permitted by the rule; however, the WRC has not used this rule to manage domestic fires in the region.

During the plan development process (from consultation with the community and industry groups) for the proposed Plan, further management of domestic fires is required to meet the proposed Objective O39 and the NESAQ. The level of intervention in the proposed Plan to meet Objective O39 has been considered across the options listed below.

(a) Reasonably practicable options

Option 1 – Status quo – operative Air Plan

This option would involve continuing with the operative Air Plan for provisions that permit domestic fires in urban and rural areas. The effectiveness report on the Air Plan shows that the Air Plan has been not been effective in managing the effects of domestic fires and does not take into account the NESAQ. This option was not considered the most appropriate for achieving the proposed Plan air objectives because:

- The Air Plan is not clear in Rule 6 whether or not the rule manages domestic fires. This has created uncertainty since the Plan inception. The WRC has elected not to police Rule 6 for domestic fires
- The Air Plan does not take into account the NESAQ and the national standard for PM₁₀
- The Air Plan has no provision for working with the community affected by high pollution from domestic fires

Option 2 – domestic fire provisions in the proposed Plan

This option would involve the following plan provisions:

- Provide a method for developing an airshed action plan with territorial authorities and the community along with key stakeholders in working out a plan to reduce the emissions from domestic fires
- Control substances that can be burnt in domestic fires
- Provide advice and information on the methods to light domestic fires by using good management practices

Option 2 is a combination of provisions based on what is required from the NESAQ and what has been developed as good practice methods in other

regions to reduce emission from domestic fires. In option 2 there is no regulatory option to manage the discharge of contaminants from domestic fires except the restriction on the burning of waste items.

Relevant proposed Plan provisions for outdoor burning

Option 2 is the preferred option for domestic fires and has been identified as the preferred option for the proposed Plan because:

- The proposed Plan provides for the management of domestic fires from restricting the burning of waste materials to improve human health, and providing for a comprehensive action plan to manage PM₁₀ in airsheds where it does not meet the NESAQ

The following table summarises the relevant objectives for domestic fires and the linkage to the policies and rules.

Table 3: Provisions in the proposed Plan relating to domestic fires

Objective:	O39: Ambient air quality is maintained or improved to the acceptable category or better in Schedule L1 (ambient air) O41: The adverse effects of odour, smoke and dust on amenity values and people's well-being are reduced
Policies:	Policy P52: Managing ambient air quality Policy P53: Domestic fires Policy P54: Open fires Policy P57: Burning of specified materials
Rules:	Rule R6: Fuels prohibited in domestic fires
Method:	Method M5: Polluted airsheds

(b) Effectiveness

Objective O39 and Objective O40 are relevant to the provisions for domestic fires. Objective O39 is about meeting ambient air quality standards that are set by the national guidelines for air quality and from overseas guidelines. Objective O40 concerns the nuisance effects of smoke from domestic fires affecting people's amenity and well-being. The following provisions are examined for effectiveness to meet the objectives.

Domestic fires are the principle contributor to poor air quality in the region from the discharge of PM₁₀. In response to the evidence regarding poor air quality from PM₁₀, proposed Policy P52, Policy P53 and Policy AQ.P54 seek to improve ambient air quality in polluted airsheds. Proposed Policy P52 sets the limits for the discharge of PM₁₀ from polluted airsheds and is aligned with the limits in the NESAQ and national guidelines. Proposed Policy 53 and Policy 54 will work to ensure that the discharge is well managed at the household level. This is achieved by preventing the installation of new open fires and by encouraging best management practices for the operation of existing domestic fires. Section 24A of the NESAQ accordingly makes the installation of new open fires in a polluted airshed a prohibited activity.

Proposed Policy 57 and Proposed Rule R6 prohibit the discharge of contaminants into the air from the combustion of specified materials (see the proposed Plan definition of specified materials). This policy and regulation are in line with the provisions for outdoor burning where the burning of waste materials has known health effects on people's health.

To manage the discharge from domestic fires in polluted areas such as the Masterton Urban Airshed, the WRC has opted to manage this discharge through a non-regulatory method in an action plan. The only regulation applying will be the ban on the burning of waste materials in domestic fires through proposed Rule R6.

The Masterton Urban Airshed has about seven to 10 exceedances of the NESAQ per 12 month period. The WRC has decided that regulation is not an effective option for Masterton for the following reasons:

- Masterton is a small to moderately sized town at about 19,000 people. The average income is low with many people on community service cards. This means that the ability of householders to replace a wood burner or open fire through regulation is limited except through a fully subsidised replacement scheme. The WRC has opted not to provide a fully subsidised scheme to replace wood burners in Masterton.
- The Masterton District Council has recommended that regulation is not an option for the Masterton community. It considers that education and publicity on the use of good management practices for wood burners is the most effective approach. The council has undertaken surveys of residents to understand heating methods, and provided advice for householders on better ways to use domestic fires over the winter months. The council has also banned backyard fires over the winter period (May to August) in the town to reduce another potential source of PM₁₀. This ban has proved effective with householders as there has been good compliance with the ban over recent years. Masterton District Council officers are part of the Masterton urban airshed working group that includes officers from the WRC, Regional Public Health, and representatives of community groups. This group is active in working towards a set of actions that will reduce the discharge of PM₁₀ from domestic fires in the town.
- The WRC with Masterton District Council have launched a rate-payer loan scheme for Masterton house owners. The scheme works by rate-payers taking out a loan for a clean-heat option and paying the loan off in instalments via their rates. The maximum amount that rate-payers can borrow is \$5,000. This scheme is similar to the government subsidised insulation scheme with EECA.
- A feature of using wood fires in Masterton and in other places in regional New Zealand is the ability to collect free fire wood. This has proved beneficial for many people as the cost for home heating is negligible if they can get their wood at no cost. Ideally, the fuel used for wood burners should only be seasoned dry wood. Wet wood creates more smoke and is less efficient with more wood required to keep the fire at an ideal

temperature. Some district councils in New Zealand have tried to ensure that wood merchants sell dry wood and they have promoted this through 'good wood schemes'. The ability of these schemes is reduced if there are a high number of householders collecting free fire wood.

