

Interim review of the Regional Air Quality Plan for Taranaki

Evaluation of appropriateness, efficiency
and effectiveness

Taranaki Regional Council

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24 April 2018

Document number: 1970757

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Executive summary

Under section 35 of the Resource Management Act 1991 (RMA) the Taranaki Regional Council (the Council) is required to undertake and make available to the public a review of the results of its monitoring into the efficiency and effectiveness of the *Regional Air Quality Plan for Taranaki 2011* (the **RAQP**). This report gives effect to that requirement.

The RAQP was adopted in 2011. It is now timely to carry out an interim review of the RAQP. The purpose of the interim review is to set out the findings of an interim review of the effectiveness and efficiency of the RAQP. Have the outcomes sought been achieved? Did the Council implement what it said it would implement in the RAQP? Finally, do the benefits of having the RAQP outweigh the costs?

The result of the evaluation, which involved an internal review and desktop analysis of the efficiency, effectiveness and appropriateness of the RAQP, shows that the RAQP is standing the test of time well and is assisting the Council in carrying out its resource management responsibilities. Key preliminary findings are:

- State of the environment monitoring confirms that Taranaki has high overall air quality and that the RAQP is on track to meet its objectives (environmental outcomes).
- State of the environment and compliance monitoring programmes show that Taranaki's air quality is tracking well and is rated 'good' to 'excellent' according to MfE environmental performance indicators.
- The assessment shows that the methods for implementing RAQP objectives and policies are being implemented.
- The RAQP is efficient and effective and it has delivered benefits that are considered to be substantially greater than its costs.
- The review has not identified cause for making immediate changes to the RAQP.
- Overall, Taranaki's clean air provides significant health and amenity benefits to the region.

Notwithstanding that, the report also identifies a number of 'change' factors (e.g. changes to legislation and government policy, and development of best practice), which have emerged since the adoption of the second RAQP that could be taken into account as part of the full review scheduled to occur in 2021. The report also identifies a number of areas to improve and build on the current RAQP as part of the next review.

It is recommended that Council, when it undertakes a full review in 2011, investigate amendments to:

1. Rule 31 (Waste incineration on site);
2. Rule 33: (Combustion of solid waste material generated on production land);
3. Rule 34: (Combustion of waste material in defined urban areas);
4. Rule 40: On-farm liquid waste management processes and the issue of Reverse Sensitivity;
5. Rules 51-54: Discharges from intensive poultry farming processes;
6. Rules 56-58: Discharges of agrichemicals into the air; and
7. Implementation issues –
 - a. enforcing the ban on backyard burning;
 - b. managing beach bonfires;
 - c. licensing of wood burning appliances.

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1. Introduction

1.1 Purpose

The purpose of this report is to undertake an evaluation of the efficiency and effectiveness of the *Regional Air Quality Plan for Taranaki 2011* (the RAQP), as part of the Taranaki Regional Council's (the Council) non-statutory interim review of that document.

Accordingly, this report:

- examines state of the environment results relating to air quality;
- examines trends in relation to resource consenting, pollution incidents and enforcement action since the RAQP for Taranaki was adopted in 2011;
- assesses the effectiveness, efficiency and suitability of RAQP provisions, including methods and regional rules, in addressing air quality issues, and any disputes over their interpretation;
- assesses the effectiveness of other plan methods (e.g. advice and information) in addressing the issues;
- assesses any implications arising from changes or proposed changes in law and the establishment of any national standards and policies such as amendments to the *Resource Management Act 1991* and national environmental standards;
- assesses whether the RAQP is achieving its purpose of providing for the sustainable management of air resources in the region; and
- on the basis of the above, identifies whether changes to the RAQP are required as a matter of urgency, including any recommendations for change.

1.2 Background

1.2.1 Development of Taranaki's air quality policy

The licensing of discharges to air was once the responsibility of the Ministry of Health but following the enactment of the *Resource Management Act* (the RMA) in 1991 this responsibility was devolved to regional councils. The development of Council's air quality policy commenced shortly thereafter.

Between 1992 and 1994, the Council undertook a detailed and robust process to develop a regional plan that would address widespread and point source discharges of

contaminants to air and subsequently released a proposed *Regional Air Quality Plan for Taranaki* in 1995. The RAQP was made operative in 1997 – it was the first fully operative air plan in New Zealand. The Plan was prepared pursuant to section 64 and the First Schedule of the RMA.

The first RAQP was reviewed and a revised Plan adopted in 2010. In the Plan the Council set an objective to –

"...maintain the existing high standard of ambient air quality in the Taranaki region and to improve air quality in those instances or areas where air quality is adversely affected, whilst allowing for communities to provide for their economic and social well-being."

The reviewed RAQP included two main changes from the previous version: a prohibition on 'backyard burning' on residential properties in urban areas (outdoor fires excluding hāngī and barbeques), and provision for 'reverse sensitivity' (protecting existing rural activities such as poultry broiler sheds from encroachment by lifestyle development).

In developing the RAQP, the 14 air quality standards introduced in the Government's national environmental standards were taken into account and given effect to. These non-optional measures included:

- seven activity standards that ban various activities that discharge unacceptable contaminants into the air (landfill fires, burning of tyres in the open, bitumen burning for road maintenance, burning of coated wire in the open, burning of oil in the open, high temperature hazardous waste incinerators, and school/healthcare incinerators unless consented)
- five ambient air quality standards for carbon monoxide (CO), fine particulate (PM₁₀), nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and ozone (O₃)
- a design standard for new small-scale domestic wood-burning appliances, and the prohibition of discharge from certain woodburners
- a requirement for landfills over one million tonnes of refuse to collect greenhouses gas emissions.

Like the first RAQP, no Environment Court hearing process was required with issues being resolved through the engagement process. The second RAQP drew on the comprehensive state of the environment monitoring programmes put in place by the Council prior to, but more substantially subsequent to, the adoption of the first Plan.

1.2.2 The Regional Air Quality Plan for Taranaki

The second RAQP was made operative on 25 July 2011. It sets out how our air resources should be managed into the future, and impacts on how people, businesses, and industry use, develop and protect Taranaki's resources. District plans must not be inconsistent with a regional plan for any matter specified in section 30(1) of the RMA (section 75(4)(b) RMA).

The over-riding purpose of the RAQP for Taranaki is to assist the Council to carry out its functions under the RMA to promote the sustainable management of the air resource of the Taranaki region.