The WRC has decided that air quality is best improved through the use of education and social marketing to inform people about cleaner forms of heating and better management of their wood burners over the winter. This needs to be balanced against the health impacts of houses that are not sufficiently warm. In this regard, the home insulation and clean-heat replacement programme run by WRC also forms part of the investment in working towards better air quality.

Method M5 is the vehicle for the airshed action plan that will be a combination of education and social marketing for Masterton and all other towns. The Wairarapa began with this plan at the end of 2014, targeted at the 2015 winter. In addition, the WRC publicises information for householders on ways to reduce smoke from domestic fires, and some of these methods are described below:

- Use only good dry wood for the domestic fire, and not burn any wet wood or treated timbers of any kind
- Use lighter wood such as pine for kindling and heavier wood for the fire as this burns longer
- Store your wood properly, wood should be stacked in a criss-cross pattern for good ventilation
- Burning plastic, household rubbish or treated timbers is not allowed
- Follow the manufacturer's instructions for the operation of the burner and clean the flue and replace any damaged parts
- If replacing the wood burner it must be replaced with an approved model according to the NESAQ. Approved models are listed on the Ministry for the Environment website

(c) Efficiency

Section 32(1)(b)(ii) requires an assessment of the efficiency of the proposal provisions. The assessment must identify the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed provisions, including opportunities for (i) economic growth and (ii) employment that are anticipated to be provided or reduced. If practicable, the benefits and costs must be quantified. However, the benefits and costs can also be qualitative where quantification is not possible.

The following table provides an assessment of the efficiency of the policies and rule for discharges into air for domestic fires. This table should be read in conjunction with the tables in the Appendix which look at the overall costs and benefits of the proposed provisions for air quality.

Table 4: Evaluation of the efficiency of the provisions for domestic fires

	Benefits	Costs
Environmental	Prohibiting the burning of hazardous materials in domestic fires will ensure air quality is improved and will contribute to meeting the NESAQ and proposed Objective O39.	Discharges into air from outdoor burning will continue in the proposed Plan however the effects will be appropriately managed at the boundary through good management practices.
Economic	The proposed provisions will allow woodburner in their current state to continue in polluted airsheds. This will benefit those using older models provided they use the burner with good management practices.	There will be a slight economic cost for those home owners that burn waste in domestic fires at present. These owners will now have to source appropriate supplies of dry wood to continue with the use of domestic fires.
Social	The proposed provisions provide for community well-being through the continued use of domestic fires of all models in polluted airsheds. This includes open fires. The continued use of domestic fires has a social benefit in providing warm housing and well-being and the ability of people to free collect fire wood.	There may be some social cost in applying the good management practices as part of Policy P53. These practices will change the way people have tended to light their fires and there is a social behavioural change required across the polluted areas to give effect to this policy.
Cultural	The proposed Plan provides for the domestic fires which is a social and cultural benefit to the way people like to heat their home.	There are no cultural costs anticipated from outdoor burning provisions.

(d) Risks of not acting

The RMA requires for section 32 an assessment of the risks of acting or not acting if there is uncertain or insufficient information about the subject matter.

In the case of domestic fires there is a risk to human health and the environment from the discharge of hazardous air pollutants from the burning of waste materials in a domestic fire. This could affect people's health if they are nearby and the activity would discharge dioxins into the environment. This risk will be met with the provisions in the proposed Plan.

There is a large risk to the WRC by not acting on the exceedances of PM₁₀ in polluted airsheds under the NESAQ. The NESAQ is a regulation under the RMA and has to be complied with by 2020. The proposed provisions with Method M5 the airshed action plan will meet the proposed objectives and the NESAQ by the time period along with providing people with their social well-being through the continued use of domestic fires.

(e) Summary of evaluation for domestic fires

The proposed provisions for domestic fires will reduce the nuisance effects from domestic fires both in rural and urban areas, and reduce the effects of toxic air pollutants on human health and the environment. The provisions also provide for the continued use of domestic fires (in polluted airsheds) that will

provide for people's social and economic well-being. The provisions will meet proposed Objective O39 for ambient air quality and Objective O41 for the discharge of odour, smoke and dust that affects people's amenity and well-being.

5.1.3 Industrial discharges

There are many industrial and trade premises with processes that discharge contaminants into the air in the Wellington Region. The most common discharges into air in the form of solvents, particulates or smoke are from paint and panel shops, abrasive blasting operations, food processing and manufacturing premises, quarries and industrial boilers that burn either natural gas or wood for energy (Beca 2012). These discharges can affect ambient air quality and have localised effects at the boundary affecting people's amenity and well-being. Industrial and trade premise discharges into air can also contain toxic substances which need to be managed.

The operative Air Plan permits discharges into air based on the types of industries in the region (for example there are dust producing industries, solvent producing industries and odour producing industries). The regulations have conditions on the discharge that permits a level of air contamination that would not lead to adverse effects on people's health or the environment. If an industry is not permitted by the Air Plan the industry would need to apply for a resource consent to discharge contaminants into air.

During the plan development process (from consultation with the community and industry groups) for the proposed Plan, further management of industrial and trade discharges is required to meet proposed Objective O39, Objective O40, and Objective O41 and the NESAQ. The level of intervention in the proposed Plan to meet these objectives has been considered across the options listed below.

(a) Reasonably practicable options

Option 1 – Status quo – operative Air Plan

This option would involve continuing with the operative Air Plan for provisions that permit industrial and trade premises air discharges in urban and rural areas. The effectiveness report on the Air Plan shows that the Air Plan has been effective in managing the effects of industrial discharges, however there are examples where the Air Plan is not completely effective (for example, the Air Plan is not clear when several types of industry are regulated under the one discharge rule, or the discharge conditions on the permitted activity rule have not been effective). And the operative Air Plan does not take into account the NESAQ. This option was not considered the most appropriate for achieving the proposed Plan air objectives because:

- The Air Plan is not always clear and certain about the industrial discharge the Plan is attempting to regulate
- The discharge of PM₁₀ from industrial boilers is a blanket condition that does not take into account the type of fuel used in the industrial boiler

- Industrial plant has been improved over the past decade (since the Air Plan was made operative) and these improvements are not reflected in the discharge rules
- New industries have emerged over the past decade (since the Air Plan was made operative) and these are not identified in the Air Plan
- The Air Plan does not take into account the NESAQ and the national standard for PM₁₀ that affects industries in polluted airsheds.

Option 2 – industrial discharges provisions in the proposed Plan

This option would involve the following plan provisions:

- Update all industrial and trade type discharges in the proposed Plan by including new industries and new discharge standards
- Change the way discharges from industrial boilers are regulated to one based on the fuel type
- Improve the discharge conditions on the discharge of hazardous air pollutants from industrial plant

Option 2 is a combination of new and improved provisions based on new technologies and methods for managing discharges into air from industrial premises. This option also takes into account the requirements of the NESAQ that discharge PM₁₀ in polluted airsheds.

Relevant proposed Plan provisions for industrial discharges

Option 2 is the preferred option for industrial discharges and has been identified as the preferred option for the proposed Plan because:

- This option provides for the management of industrial and trade premises discharges into air by providing for new industries and improvements to industrial plant and the NESAQ

The following table summarises the relevant objectives for industrial discharges and the linkage to the policies and rules.

Table 5: Provisions in the proposed Plan relating to industrial discharges

Objective:	O39: Ambient air quality is maintained or improved to the acceptable category or better in Schedule L1 (ambient air) O40: Human health, property, and the environment are protected from the adverse effects of point source discharges of air pollutants O41: The adverse effects of odour, smoke and dust on amenity values and people's well-being are reduced
Policies:	Policy P4: Minimising adverse effects Policy P52: Managing ambient air quality Policy P58: Industrial discharges Policy P59: Industrial point source discharges Policy P61: National Environmental Standard for Air Quality
Rules:	Rule R7 to Rule R35
Method:	N/A

(a) Effectiveness

Industrial discharges have the necessary policy and rule framework to enable industry to function in the region without the requirement to gain resource consent from the outset, as well as protecting human health from adverse effects of toxic air discharges. There are many industries and premises that may discharge contaminants into the air, and the proposed Plan has taken a view that only the most common industries have a provision in the Plan to manage the discharge. All other discharges not in the regional plan will have to obtain resource consent to continue. This is a pragmatic decision, as there is no other way of managing all the discharges that may occur from industrial and trade premises. An alternative position could be to require all such existing discharges to gain consent once the Plan is proposed, but this would have high social and economic costs with an added negative multiplier effect on communities at large. To assist in forming this decision WRC commissioned a review of the industrial and trade premise rules in the Air Plan by Beca (2012). The analysis by Beca (2012) took into account:

- Industries in the region that discharge into the air and would benefit from this approach
- New information about discharges – stack type and height, discharge velocity, and buffer distances
- New science on the discharge – whether hazardous or not
- Best practice methods to mitigate the discharge including reductions in fugitive discharges

The industries and trade premises included in the proposed Plan (see large scale generator rules, chemical and metallurgical processes, cremation and incineration, food processing, fuel storage, and drying processes) is considered the most effective method to achieve the proposed objectives for protection of human health, amenity values, and the environment.

An industrial discharge has the potential to cause amenity effects from industrial activities and processes. The discharge can be from a stack or from fugitive discharges in the yards or areas that are part of an industrial site. The proposed Plan requires in proposed Policy P58 that industrial amenity effects are managed through good management practices. This policy has the same intent as other amenity air policies for outdoor burning and domestic fires. The policy requires that industrial owners go about their business in an appropriate manner by not causing undue nuisance discharges of odour, smoke or dust on neighbouring properties, which could be residential.

Proposed Policy P4 provides guidance to proposed Policy P58 which requires that adverse effects be minimised. That is, adverse effects are to be reduced to the smallest amount practicable and include consideration of alternative locations, timing of the activity, the use of good management practice and ensuring the scale of the activity is as small as practicable. It is intended that Policy P4 be used to guide a resource consent assessment of environmental effects for proposed Policy P58.

In some cases, the industry may have a resource consent for the main discharge from the stack as required by the operative regional plan. The amenity effect of this discharge is usually contained as part of the consent. Nevertheless, discharges from industrial premises do occur and have adverse effects on neighbouring properties.

Odour effects from industrial plants are by far the most common discharge recorded by WRC in any year as an incident. These incidents are sometimes difficult to control and require the industry to undertake, in some cases, substantial changes to the plant to mitigate the odour.

The proposed Plan takes a permissive view on the amenity discharge that they can be mitigated with using good management practices. This reduces the cost to the industry for the odour in the first instance however chronic discharges are sometimes escalated into a consenting situation.