Issues

Twelve air quality issues are identified in the RAQP. These being:

1. Degradation of air quality from the discharge of contaminants to air;
2. Recognition of the air resource as a taonga and protection of wāhi tapu from the intrusion of odour or visual contaminants;
3. Adverse effects on the environment from the discharge of contaminants to air from industrial and trade premises (excluding waste management processes, as dealt with separately);
4. Adverse effects on the environment from the discharge of contaminants to air from waste management processes;
5. Adverse effects on the environment from the discharge of contaminants to air from site development, earthworks and the application of soil conditioners;
6. Adverse effects on the environment from the discharge of contaminants to air from aquaculture and intensive farming processes;
7. Adverse effects on the environment from the discharge of contaminants to air from the discharge of agrichemicals into the air;
8. Adverse effects on the environment from the discharge of contaminants to air from burning of vegetation on production or on forested land;
9. Adverse effects on the environment from the discharge of contaminants to air from burning of tyres or untreated used oil;
10. Adverse effects on the environment from the discharge of contaminants to air from fire training activities or fire safety research or education purposes;
11. Adverse effects on the environment from domestic sources of discharges of contaminants to air; and

12. Recognition of the benefits from activities discharging to air.

Objectives

Four objectives are identified in the RAQP for air quality in the Taranaki region:

1. To maintain the existing high standard of ambient air quality in the Taranaki region and to improve air quality in those instances or areas where air quality is adversely affected, whilst allowing for communities to provide for their economic and social wellbeing.
2. To safeguard the life-supporting capacity of air throughout the Taranaki region.
3. To provide for activities discharging to air.
4. To avoid, remedy or mitigate the adverse effects of activities discharging contaminants to air in the Taranaki region, including adverse effects on the amenity and aesthetic qualities of air.

To address the issues and implement the objectives, the RAQP includes policies and methods of implementation, together with regional rules.

The RAQP uses a combination of regulatory and non-regulatory methods (such as the preparation and development of guidelines and other advice and information) to protect and maintain the region's generally excellent air quality.

Rules

The regional rules of the RAQP have the force and effect of a regulation under the Act. The rules permit, control or prohibit air discharge activities depending upon the scale and significance of the adverse effects associated with particular activities, and the need to ensure measures are adopted to avoid or minimise those effects of concern. The rules classify activities according to the following categories:

- (a) **Permitted activities:** activities that may be carried out through a rule in the Plan, without resource consent, subject to their compliance with any conditions prescribed in the rule, e.g. discharge of agrichemicals or burning of vegetation on production or forested land.
- (b) **Controlled activities:** activities that may be carried out, through a rule in the Plan, with resource consent that must be granted by the Council, subject

to the activity complying with standards and terms set out in the rule¹.

- (c) **Restricted discretionary activities:** activities that may only be carried out if resource consent is obtained. The Council may decline or grant resource consent for this type of discretionary activity. The Council will exercise its discretion in accordance with Section 104 of the Act including consideration of the objectives and policies in the Plan.
- (d) **Discretionary activities:** activities that may only be carried out if resource consent is obtained. The Council has the discretion to grant or decline a resource consent application for this type of discretionary activity and, depending upon the rule, impose conditions on the consent.
- (e) **Prohibited activities:** activities that the Plan expressly prohibits, e.g. discharges to air from the burning of metal cables, motor vehicles, tyres and untreated waste oil.

The RMA also provides for 'non-complying activities'. Non-complying activities are activities that are not prohibited but which otherwise contravene or fall outside the scope of a rule in the Plan (and for which the Council has the discretion to grant or decline the consent application). However, there are no regional rules in the RAQP for Taranaki that allow for non-complying activities.

Under the RAQP all major industrial, trade and agricultural activities that discharge contaminants to air are addressed through regional rules. **Appendix I** summarises the arrangement of rules in the Plan according to discharge source or activity. Depending upon the scale and significance of the effects associated with the discharge source or activity, differing standards, terms and conditions are applied.

Methods of implementation

The RAQP contains 15 methods of implementation. For the purposes of this review, the methods have been grouped according to the following broad themes:

1. Applying regional rules to allow, regulate or prohibit activities.
2. Applying policies and section 104 of the RMA (see section 3.1 below) when granting discharge to air permits or the conditions of such a permit.
3. Requiring applicants for discharge to air permits to adopt the best practicable option to prevent or minimise adverse effects.

4. Consulting with iwi and hapū regarding identification of places of special cultural and traditional value associated with the air resource.
5. Providing advice and information, including guidelines, to landowners, resource users, and the public.
6. Supporting and promoting the preparation and adoption by sector groups of guidelines and certification programmes.
7. Working with the poultry growing industry to reduce the effects of broiler operations on air quality.
8. Monitoring and gathering information.
9. Receiving and responding to public complaints.
10. Implementing and promoting effective integrated management of air quality issues with territorial authorities.
11. Applying and contributing to the monitoring of national environmental standards for air quality.
12. Advocating to relevant agencies.
13. Providing information on the location of electricity transmission networks.
14. Encouraging the installation of cleaner heating methods and appliances and increases in home energy efficiency
15. Defining a Port Air Zone to provide boundaries for controlling the effects of air emissions in the coastal marine area at Port Taranaki.

1.3 This review

Under the RMA, a full review of the RAQP must be commenced within 10 years of it becoming operative. The current RAQP is therefore due for full review in 2021.

In the interim, under section 35(2)(b) of the RMA, Council must monitor the efficiency and effectiveness of policies, rules, or other methods in their regional plans. Monitoring results are also set out in the regular state of the environment monitoring reports². Section 35(2A) of the RMA (refer **Appendix II**) further requires that the Council compile and makes available to the public an interim review of the results of its monitoring of the efficiency and effectiveness of its regional plan policies, rules or other methods.³

¹ In effect, controlled activities are permitted, the Council cannot refuse consent), and subject only to Council discretion regarding those controls specified in the Plan. This allows the Council flexibility to deal with those activities that it considers should be permitted but which the Council feels there should be some discretion to impose appropriate conditions on a case-by-case basis.

² Taranaki Regional Council, 2015, *Taranaki as One; Taranaki Tangata Tu Tahi State of the Environment Report 2015*.

³ Reviewing the effectiveness of policy is an important component of resource management, completing the circle of policy development, delivery of that policy through methods, monitoring the outcomes of delivering that policy and taking appropriate actions to deliver on the policy.

This report, amongst other things, gives effect to that requirement and summarises the findings of a review on the efficiency and effectiveness of the RAQP.

Through the interim review process, the Council is seeking to ensure that the RAQP remains relevant, lawful and appropriate and that it is achieving its purpose in an efficient and effective way. In the event of any deficiencies in the RAQP the Council must consider whether the deficiencies are significant or minor.

If the deficiencies in the Plan are significant, changes to the RAQP may need to be made immediately as a matter of urgency, i.e. half way through the 'life' of the Plan. If the deficiencies in the RAQP are relatively minor then any changes can wait until the Council undertakes a full review in 2021. **Appendix III** of this report sets out the criteria by which the Council will consider making changes to the Plan. The criteria include consideration of the issues, lawfulness, clarity, practicality and affordability, efficiency, equity and section 32 duties including the risk of acting or not acting.

1.3.1 Assessment criteria

In deliberating as to the necessity to make immediate changes to the RAQP, Council has had regard to the following criteria:

- The ongoing relevance of the RAQP in terms of section 35(2) matters. Part of this assessment will need to include consideration of the:
 - timeliness of any change, particularly in view of any proposed changes in legislation and new or emerging issues (refer sections 3 and 6 below); and
 - costs to the Council or resource users.
- The *effectiveness* of RAQP policies in achieving the objectives (refer section 4 below).
- The *effectiveness* of the RAQP in terms of the clarity and appropriateness of the rules (refer section 5.1 below).
- The *efficiency* of the RAQP in terms of its benefits and costs (refer section 5.2-5.4 below).
- The *effectiveness* of the RAQP in terms of its delivery of the methods of implementation (refer section 5 and Appendix V below).