Proposed Rules R7 to Rule R35 create an approach which aims to provide the community with confidence that the region's air resource is managed to be safe, whilst avoiding imposing unnecessary regulatory or cost burdens on industry, trade premises or individual property owners. A range of industrial or trade activities that are known or likely to take place outside of industrial areas, for example metal work or spray coating, are permitted subject to performance conditions designed to ensure the discharge into air effects of the activity are not experienced beyond the boundary of the property in which the activity is taking place. The proposed Plan considers this to be a reasonable and appropriate response, given the adverse effects on residential amenity and wellbeing that can arise from nuisance effects. Where activities cannot comply with the conditions, the discretionary activity status is used, enabling proposed Plan to assess and consider the full range of potential and actual adverse effects that could occur.

Proposed Policy P52 allows the discharges from industry that may affect ambient air quality provided the discharge is within permitted activity conditions of the various industries listed and that the discharge is managed overall through good management practices.

Hazardous air pollutants (HAPs) are defined as any substance known or suspected to cause a significant adverse effect on human health or the environment due to its toxicity, persistence in the environment, tendency to bio-accumulate, or any combination of these factors. HAPs are a source of poor ambient air quality, which are specifically defined in Schedule L1, and for specified substances in Schedule L2. Sources of HAPs are from the open burning of hazardous materials or waste, burning of hazardous waste in domestic fires, the application of agrichemicals, and from various industrial and trade premises that may produce HAPs as part of their industrial processes. The proposed Plan manages the discharge of HAPs from the burning of these different waste materials in the policies and rules of the Plan.

Policy P59 avoids the discharge of HAPs from industrial point source discharges where there will be likely significant adverse effects on human health or the environment. This is a precautionary view as it is well known

from overseas studies and experience that discharges of hazardous substances can have long-lasting effects on people's health and remain in the environment for long periods. If however the discharge can be mitigated by appropriate emission control equipment so that the discharge does not have significant health effects or effects on the environment at large, then the discharge can be permitted by the proposed Plan.

Proposed Policy P61 will assist applicants with air discharges that affect ambient air quality in polluted airsheds. Currently, the region only has one polluted airshed – the Masterton Urban Airshed. Proposed Policy P61 describes how offsets are to be managed if the ground level concentration of the discharge exceeds the threshold amount. The requirements of the policy are best practice in New Zealand for air discharge offset consents in polluted airsheds.

(b) Efficiency

Section 32(1)(b)(ii) requires an assessment of the efficiency of the proposal provisions. The assessment must identify the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed provisions, including opportunities for (i) economic growth and (ii) employment that are anticipated to be provided or reduced. If practicable, the benefits and costs must be quantified. However, the benefits and costs can also be qualitative where quantification is not possible.

The following table provides an assessment of the efficiency of the policies and rule for discharges into air from industrial premises. This table should be read in conjunction with the tables in the Appendix which look at the overall costs and benefits of the proposed provisions for air quality.

Table 6: Evaluation of the efficiency of the provisions for industrial discharges

	Benefits	Costs
Environmental	Improvement management of the discharge into air of contaminants from industrial places will reduce discharges into ambient air and improve the effects of odour and smoke beyond the boundary.	Discharges into air from industrial plant will continue in the proposed Plan however the effects will be appropriately managed into ambient air and at the boundary through good management practices.
Economic	The proposed provisions will permit a greater range of industrial boiler that otherwise would have required a resource consent.	There will be an economic cost for those industries that have to comply with new permitted activity conditions or those one-off industries that are not included as industrial plant in the proposed plan.
Social	Industries are able to function in the region if the conditions of the proposed plan are met. These industries provide for people's economic well-being and improvement the social capital of local areas and the region as a whole.	There are social costs for those people living alongside industrial plant that have chronic discharges of odour or smoke. The new provisions will curb future discharges and force changes in existing industries once the plan is operative.

	Benefits	Costs
Cultural	The proposed Plan provides for the certain industries in the region which some have a cultural effect (i.e., crematoria). These effects will be managed by new provisions in the proposed Plan allowing these premises to continue.	There are cultural costs anticipated from the discharge of crematoria for mana whenua.

(c) Risks of not acting

The RMA requires for section 32 an assessment of the risks of acting or not acting if there is uncertain or insufficient information about the subject matter.

In the case of industrial discharges there is a risk to human health and the environment from the discharge of hazardous air pollutants and from the discharges of odour, smoke and dust if the discharge is not well managed. Overall, industrial discharges are well known about and managed in the region, therefore the future risk of proceeding with the proposed Plan for this type of discharges is not high.

(d) Summary of evaluation for industrial discharges

The proposed provisions for industrial discharges will reduce the nuisance effects from industrial premises, and reduce the effects of toxic air pollutants on human health and the environment. The provisions also provide for the continued use of industrial premises (including in polluted airsheds) that will provide for people’s social and economic well-being. The provisions will meet the proposed objectives for ambient air quality, point source discharges and for the discharge of odour, smoke and dust that affects people’s amenity and well-being.

5.1.4 Agrichemicals and fumigants

Agrichemical and fumigant applications are an activity that is necessary for the control of pest plants and animals that allows people and communities to provide for their economic well-being. Managed appropriately the application of agrichemicals and fumigants can have many environmental and economic benefits with little adverse effects on the environment.

The operative Air Plan permits the discharge of agrichemicals and fumigants if the conditions of the rule are met. The rule conditions are based on industry best practice and if the conditions cannot be met, a discretionary resource consent is required for the discharge of agrichemicals and fumigants.

During the plan development process (from consultation with the community and stakeholders) for the proposed Plan, further management of agrichemicals and fumigants is required to meet the proposed Objective O41. The level of intervention in the proposed Plan to meet these objectives has been considered across the options below.

(a) Reasonably practicable options

Option 1 – Status quo – operative Air Plan

This option is continuing with the operative Air Plan for provisions that permit agrichemicals and fumigants in urban and rural areas. The effectiveness report on the Air Plan shows that the Air Plan has been effective in managing the effects of these discharges; however, there have been a low number of consents issued for these discharges. Therefore, it is difficult to assess the full effectiveness of these rules. This option was not considered the most appropriate for achieving the proposed Plan air objectives because:

- The Air Plan is based on industry best practice and codes of practice for discharges that are now out-of-date. New standards for agrichemicals were developed in 2004 that have superseded the rules in the Air Plan
- Since the Air Plan was made operative the EPA has come into existence and this organisation controls the use, transport and management of fumigants. The discharge into air of these substances remains a regional council responsibility
- The operative fumigant rule includes all fumigants and does not discriminate fumigants that are colourless and odourless. This makes the condition of the operative rule ineffective as the condition relies on an odour

Option 2 – agrichemicals and fumigants provisions in the proposed Plan

This option would involve the following plan provisions:

- Update the agrichemical and fumigants provisions in the proposed Plan by including new good practice methods and codes of practice
- Change the way discharges from fumigants are regulated based on the type of odour discharged

Option 2 is a combination of new and improved provisions based on new technologies and methods for managing discharges into air from agrichemicals and fumigants.

Relevant proposed Plan provisions for agrichemicals and fumigants

Option 2 is the preferred option for agrichemicals and fumigants and has been identified as the preferred option for the proposed Plan because:

- This option provides for the management of agrichemicals and fumigants by taking into account industry best practice and compliance with existing standards and codes

The following table summarises the relevant objectives for agrichemicals and fumigants and the linkage to the policies and rules.

Table 7: Provisions in the proposed Plan relating to agrichemicals and fumigants

Objective:	O41: The adverse effects of odour, smoke and dust on amenity values and people's well-being are reduced
Policies:	Policy P60: Agrichemicals and fumigants
Rules:	Rule R36 to Rule R38 – agrichemicals Rule R39 to Rule R40 – fumigants
Method:	N/A

(b) Effectiveness**Agrichemicals**

The Air Plan recognises the usefulness of the application of agrichemicals and has a set of permitted activity rules for the ground-based and aerial application of agrichemicals. The operative rules are built around having appropriate distances from sensitive areas such as properties and places of common public assembly. The rules further require the applicator to inform sensitive areas before the application of agrichemicals and keep a regular spray diary of the applications including date and time, concentration, and weather conditions. The principal contractor shall also hold a GROWSAFE certificate from the New Zealand Agrichemical Education Trust that shows a level of competency for the use of agrichemicals by the operator.

The proposed Policy P60 and rules structure generally maintains the existing enabling approach of the Air Plan. The rules for agrichemicals (Rule R36 to R38) have been strengthened to incorporate the operative national standard for the application of agrichemicals – *NZS:8409:2004: Management of Agrichemicals*. This is a comprehensive standard that covers all aspects of the safe application of agrichemicals. The standard includes methods for the storage, use, disposal and recording of agrichemicals.

Proposed Rule R36 provides the detailed management framework for ground-based and aerial-based discharge of agrichemicals. The application of agrichemicals is comprehensively managed through NZS:8409:2004 and these standards are current and well recognised by users, contractors and distributors of agrichemicals. The permitted activity performance conditions repeat the requirements of NZS:8409:2004 and the advice and guidance of GROWSAFE, an educational trust established to improve the handling of agrichemicals in New Zealand.

Proposed Rule R36 exempts small-scale hand-held and knack sack applications as these are considered relatively low risk applications to human health and the environment. Other conditions in proposed Rule R36 include the requirement for agrichemical spray applicators to be appropriately qualified, the spray application rate to not exceed those recommended by the manufacturer, and requiring prior notification of spray application when requested by people neighbouring the spray application site.

Proposed Rule R37 governs the application of agrichemicals into water. This rule controls the types of agrichemicals that can be used over water and

requires adherence to the national standard for the operator to have an appropriate level of competency for this activity.

Where permitted activity conditions cannot be adhered to or an activity is not provided for in the suite of permitted activity rules, discretionary Rule R38, is triggered. This is considered a proportionate response given the potential adverse effects associated with the non-standard application of agrichemicals, and is unlikely to be triggered often given the level of regulation that exists for this type of activity outside of the RMA. The policy package allows for environmentally responsible use of such products, without placing additional regulatory burden on those sectors of the community that need to use agrichemicals.

Fumigation

Fumigants are used to control a variety of pests, such as fungi, insects and rabbits, and they are used in a number of different situations. For example, they are:

- Injected into soil
- Used to treat timber
- Used to treat export and import goods
- Used to debug buildings and ships
- Used extensively by the agriculture and horticulture industries and other pest management services

Fumigants are hazardous substances and must be managed safely to prevent them causing harm to people and the environment. As with agrichemicals, the Environmental Protection Authority (EPA) controls and regulates the use, distribution and handling of fumigants in New Zealand.

As a consequence of the EPA's control over the management of the risks associated with agrichemicals and fumigants, and also the oversight and involvement of other workplace safety organisations such as Work Safe New Zealand, the regional council's responsibilities in respect of managing the adverse effects associated with fumigants is relatively limited.

Proposed Policy P60 for the discharge to air associated with agrichemicals and fumigants focuses on preventing adverse effects associated with their use beyond the site boundary. It identifies the use of best management practices as the principle means by which the adverse effects on people's health or property from the use of fumigants beyond the boundary of a property will be avoided.

Fumigation is provided for as a permitted activity under proposed Rule R39, subject to conditions restricting the types of substances being used, and seeking to ensure that the discharge is not beyond the boundary of the property. The use of fumigants not able to comply with these conditions is a discretionary activity. The proposed package of measures is designed to be straightforward and compliment, and not duplicate, other regulation, such as the Hazardous Substances and New Organisms Act 1996. In this regard, it is an approach unlikely to result in transferring significant additional costs to those affected, but provides benefits to the wider community in assuring the provision of air uncontaminated from substances used in fumigation.