This report summarises and is underpinned by comprehensive state of the environment monitoring undertaken by the Council.

1.3.2 Assessment methodology

The methodology for assessing the effectiveness and efficiency of the RAQP is similar to those previously undertaken by the Council. The methodology is also based on best practice guidelines set out in the report *Evaluating Regional Policy Statements and Plans – A Guide for Regional Councils and Unitary Authorities*.⁴

This report seeks to answer three key questions:

1. Are the significant air quality issues still relevant in 2018 (are there any drivers for change and does the RAQP continue to focus on the appropriate *regionally significant issues*)?
2. Is the RAQP effective and efficient in achieving its purpose of providing for the sustainable management of air resources in the Taranaki region (is it achieving its objectives, are the policies and methods being implemented)?
3. On the basis of the above, are changes to the RAQP required as a matter of urgency (are there any priority areas where additional information and analysis may be required)?

To answer these questions the Council undertook:

1. A desktop review of legislative and government policy changes, state of the environment information, and other relevant information.
2. The preparation of this report, which compiles the results of that monitoring, including the Council's findings and will be made available to the public.

As noted above, a desktop review of the state of the environment information and Council databases was undertaken. Assessment of the effectiveness of the policies towards achieving the RAQP objectives was based largely upon the Council's *Taranaki as One; Taranaki Tangata Tu Tahi State of the Environment Report 2015*.⁵

1.4 Structure

The report is divided into seven sections, as follows:

Section 1 (this section) introduces the purpose, background, methodology and structure of the report.

Section 2 summarises the context of the review, including the current state of air quality in the Taranaki region and the current legislative and policy context.

Section 3 identifies legislative change factors.

Section 4 examines the effectiveness of the RAQP's objectives and policies.

⁴ Enfocus Limited, July 2008.

⁵ Read the report by clicking on the following link: <https://www.trc.govt.nz/council/plans-and-reports/environmental/state-of-the-environment-report-2015/>

Section 5 examines the efficiency of RAQP implementation, including the costs and benefits.

Section 6 identifies implementation issues arising from the review including potential for future inclusion of additional matters, and evaluation of the urgency for change.

Section 7 presents the conclusions on the efficiency and effectiveness of the RAQP.

Appendices are presented at the back of the report. The appendices set out the arrangement of rules according to discharge source or activity, and the legislative requirement to undertake an interim review under section 35 of the RMA, the criteria for review of the RAQP, *Regional Policy Statement for Taranaki 2010* provisions relating to reverse sensitivity, and a summary of progress in respect of implementing RAQP methods.



2. Context of review

2.1 The current state of air quality in Taranaki

The combination of a windy and exposed environment, a dispersed and small population, relatively light industry and a low number of vehicles means that the overall quality of air in the Taranaki region is excellent. As there are no significant pressures upon the quality of air in the region the focus of the RAQP and its rules are generally on maintaining and, at specific locations, enhancing air quality.

Taranaki is one of only two regions in New Zealand that have never exceeded national air quality standards. For that reason we have never been required to create a 'gazetted airshed' (a defined body of air within a specific locality) to address air quality issues. Continued demonstration of excellent air quality means that, unlike other regions in the country, National Environmental Standard monitoring is not compulsory in Taranaki.

Most emissions to air in Taranaki are diffuse emissions from natural sources: from vegetation, land cover, farm animals and sea-spray drift. They also come from industry, homes, and motor vehicles.

Point source discharges (from a single large source) are more obvious than diffuse emissions and come from industry, land development, and farms with housed livestock (such as piggeries and poultry sheds).

The potential effects of air emissions range from amenity effects (such as haze, smoke, or offensive odours) to potential or actual negative impacts on human and ecosystem health. For example over time, increased levels of poultry farming have resulted in increased resource consents for air discharges in the region. However, effective regulations promoting best practice, together with monitoring to enforce conditions, mean there has been a negligible impact on local air quality.

2.2 Current legislative and policy context

2.2.1 Resource Management Act

Section 15 of the RMA restricts the discharge of contaminants into the environment, including discharges of contaminants from any industrial or trade premises into air, unless the discharge is expressly allowed by a rule in a regional plan, any relevant proposed regional plan, a resource consent, or regulations.

Discharges to air from places that are not industrial or trade premises (including farmland, residential properties and all moveable sources) are allowed, unless a rule in the RAQP or other regional plan provides otherwise.

Of note air discharges in the coastal marine area (CMA) are addressed separately by the Regional Coastal Plan.

2.2.2 National policy statements and environmental standards

National policy statements (NPSs) and environmental standards (NESs) are issued by the government to provide direction to local government on matters of national significance.

National environmental standards (NES) are regulations that prescribe standards for environmental matters, to ensure consistency. Issued under section 43 of the RMA, they can apply regionally or nationally (although all current national environmental standards apply nationally). Each regional, city or district council must enforce the same standard. In some circumstances, and where specified in the NES, councils can impose alternative standards.

NPSs and NESs that may be of relevance to the RAQP are outlined below.

2.2.3 NES for Air Quality Regulations

The *National Environmental Standards for Air Quality* (NES-AQ)⁶ are regulations made under the RMA, which aim to set a guaranteed minimum level of health protection for all New Zealanders in respect of air quality.

The NES-AQ covers the field of air pollutants, dioxins and other toxins. The standard restricts the lighting of fires or burning of waste at landfills and the burning of other pollutants, and establishes minimum air quality standards applied to airshed boundaries. These standards are to be implemented by regional councils (or unitary authorities) under regional plans. When the maximum pollution levels are reached, remedial action may be considered and no further consents for harmful emissions may be granted.

If a standard allows, regional plans may impose stricter air pollution standards, and may include rules that prohibit the installation of open fireplaces in urban properties.

Emissions from motor vehicles are not covered by the standards directly, but may be regulated under traffic rules and vehicle performance standards.

The NES-AQ came into effect on 8 October 2004. The standards are made up of 14 separate and interlinked standards (see section 1.2.1 above).

Regional councils and unitary authorities are responsible for managing air quality under the RMA national environmental standards. They are required to identify areas where air quality is likely, or known, to exceed the standards. These areas are known as airsheds.

In June 2009 the regulations relating to Particulate Matter of a certain size – PM₁₀ – were reviewed to address concerns about the perceived stringency of the ambient standard, the lack of equity for industrial air pollution sources, and difficulty in achieving the original target timeline of 2013. The standards were revised and the amended Regulations came into force on 1 June 2011. These have been consolidated into the NES-AQ.

2.2.4 NES for Electricity Transmission Activities Regulations

The *(National Environmental Standards for Electricity Transmission Activities) Regulations 2009* (NES-ET) applied nationally from 14 January 2010.

The NES-ET sets out a national framework of permissions and consent requirements for activities on existing high voltage electricity transmission lines. Activities include the operation, maintenance and upgrading of existing lines.

The NES-ET does not apply to the construction of new transmission lines or substations.

Regulations 25–27 of the NES-ET are relevant to air quality because they relate to permitted, controlled, and restricted discretionary activities in relation to discharges from blasting and applying protective coatings to transmission line support structures.

The requirements of the NES-ET are in addition to those given in this Plan. The NES-ET contains rules that apply to Electricity Transmission Activities and if any of those rules duplicate those in the RAQP, the relevant rules in the RAQP do not apply.

2.2.5 NES for Plantation Forestry

The National Environmental Standards for Plantation Forestry (NES-PF) was published on 3 August 2017 and will commence on 1 May 2018.

The NES-PF aims to maintain or improve the way New Zealand manages the environmental effects of plantation forestry while also increasing the efficiency and certainty of managing plantation forestry activities.

The NES-PF regulations apply to any forest of more than 1 hectare that has been planted specifically for commercial purposes and harvesting. It does not apply to trees grown for fruit, nut crops, shelter belts, or nurseries.

Eight core plantation forestry activities are covered, these being:

- afforestation (planting new forest);
- pruning and thinning;
- earthworks;
- river crossings;
- forestry quarrying;
- harvesting;
- mechanical land preparation; and
- re-planting.

Most forestry activities are permitted by the NES-PF as long as foresters meet specific conditions to prevent significant adverse environmental effects, including dust.

For forestry related activities covered by the NES-PF, regional rules will not apply unless provided for by Regulation 6 of the standards.

⁶ The title of these Regulations, previously “Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004” was amended, as from 1 June 2011, by regulation 4(1)(a) Resource Management (National Environmental Standards for Air Quality) Amendment Regulations 2011 (SR 2011/103) by substituting “for Air Quality” for “Relating to Certain Air Pollutants, Dioxins, and Other Toxics”.

2.2.6 Medical Officers of Health and Health Protection Officers

The Taranaki District Health Board also contributes to air quality objectives in the RAQP through the provisions of the *Health Act 1956*.

Under section 123 of the *Health Act* the District Health Board is the default agency to conduct any sanitary work pursuant to this Act, if the local authority fails to start or complete this work.

In Schedule 2 of the *Health Act*, there is a responsibility to notify the Medical Officer of Health (MOH) of any infectious or communicable disease. This includes a chemical poisoning incident that could become a public health issue as a result of, for example, an agrichemical spraying operation.

2.2.7 National Ambient Air Quality Guidelines

The purpose of the *National Ambient Air Quality Guidelines 2000* is to promote sustainable management of the ambient air resource in New Zealand and to provide guidance on the management of air quality under the RMA. The Guidelines apply only to ambient air outside buildings or structures, and not to indoor air or air in the workplace.

Guideline values are the minimum requirements that outdoor air quality should meet in order to protect human health and the environment. While the Guidelines are not legislative requirements, the Council accords them weight as a technical reference document which represents the best applied scientific knowledge. The Guidelines were last reviewed in 2002.

2.2.8 Other statutes and regulations

The provisions of the RAQP do not replace other legislation, regulations or bylaws relating to air quality. These may include legislative requirements, regulations or bylaws made by the New Plymouth, Stratford or South Taranaki District Councils under the *Local Government Act 1974*, *Local Government Act 2002*, or otherwise under the *Health Act 1956*, the *Forest and Rural Fires Act 1977*, or the *Hazardous Substances and New Organisms Act 1996* (HSNO).

2.2.9 Hazardous Substances and New Organisms Act 1996 (HSNO)

All entities involved in the transporting, storing, handling, or management of dangerous goods and hazardous substances are required to comply with the provisions of HSNO. All users (from home users to major industry), including storage and transport companies, and waste treatment and disposal companies, need to comply with

the controls set by the Authority on each hazardous substance that it deals with.

Compliance may include having to get a test certificate if the substance or substances are highly hazardous or if there are large quantities. Handlers of highly hazardous substances need to get certification from a test certifier who has been approved by the Environment Protection Authority.



3. Legislative change factors

There have been some changes to the legislative context since the current RAQP was made operative in 2011. This section examines potential change factors in relation to the ongoing relevance of the RAQP.

3.1 RMA amendments

Since the RAQP was adopted in 2011, the RMA has been amended a number of times.

The *Resource Management Amendment Act 2013* - :

- Made changes to the resource consent regime.
- Create a streamlined process for Auckland's first unitary plan.
- Set a six-month time limit for processing consents for medium-sized projects.
- Create easier direct referral to the Environment Court for major regional projects.
- Set up stronger requirements for councils to base their planning decisions on a robust and thorough evaluation of the benefits and costs.

In 2017 the Government enacted the *Resource Legislation Amendment Act*. This Act contains reforms that comprise substantive, system-wide changes to the resource management system. Key changes of relevance to the RAQP include:

- Councils have the ability to charge for monitoring of activities permitted by a NES. However Councils will not be able to charge financial contributions under the RMA (from 5 years after Royal Assent).
- A national planning template that aims to improve the consistency of RMA plans and policy statements, reduce complexity, and improve the clarity and user-friendliness of plans. The national planning template provisions will be mandatory after 5 years from Royal Assent (i.e. by 2022).
- A statutory obligation on councils to invite iwi to form an iwi participation arrangement that will establish the engagement expectations when consulting during the early stages of the Schedule 1 plan-making process. This obligation aims to improve consistency of iwi engagement during plan development.
- Other minor process improvements concerning the waiving of resource consents for marginal or temporary rule breaches, fixing of fees for resource

consents, and changes to requirements around public notices and service of documents.

The above amendments have not so far required Council to amend the current RAQP but will have implications when a full review is required. Further significant changes to the RMA are anticipated over the next couple of years that may also have implications when it is due for its full review – scheduled to occur in 2021.

3.2 Proposed amendments to the NES for Air Quality

In March 2015 the Parliamentary Commissioner for the Environment requested that the National Environment Services-Air Quality (NES-AQ) be amended to include a standard for particular matter PM_{2.5}.

The Government is currently developing amendments to the NES-AQ, which are intended to address PM_{2.5} and reflect improved scientific understanding on health impacts. This amendment process is tentatively due to be completed in 2018/2019, but this is subject to prioritization by the new Government. The Government will seek submissions from the general public, iwi, regional councils, and air quality practitioners once a discussion document is released for consultation.

Of note, the Council already conducts monitoring for PM_{2.5} and results are well within the World Health Organisation (WHO) guideline of 25µg/m³ over an average of 24 hours.

3.3 Effect of key change factors

As outlined above, there are a number of legislative 'change' factors that have emerged since the adoption of the RAQP in 2011. However, a review of these change factors has not identified any new or emerging issues that warrant immediate changes to the RAQP.

Other issues that have arisen since 2011 and may require changes to the Plan are discussed in Section 6 of this report.

Notwithstanding the above, when preparing the next RAQP Council will take the aforementioned Government reviews, strategies, and initiatives (plus other change factors) into account where they are relevant to the purpose of the RAQP.



4. Are the objectives and policies effective?

As indicated earlier in this report, the RAQP contains four objectives for air quality in the region. They are:

1. To maintain the existing high standard of ambient air quality in the Taranaki region and to improve air quality in those instances or areas where air quality is adversely affected, whilst allowing for communities to provide for their economic and social wellbeing.
2. To safeguard the life-supporting capacity of air throughout the Taranaki region.
3. To provide for activities discharging to air.
4. To avoid, remedy or mitigate the adverse effects of activities discharging contaminants to air in the Taranaki region, including adverse effects on the amenity and aesthetic qualities of air.

This section examines, compiles and presents state of the environment monitoring results relevant to each objective, together with qualitative assessments where necessary.