Other fumigants which are colourless and odourless are a controlled activity under proposed Rule R40. These substances are toxic to human health and are not permitted under proposed Rule R39.

(c) Efficiency

Section 32(1)(b)(ii) requires an assessment of the efficiency of the proposal provisions. The assessment must identify the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed provisions, including opportunities for (i) economic growth and (ii) employment that are anticipated to be provided or reduced. If practicable, the benefits and costs must be quantified. However, the benefits and costs can also be qualitative where quantification is not possible.

The following table provides an assessment of the efficiency of the policies and rule for discharges into air from industrial premises. This table should be read in conjunction with Table A2 in the Appendix which looks at the overall costs and benefits of the proposed provisions for air quality.

Table 8: Evaluation of the efficiency of the provisions for agrichemicals and fumigants

	Benefits	Costs
Environmental	Improved management of the discharge into air of contaminants for agrichemicals and fumigants will reduce the effects of these discharges on neighbouring properties.	Discharges into air from the application of agrichemicals and fumigants will continue in the proposed Plan however the effects will be appropriately managed into air and at the boundary is protected through good management practices.
Economic	The proposed provisions will not cause a significant increase in costs for applicators as the proposed provisions are current best practice.	There will be an economic cost for those industries that have to comply with the proposed Rule R40 for the discharge of odourless and colourless fumigants.
Social	The primary sector is able to function in the region if the conditions of the proposed Plan are met for these discharges.	There are social costs for those people living alongside rural areas that discharge agrichemicals. The new provisions will protect the boundary by operating best practices techniques.
Cultural	The proposed Plan will protect the boundary from the discharge and in doing so any neighbours that may be affected by the discharge through the provision of good management practices	There are no cultural costs anticipated from the discharge of agrichemicals and fumigants

(d) Risks of not acting

The RMA requires for section 32 an assessment of the risks of acting or not acting if there is uncertain or insufficient information about the subject matter.

In the case of agrichemicals and fumigant discharges there is a risk to human health and the environment from the discharge of these substances if the discharge is not well-managed. Overall, agrichemicals and odour producing fumigants are well known about and managed in the region, therefore the future risk of proceeding with the proposed Plan for this type of discharges is not high. The odourless fumigants require further controls to safeguard human health.

(e) **Summary of evaluation for agrichemicals and fumigants**

The proposed provisions for agrichemicals and fumigant discharges will reduce the effects from discharges beyond the boundary of a property, and reduce the effects of toxic air pollutants on human health and the environment. The provisions also provide for the continued use of these substances that will provide for people's social and economic well-being. The provisions will meet the proposed objectives for the discharge of odour, smoke and dust that affects people's amenity and well-being.

6. Summary of evaluation

Section 32(1)(b)(iii) requires that the evaluation has been undertaken to test the efficiency, effectiveness and risk for the proposed amendments for air quality management. The proposed amendments have been assessed against the status quo of keeping the existing rules in the proposed Plan unchanged.

The evaluation has found that the proposed amendments would ensure that the objectives of the proposed Plan could be fully achieved to protect the air resource and reduce discharges of contaminants into the air. Further, the current amendments are compatible with other policy objectives and provisions in the proposed Plan.

The preliminary cost-benefit analysis suggests that, on balance, the proposed amendments would prove the most cost effective for achieving the policy objectives. There are some risks in this approach; however these risks relate mainly to the level of resources placed into the management of air quality in the region.

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Appendix

Table A1: Appropriateness of the objectives

Objective: O39	Ambient air quality is maintained or improved to the acceptable category or better in Schedule L1 (ambient air quality).
Relevance	
Directly related to resource management issue?	Related to air quality Issues 2.1, 2.2 and 2.4.
Will achieve one or more aspects of the purpose and principles of the RMA?	Directly related to section 5 of the RMA, specifically section 5(2)(b).
Relevant to Māori environmental issues? (sections 6(e),6(g),7(aa),8)	Yes.
Relevant to statutory functions or to give effect to another plan or policy (i.e. NPS, RPS)?	Gives effect to RPS (2013) Objective 2, Policy 2; NESAQ compliment Council's efforts to comply with the requirements of the NES in respect of polluted airsheds.
Usefulness	
Will effectively guide decision-making?	Yes. Linking the objective with a scientifically formulated limits table (Schedule L1) provides a clear and understandable foundation for decision-making. It enables Council to determine baseline data on a case-by-case basis and manage air quality to clear targets and limits. It enables Council to monitor and enforce resource consents and air quality outcomes. There is a clear relationship between issues, objective, policies and rules.
Meets sound principles for writing objectives? (specific; state what is to be achieved where and when; relate to the issue; able to be assessed)	The schedule to which the objective relates is specific and clearly sets out what limits must be reached in order to achieve the objective. Directly relates to the issues, and is able to be monitored and assessed over time.
Consistent with other objectives?	Yes, all the objectives have been assessed and work together to achieve the sustainable management of natural resources in the region.
Achievability	
Will it be clear when the objective has been achieved in the future? Is the objective measureable and how would its achievement be measured?	Yes. The objective, schedule and policy framework provides a means by which air quality can be managed to clear and defined targets and limits. It provides a framework within which poor or unacceptable air quality can be improved within the lifetime of the proposed Plan. The approach can be readily applied consistently across the region and across a variety of activities. Outcomes are measurable, and can be compared over the long term.