In relation to each objective, the effectiveness or otherwise of the RAQP five years on in terms of achieving or working towards its objectives is evaluated and assessed as:

- **Achieved** – objective is being achieved across the broad range of environmental indicators.
- **Generally being achieved** – objective is largely being achieved. Monitoring results and this assessment indicates generally positive trends and outcomes across most (but not all) environmental indicators.
- **Partially being achieved** – monitoring results and this assessment has identified mixed positive and negative results across the range of environmental indicators. Negative results indicate significant risk that elements of the RAQP objective may not be achieved.
- **Not achieved** - objective is not being achieved across the broad range of environmental indicators.

4.1 Objective 1: Maintaining and improving ambient air quality

Air quality data has been gathered and maintained for more than 20 years at up to 20 representative sites, including urban, industrial, rural, coastal and pristine areas. Screening methods are also used to monitor air quality at locations that have the most potential for adverse impacts as a result of surrounding land use. Consistently good results from the air quality monitoring programme confirm that the screening approach is justified and cost-effective.

The Council looks at key indicators of ambient air quality, including inhalable particulates; chemicals such as nitrogen oxides, benzene, carbon monoxide, sulphur oxides and formaldehyde; and suspended particulates and deposition. Visibility is also monitored.

The Council also monitors air quality as part of resource consent compliance programmes to ensure resource consent conditions are met in industry and agriculture and also in residential areas (for activities such as backyard fires).

The Council undertakes further regular testing of air quality in areas determined to be 'worst-case scenario' checkpoints, such as urban areas of high traffic flow. In this way, we can monitor trends to ensure that activities are continuing to have no or acceptable adverse effects, and that the high quality of air in the region is being maintained.

Using Ministry for the Environment (MfE) environmental performance indicators for air, Taranaki's air quality is rated overall as 'good' to 'excellent' across various measures of quality at the region's representative monitoring sites, including built-up areas and areas of high vehicular use⁷. Some minor localised issues have occurred from time to time, but otherwise no major issues have been identified. An explanation of MfE's environmental performance indicators for air is provided in Table 1 overleaf.

Result: Objective 1 is being achieved

⁷ Taranaki as One; Taranaki Tangata Tu Tahi State of the Environment Report 2015.

Table 1: MfE environmental performance indicator categories for air quality

Category	Measured value	Explanation and Action
Action	More than 100% of the National Environmental Standard (NES) or alternative guideline value	Exceedences of the guideline are a cause for concern and warrant action if they occur on a regular basis. Action requires achievement of the guideline value within shortest possible timeframe and comprehensive investigation and monitoring.
Alert	Between 66% and 100% of the NES or other guideline value	This is a warning level, which can lead to exceedences if trends are not curbed. Action requires further reduction where practicable and monitoring.
Acceptable	Between 33% and 66% of the NES or other guideline value	This is a broad category where maximum values might be of concern in some sensitive locations, but are generally at a level that does not warrant dramatic action. Action requires maintenance, reduction where practicable, and periodic monitoring.
Good	Between 10% and 33% of the NES or other guideline value	Peak measurements in this range are unlikely to affect air quality. Action requires maintenance
Excellent	Less than 10% of the National Environmental Standards guideline value	Of little concern. Action requires maintenance and occasional monitoring.

4.2 Objective 2: Safeguarding the life-supporting capacity of air

Objective 1 and 2 are inter-related. However, for the purposes of this report, Council examines in greater detail the constituent parts of air quality that contribute to safeguarding the life supporting capacity of air in Taranaki.

4.2.1 Particulate matter (PM₁₀)

One aspect of air quality the Council measures is PM₁₀ (airborne particulate matter of less than 10 micrometres in diameter per cubic metre of air) emissions. PM₁₀ emissions come from sources such as burning coal, oil, wood, petrol and diesel in domestic fires, transportation and industrial processes and from natural sources, including sea salt, dust, pollens and volcanic activity. PM₁₀ is associated with health issues ranging from respiratory irritations to cancer.

The NES for PM₁₀ is 50 micrograms per cubic metre (µg/m³) over a 24-hour average period. The NES allows one sample per site to exceed this limit per year.

Surveys in the CBD (2010) and at Port Taranaki (2012) found that the majority of the results were within the Ministry's 'Excellent' or 'Good' categories and the remainder met the 'Acceptable' category (refer Figure 1). To ensure a 'worst-case' air quality scenario, sites with high traffic movements and marine influences were chosen. The CBD survey was undertaken between two main roads close to the foreshore. Similarly, the Port Taranaki survey site was subject to heavy vehicles and marine influences. No survey results entered the 'Action' category, meaning no result exceeded the NES of 50 µg/m³.

Traffic flows were found to have no discernible effect on particulate matter emissions. However, onshore winds

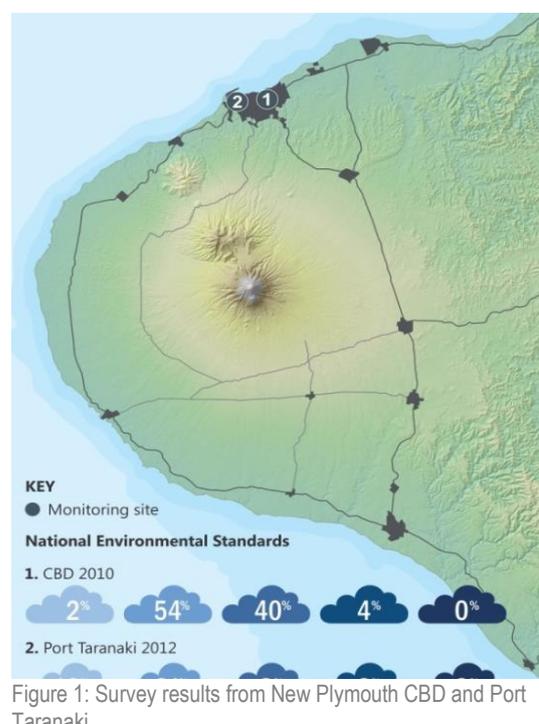


Figure 1: Survey results from New Plymouth CBD and Port Taranaki

were found to be a major influence upon air quality, with airborne salt causing PM₁₀ concentrations to double.

Elsewhere in New Zealand, the highest PM₁₀ results occur in winter, as a result of wood and coal use for heating and traffic-related emissions. This is not the case in Taranaki because there is a comparatively low use of solid fuels and the exposed environment means less periods of calm weather in winter.

4.2.2 Particulate matter (PM_{2.5})

The Council also measures PM_{2.5} concentrations around the region. These finer particles, commonly derived from

incomplete combustion, pose a greater public health risk than PM₁₀.

The Government is currently developing amendments to the NES-AQ, which will require regional councils to monitor PM_{2.5} and reflect improved scientific understanding on health impacts (refer section 2.2.3 above).

State of the environment monitoring results over the life of the RAQP for PM_{2.5} confirms concentrations are well within World Health Organisation guidelines of 25µg/m³ over an average of 24 hours.

4.2.3 Nitrogen oxides (NO_x)

Nitrogen oxides (NO_x) are a group of gases that typically comprise mainly nitric oxide (NO) and nitrogen dioxide (NO₂), and a small proportion of nitrous oxide (N₂O).

Nitrogen oxides are produced from soil, vegetation and other natural sources, as well as motor vehicles and other fuel combustion processes. Indoor domestic appliances such as gas stoves or unflued gas heaters can be significant sources of nitric oxide and nitrogen dioxide. These gases can accumulate, particularly in poorly ventilated areas. It is widely accepted that nitrogen dioxide can aggravate asthma and reduce lung defences against bacteria.

As part of its state of the environment monitoring, since 1997 the Council has surveyed nitrogen oxides at seven sites throughout the region (refer Figure 2). In this programme, passive absorption discs that capture target gases are placed at each site. Samples gathered are then analysed by an external party and the results converted to the equivalent exposures for a one-hour period.

Unsurprisingly, the highest concentrations are found in the urban environment (sites 4 and 5 in New Plymouth city). Another eight sites in the region are monitored as part of consent compliance programmes.

Concentrations at all state of the environment monitoring (SEM) sites since that time have been well within the relevant NES values, with no observable upward trend. Five (80%) of the SEM sites monitored were consistently within the 'Excellent' category of the MfE Environmental Performance indicator, with nitrogen oxide concentrations less than 10 µg/m³.

In a 2011–2012 survey, the Council monitored Fonterra's Whareroa dairy factory generation plant and Downer EDI's asphalt and bitumen plant as part of its industrial consent compliance monitoring. Results found that NO_x concentrations at Fonterra were comparable with monitoring sites located near major roads and the Downer site was also well within NES guidelines. The highest result of this survey (24.7 µg/m³) was from a busy traffic intersection in New Plymouth and was still well below limits.

Overall, 97% of results from all Council monitoring in 2015/16 have been within the Ministry's 'Good' or 'Excellent' categories in the environmental performance indicator table. This is consistent with previous years.

These results indicate that NO_x levels are consistently well below the limits posed by the National Environmental Standard and there is no evidence that concentrations in the region are increasing.

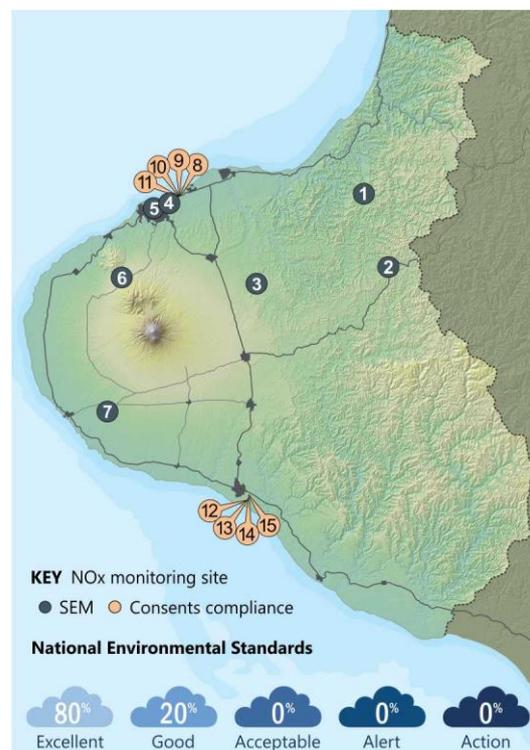


Figure 2: Monitoring results for SEM and consent compliance

4.2.4 Volatile organic compounds (VOCs)

The Council also monitors air quality for gases that are classified as volatile organic compounds or VOCs. The four most common VOCs are benzene, toluene, ethylbenzene and xylenes—often found together and referred to as BTEX. These volatile gases occur naturally as a component of crude petroleum and vegetable oils (in small amounts). They are also produced during the combustion of organic matter such as petroleum products. Other common sources of exposure are solvents (including paints and glues), petrol and diesel fuels.

Short-term or acute exposure to high levels of BTEX components has been associated with skin and sensory irritation, central nervous system depression and adverse effects on the respiratory system. Prolonged or chronic exposure to high levels of these compounds can affect the kidney, liver and blood systems. Studies by the United States Environmental Protection Agency show long-term exposure to benzene can be carcinogenic for humans.

In April 2012, the Council conducted an air quality survey to monitor BTEX at four sites in Taranaki: two in New Plymouth city urban area, one on farmland, and one in the Stratford township. As demonstrated in Figure 3 all results in respect of benzene from the 2012 survey were within the recommended *Health Effects of Eleven Hazardous Air Contaminants and Recommended Evaluation Criteria* guidelines (October 2000).

Levels of toluene and xylene were found to be far below the maximum guideline values. All toluene and xylene results fell into the MfE 'Excellent' air quality category. Three of the four benzene results were within the MfE 'Acceptable' category and one result fell within the 'Good' category.

The Council also monitors for VOCs around significant potential sources, such as gas production stations, as part of consent compliance programmes. Results always fall well within guideline values.

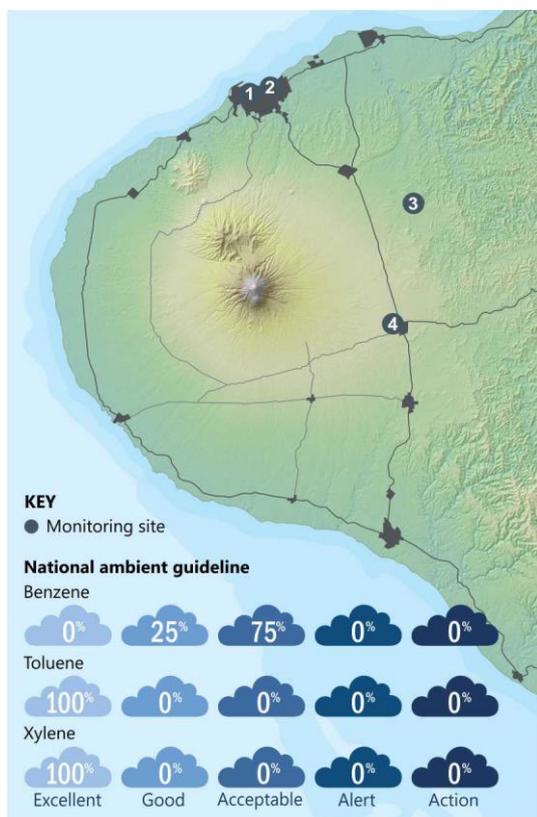


Figure 3: VOC monitoring results

4.2.5 Carbon monoxide

Carbon monoxide (CO) is the result of incomplete fossil fuel combustion. For example, it comes from motor vehicle

emissions and from burning wood or coal for home heating or industrial purposes.

In high concentrations carbon monoxide can cause dizziness or aggravate heart conditions. It can be fatal. In New Zealand, the NES for carbon monoxide is 10 mg/m³ (calculated as an eight-hour average).

A one-month survey of carbon monoxide concentrations in New Plymouth in 2012 met the NES, with monitoring showing low levels of CO in the area most of the time.

The Council also undertakes routine consent compliance monitoring for carbon monoxide in Taranaki around significant potential sources such as gas production stations. Results never reach more than a trivial level of either the National Ambient Air Quality guidelines or NES guideline values and are reported publicly in individual annual monitoring reports.