Is it expected that the objective will be achieved within the life of the Plan or is it an aspirational objective that will be achieved some time in the future?	The Council and stakeholders can seek to achieve the objective immediately, as well as have a means of assessing and measuring improvements to air quality over the lifetime of the Plan.
Does the Council have the functions, powers, and policy tools to ensure that they can be achieved? Can you describe them?	Yes. The Council has the staff to assess and issue consents, and staff to monitor and ensure compliance with the standards set out in the Schedule.
What other parties can the Council realistically expect to influence to contribute to this outcome?	Stakeholders in the achievement of the objective include industry and rural landowners, as well as the wider community.
What risks have been identified in respect of outcomes?	The proposed objective and schedule carry less risk than an approach that does not rely on stated limits and targets. It creates a level playing field that has been developed within the wider environment of industry best practice and national policy development.
Reasonableness	
Does the objective seek an outcome that would have greater benefits either environmentally or economically/socially compared with the costs necessary to achieve it?	The objective seeks to achieve air quality that does not adversely affect human health, property or the environment. This has direct benefits for health, and for cultural, social and economic wellbeing. The proposed air quality management framework is straightforward to communicate, implement and monitor and provides benefits that significantly outweigh costs necessary to achieve the objective.
Who is likely to be most affected by achieving the objective and what are the implications for them?	The wider community will benefit from the achievement of the objective in terms of air quality to an acceptable or better standard. Industry and others who discharge to air will be affected by having to comply with the targets and limits set out in the table.
Existing objectives	
Is the operative objective (4.1.2) in the Regional Air Quality Management Plan for the Wellington region still relevant or useful?	The operative objective fulfils the requirements of the RMA; however, it is not specific enough to address the management of this resource.

Objective: O40	Human health, property, and the environment are protected from the adverse effects of point source discharges of air pollutants.
Relevance	
Directly related to resource management issue?	Directly related to Issues 2.1, 2.2 and 2.4.

Will achieve one or more aspects of the purpose and principles of the RMA?	It seeks to safeguard the life-supporting capacity of the region's air resource whilst providing for social, economic and cultural health, safety and wellbeing (section 5).
Relevant to Māori environmental issues? (sections 6(e),6(g),7(aa),8)	Yes.
Relevant to statutory functions or to give effect to another plan or policy (i.e. NPS, RPS)?	Gives effect to Objective 1, Policy 1 and Policy 2 of the RPS.
Usefulness	
Will effectively guide decision-making?	Allows for a case-by-case assessment of resource consent applications and will assist consents staff to make reasoned assessments of activities. The objective provides a firm basis for the proceeding policies and rules.
Meets sound principles for writing objectives? (specific; state what is to be achieved where and when; relate to the issue; able to be assessed)	It is specifically targeted at managing the adverse effects of hazardous air pollutants on human and environmental health. Hazardous air pollutants are specified in Schedule L2, and are assigned values according to a range of performance categories.
Consistent with other objectives?	Yes.
Achievability	
Will it be clear when the objective has been achieved in the future? Is the objective measureable and how would its achievement be measured?	Objective RP.040 and Schedule L provide a means by which achievement of the objective can be measured. The objective builds on the basic approach of the Air Plan, but provides clearer direction for consents staff and resource users. The objective and ensuing policies and methods are unlikely to result in an increase in consents on current levels. The necessary consents processing resources are already established.
Is it expected that the objective will be achieved within the life of the Plan or is it an aspirational objective that will be achieved sometime in the future?	The objective is a long term goal, and is likely to be relevant throughout the life of the Plan and beyond.
Does the council have the functions, powers, and policy tools to ensure that they can be achieved? Can you describe them?	Yes. The Council has the staff to assess and issue consents, and staff to monitor and ensure compliance with the standards set out in the Schedule.
What other parties can the Council realistically expect to influence to contribute to this outcome?	Stakeholders in the achievement of the objective include industry and rural landowners, as well as the wider community.
What risks have been identified in respect of outcomes?	Yes, the risks are well known of the effects of hazardous substances on human health. This objective is ensuring human health is safeguarded.

Reasonableness	
Does the objective seek an outcome that would have greater benefits either environmentally or economically/socially compared with the costs necessary to achieve it?	Positive outcomes provided for cover a range of environmental, social, and cultural considerations. Implementation of the policy package relies on existing consents procedures. Provides certainty and clarity for Council, resource users and wider community without imposing significant additional costs on any one group.
Who is likely to be most affected by achieving the objective and what are the implications for them?	The wider community will benefit from the achievement of the objective in terms of air quality to an acceptable or better standard. Industry and others who discharge to air will be affected by having to comply with the targets and limits set out in the table.
Existing objectives	
Is the operative objective (4.1.2) in the Regional Air Quality Management Plan for the Wellington region still relevant or useful?	The operative objective requires that adverse effects are managed to avoid, remedy or mitigate effects on human health, however the operative plan did not contain specific provisions on the effects of hazardous air pollutants on human health. The proposed objective is directive with a clear outcome that must be met through the life of the Plan.

Objective: O41	The adverse effects of odour, smoke and dust on amenity values and people's wellbeing are reduced.
Relevance	
Directly related to resource management issue?	Yes, this objective addresses Issue 2.1, 2.4.
Will achieve one or more aspects of the purpose and principles of the RMA?	Yes, Part 2, section 5(2)(b).
Relevant to Māori environmental issues? (sections 6(e),6(g),7(aa),8)	Yes.
Relevant to statutory functions or to give effect to another plan or policy (i.e. NPS, RPS)?	Gives effect to Objective 1, Policy 1 and Policy 2 of the RPS.
Usefulness	
Will effectively guide decision-making?	Yes, this objective will guide decision making for the processing of consents and the enforcement of nuisance effects beyond the boundary of properties.
Meets sound principles for writing objectives? (specific; state what is to be achieved where and when; relate to the issue; able to be assessed)	The objective is a clear and complete sentence related to the issue. The objective is not time bound however aims to deliver a reduction in nuisance effects over time.