4.2.6 Hydraulic fluid flaring

Hydrocarbon exploration operations can include hydraulic fracturing, or 'fracking'⁸. Fracking fluids are generally recycled or disposed of off-site. However sometimes, for the safety of workers or equipment, disposal via a flare is required. The process of 'flaring' involves combusting and vaporising the recovered fluids into the air.

Previous examination of the effects of flaring on air quality at well sites found that beyond 100 metres downwind of a flare, there was no elevation of risk to public health over normal everyday exposure. However with increased fracturing activity in Taranaki, and in response to public concerns, the Council decided to undertake further investigations to evaluate fracking air emissions in 2012-2013.

These investigations tested emission and ambient air samples collected both at and downwind of a flare in the process of combusting/vaporising recovered fluids. The samples were tested for particulate matter; dioxins and furans; polyaromatic hydrocarbons; aldehydes; volatile organic compounds and methanol. Other measures of the combustion process (oxygen, carbon dioxide, carbon monoxide, nitrogen oxides, and sulphur dioxide) were also investigated. Results showed:

- no elevation of dioxins or furans concentrations
- PM levels at or below those generally found throughout the region
- polyaromatic hydrocarbon levels lower than those found in central city areas

⁸ Fracking is a well stimulation technique used to increase the flow of hydrocarbon fluids to the surface by pumping fluids down at pressures sufficient to fracture the reservoir rock, propping open the fracture with permeable material, and capturing the fluids (which sometimes contain produced hydrocarbons) that flow back to the surface.

- volatile organic compounds (including benzene), aldehyde and methanol levels well within Ministry for the Environment guidelines
- no trace of carbon monoxide, and minimal levels of the other conventional products of combustion.

The design and implementation of the investigation projects were independent of any influence or direction from the exploration and production companies and were subject to external peer review.

The results of the study are consistent with others overseas and have demonstrated that, even if hydrocarbon production in the region was to expand significantly, public health would not be compromised. The full report can be found online at www.trc.govt.nz/hydraulic-fracturing/.

Result: Objective 2 is being achieved

4.3 Objective 3: Providing for activities to discharge to air

In the three years either side of the adoption of the first RAQP in 1997,⁹ nearly three-quarters of the major air discharge consent holders upgraded their emissions control or production technology to improve the quality of their discharges to air. Further, through the resource consents process, and with through general advice and advocacy, the Council has continued to promote on-going improvements to emissions control or production technology in the region.

A total of 294 air discharge consents were issued between 2011 and 2017, making up 10.3% of the total number of consents processed by Council (2,853) in that time.

Just over half of the air discharge consents (155) are related to the Hydrocarbon (Oil and Gas) industry. A further quarter (75) relate to the Poultry industry. Abrasive Blasting (15) and Power Generation (eight) are the next highest number of consents issued, followed closely by Meat and By-products Processing and the Piggery Industry air discharge consents, at seven consents each. Crematoria and Dairy Processing sites are the next largest, with four consents.

The remainder of air discharge consents relate to Asphalt/Bitumen processing; Chemical Processing and Manufacture; Distribution/Storage of Fertiliser; Earthworks; Landfill; Metal Processing; Petrochemical Processing; Sewage Treatment; and the Timber and Wrecking industries.

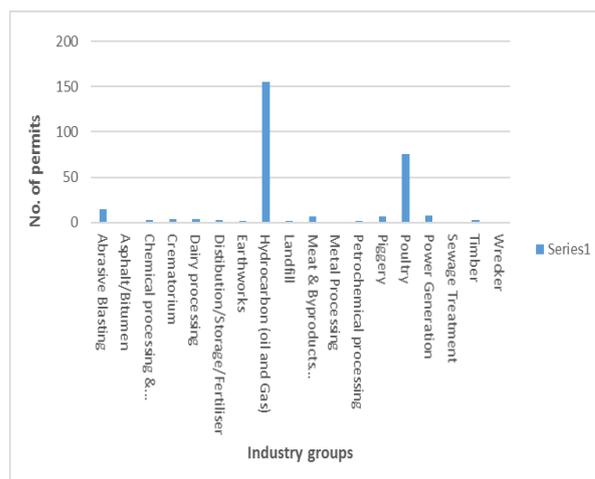


Figure 4: Number of air discharge permits held by industry

The volatility of export markets for oil and gas has contributed significantly to decreasing air discharge consent numbers since 2011. Rising from 25 air discharge consents in 2010/11 to 98 in 2013/14, Hydrocarbon air discharge consents have decreased again to 20 in the 2016/17 year.

For further information on consenting please refer to section 5.1 below.

Result: Objective 3 is being achieved

4.4 Objective 4: Avoiding, remedying, or mitigating adverse effects on air

4.4.1 Compliance monitoring results

In the early years of the RAQP, the Council undertook regular monitoring of representative monitoring sites and monitored discharges to air from large or complex consented point sources that have the potential for significant adverse effects on air. Once it was identified that Taranaki has consistently excellent air quality by national and international criteria, the number of general air quality investigations were reduced. However there are a range of tests related to air quality that the Council continues to conduct at consented sites.

More recently the Council has integrated the timing of the State of the Environment (SEM) and compliance monitoring programmes in respect of NO_x measurements, and has implemented continuous PM_{2.5} measurements at a new SEM site. Officers survey air quality at specific sites including:

⁹ 1992-1996 and 1997-2001.

- Bell Block Bypass (PM₁₀, PM_{2.5}, NO_x, CO, BTEX)
- Vickers to City Upgrade Project (PM₁₀, PM_{2.5}, NO_x, CO, BTEX)
- Port Taranaki (PM₁₀, PM_{2.5})
- Permanent continuous PM_{2.5} monitoring site at New Plymouth Central School
- Fourteen sites covering all industrial area across the region (NO_x, PM₁₀, CO).

Compliance monitoring confirmed that in 2015/16, 97 % of air permit holders routinely achieved a 'high' or 'good' performance based upon a rating system adopted by the Taranaki Regional Council to grade a resource consent holder's overall environmental performance and compliance (refer Table 2).

Result: Objective 4 is being achieved

Table 2: Council rating system for compliance monitoring

Grading category	Explanation
High	Where there are essentially no adverse environmental effects to be concerned about, and no, or trivial, lack of compliance with conditions (eg, a deadline for delivery of results or a contingency plan missed by a few days).
Good	Where the adverse environmental effects of activities during the year were negligible or minor at most. Any issues of concern were resolved positively, cooperatively, & quickly. No unauthorised incidents were recorded or abatement notices issued. Perhaps some items were included on inspection notices for attention but these items were not deemed urgent or critical, and subsequent follow-up showed they had been addressed.
Improvement desirable	Indicates that unauthorised incidents were recorded or an abatement notice issued. There may have been several instances involving moderate to significant adverse environmental effects or other matters arising from activities that required intervention by Council. There may have been matters that took some time to resolve or remain unresolved at the end of the period under review.
Poor	Indicates a significant or serious non-compliance issue to the extent that further enforcement action might be considered.

5. Efficiency of the RAQP

Reviewing the efficiency of the RAQP, at its simplest, is a measure of whether outcomes sought have been achieved at a reasonable cost. That is, does the delivery of the RAQP, its methods of implementation, represent value for money?

Assessment of whether RAQP methods have been implemented is based upon Council's Long Term Plan reporting and state of the environment monitoring.