Consistent with other objectives?	Yes, all the objectives.
Achievability	
Will it be clear when the objective has been achieved in the future? Is the objective measurable and how would its achievement be measured?	Yes, the achievement of this objective will become clear in the future through state of the environment report monitoring, and enforcement monitoring of complaints for odour or smoke.
Is it expected that the objective will be achieved within the life of the Plan or is it an aspirational objective that will be achieved sometime in the future?	This objective will be achieved over a longer timeframe than the life of the Plan.
Does the Council have the functions, powers, and policy tools to ensure that they can be achieved? Can you describe them?	Yes, s15(1)(2). This objective will be achieved through the policies and rules in the proposed Plan. (see linkage tables in the main body of this report).
What other parties can the Council realistically expect to influence to contribute to this outcome?	The following parties are likely to influence this outcome; all resource users that may burn outdoors, and consent holders for discharges to air.
What risks have been identified in respect of outcomes?	The risk to air quality will be reduced through the achievement of this objective. The objective requires a reduction from existing levels and with good practice management this will be achieved.
Reasonableness	
Does the objective seek an outcome that would have greater benefits either environmentally or economically/socially compared with the costs necessary to achieve it?	Yes, the objective will have a greater environmental benefit than the costs necessary to achieve it. The costs are internalised to individual dischargers. The discharge can be mitigated at the source to reduce the overall discharge to meet the objective.
Who is likely to be most affected by achieving the objective and what are the implications for them?	Discharges from households (backyards fire and internal wood fires), industrial discharges and rural land burn-offs. The implications for these people are not large except that any burning activity has a degree of risk and care is required to not affect neighbouring property owners.
Existing objectives	
Are the existing objectives [include a list of objectives or relevant objective to the one being compared] still relevant or useful?	The existing objective (4.1.2) is relevant in that the operative plan aims to manage the effects of discharges on people's amenity values and their health and safety. The proposed objective is similar intent however, the operative objective requires a reduction in the nuisance effects on people's amenity values rather than having them managed, which does not necessary require a reduction. In this respect the proposed objective is the most appropriate.

Table A2: Assessment of the benefits and costs

Efficiency		Option 1 – Status quo (no change from Air Plan)	Option 2 – Amended Air Plan (regulatory and non-regulatory approach) [Preferred option]
Costs (of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions)	Council	<p>Moderate costs associated with processing discretionary consents.</p> <p>Large costs associated with ambient air quality monitoring for compliance with the NESAQ since 2004. The air quality monitoring is intensive in polluted airsheds and for other areas that may be indicative of having high pollution levels.</p> <p>Low cost associated with monitoring and enforcement of permitted activity standards.</p>	<p>To follow up on a more stringent regime to reduce the effects of nuisance effects would require further financial, time and human resource cost in collating and analysing data necessary to support and justify more complex permitted activity regime.</p> <p>Potential increase in monitoring and enforcement costs across range of permitted activities.</p> <p>Potential added and ongoing cost in continued collation, storage, maintenance and re-analysis of data and information.</p>
	Resource user (consent applicant or permitted use)	<p>The permitted activity rule standard allows for minor discharges that would not have any adverse effect on people's health or the environment. This does not convey a high cost onto the resource user, except in situations where the discharge of odour becomes chronic and further intervention is required by the discharger.</p>	<p>Time cost in determining whether discharge standards are within permitted limits.</p> <p>Potential increase in financial costs associated with securing consent if permitted activity regime lowered permitted activity thresholds.</p> <p>Complexity could result in some resource users foregoing resource use, or exceed permitted discharges without benefit of consent.</p> <p>Potential increase in costs of extraction, as extraction tailored to fit range of permitted activity thresholds and less efficient overall.</p>
	Community costs (environmental, social, economic, cultural)	<p>Small, if not non-existent cost to the community from these provisions.</p> <p>The plan requires discharges to have appropriate measures in place to manage the discharge beyond the boundary of the property.</p> <p>The cost of the discharge can become a community cost if the discharge reaches chronic proportions and there are negative effects on wellbeing.</p>	<p>This is not applicable, as the option is prohibition for the low temperature burning of hazardous materials.</p>

Efficiency		Option 1 – Status quo (no change from Air Plan)	Option 2 – Amended Air Plan (regulatory and non-regulatory approach) [Preferred option]
Benefits (of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions)	Council	<p>The pragmatic decision to manage the discharge within the boundary is a common approach throughout New Zealand for all types of air discharge. This plan is no different and has been the main stay of air management in the region.</p> <p>The main benefit is in relatively low, known and stable administration, compliance and monitoring costs.</p> <p>The approach is considered by Council and stakeholders to work effectively in managing the resource.</p>	<p>Similar benefits to options 1 and 2 combined. The benefits to the Council are in confidence in the processes that enable economic and social wellbeing.</p> <p>This is the preferred option as benefits about process are met and confirmed including benefits to the wider community through non-regulatory involvement in the process.</p>
	Resource user (consent applicant/licensed operator or permitted use)	<p>Straightforward regulated situation for the discharge of odour, smoke and dust.</p> <p>The benefits are high for the resource user if they can reduce the effects within the boundary using good management practice.</p>	<p>Similar benefits to option 1.</p>
	Community benefits (environmental, social, economic, cultural)	<p>Knowledge that people's health and wellbeing is protected through the plan requirements.</p>	<p>Environmental and social benefits associated with an improved understanding of the discharge of hazardous substances across region; and potentially improved strategic management of air quality over time.</p>

The Greater Wellington Regional Council's purpose is to enrich life in the Wellington Region by building resilient, connected and prosperous communities, protecting and enhancing our natural assets, and inspiring pride in what makes us unique

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