This section assesses–

- the RAQP's methods of implementation:
- The benefits of the RAQP; and
- The cost of the RAQP in terms of administrative, compliance and broader economic costs.

A summary of progress in implementing the RAQP methods is contained in **Appendix V**.

5.1 Implementation of the RAQP

The implementation of the RAQP has streamlined the resource consents process resulting in reduced costs and increased certainty for resource users. Set out below is an explanation of how improvements in the resource consents process have improved efficiency.

5.1.1 Regional rules

Like other regional plans, the RAQP includes rules that are used to regulate or allow activities that have potential to result in significant adverse environmental effects on air resources. The rules also increase efficiency because they provide certainty to resource users, limiting the time and cost of resource consent applications.

For activities that have little or no environmental effect, the RAQP has rules 'permitting' the activity without the requirement, and cost, of obtaining resource consent. Permitted activities are still required to meet certain conditions dealing with the prevention or mitigation of adverse effects (refer section 5.1.2 of this report).

In circumstances where the conditions of the permitted rule cannot be met, resource consent is required. Resource

consent is also required for activities having more than minor adverse effects.

Since the second generation RAQP became operative in 2011, 297 air discharge consents have been processed, issued, monitored, and reported upon (refer section 5.1.3 of this report).

In addition to the conditions related to specific permitted and consented activities detailed in the RAQP, the Council assesses the effects of air discharges on a case-by-case basis when considering resource consent applications. To regulate the potential effects on the environment, all air discharge resource consents are granted with consent conditions.

This activity implements **Methods 1, 2, 3 and 4** of the RAQP.

5.1.2 Permitted activities

Through the implementation of the RAQP, air discharge activities having no or very little environmental effect have been identified through the regional rules and those activities are now 'permitted', without the requirement (and cost) to obtain resource consent.

There are currently 63 regional rules in the RAQP pertaining to the discharge of contaminants to air from a wide range of industrial, trade and agricultural activities. 31 (or 50%) of these rules permit air discharge activities¹⁰. Notwithstanding their permitted status, permitted air discharge activities must comply with the conditions prescribed in the rule. If they cannot, a resource consent is required for that activity.

In 2013/14, the failure of a number of activities to comply with the conditions of a permitted activity rule resulted in this Council undertaking prosecutions in the Environment Court.

A review of the permitted activity rules in the RAQP demonstrates that in the main these rules adequately target activities that have little or no adverse effects – so long as they comply with the conditions prescribed in the rule.

5.1.3 Air discharge permits

Air discharge permits make up 7% of current resource consents processed by the Council in 2016/17. As at 30 June 2017, the total number of air discharge consents held in Taranaki was 348. This is an increase of 10% since 2011, when there were 315 resource consents.¹¹

In recent years, due to a slow-down in oil and gas activity in the region, there has been a decrease in the number of air discharge consents for emissions from hydrocarbon

¹⁰ 26 (or 41%) of the regional rules in the RAQP require air discharge activities to obtain a resource consent with the remaining 6 (or 9%) being prohibited because of unacceptable adverse environmental effects.

¹¹ As per statistics maintained by Council officers.

exploration and servicing facilities – from 206 in 2013/2014 to 155 in 2016/17.

Overall, the number of resource consents held for emissions from industry such as landfills (dust, odour, landfill gas) and from chemical and metal processing (odour) has remained the same since 2010/2011.

The number of air discharge permits granted by the Council for each year since 2011 is shown in Figure 5. In any one year the figure includes new permits, variations to current permits, renewals of permits, and reviews. Over the life of the RAQP the number of air discharge permits granted ranged between 20 and 98. However, typically it is in the order of 30 to 40 air discharge permits granted per annum.

Piggeries and poultry farms accounted for almost 28% of all air discharge permits granted in the 2016/17 year.

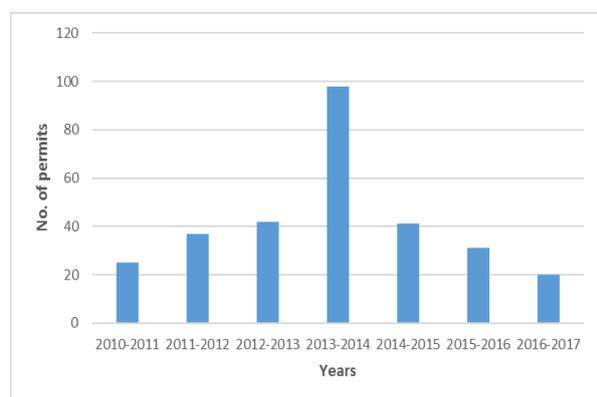


Figure 5: Number of air discharge permits granted

5.1.4 Notification of air discharge permits

In the years following initial implementation of the RAQP, one of the most significant benefits to arise was a reversal in the proportion of air discharge permits notified under the RMA. This has achieved significant savings to the Council and resource consent applicants with respect to the time taken and costs associated with processing resource consent applications.

The regional rules in the RAQP effectively minimise the need for the Council to publicly notify most air discharge permit applications it receives. As indicated in Figure 4 below, the proportion of air discharge permits that do not have to be notified has generally stayed high over time. The proportion of permits limited notified or non-notified has ranged from 92% in the 2010/2011 year to 100% in the 2016/2017 year.

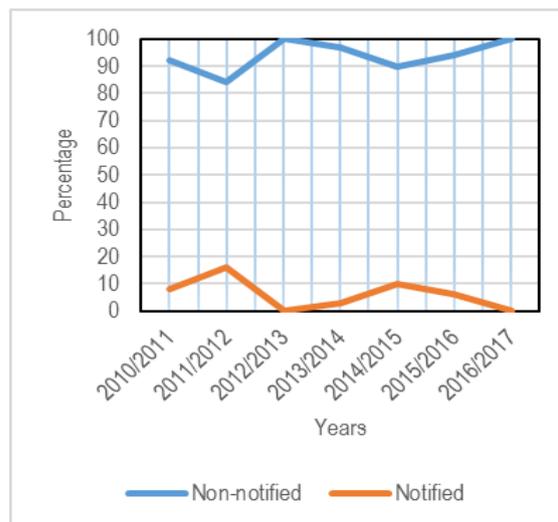


Figure 6: Proportion of non-notified and notified air discharge permits granted per annum

The implications of whether an air discharge permit is notified or non-notified are significant to applicants, particularly in relation to the time and cost of processing the application. Between the 2014/15 and 2015/16 the average cost charged to an applicant for processing a non-notified air discharge permit was approximately \$1,955 (although there is some variation in costs depending on the complexity of the consent). However, the cost charged to an applicant for a notified air discharge permit is significantly more, with the average at \$12,061.¹²

Consultation is required for both notified and non-notified applications. The added costs incurred for notified applications are primarily due to the greater complexity of the issues related to the air discharge permit, which leads to more time (and associated costs) required by Council to publicly notify the application, liaise with the applicant, prepare and process relevant reports, attend pre-hearing meetings, address submitters' concerns, conduct hearings and such like.

5.1.5 Iwi/Hapū involvement in consents issued

Method 4 of the RAQP states that the Council will –

Consult with iwi and hapū with regard to the identification of places of special cultural and traditional value associated with the air resource, with the aim of ensuring these values are recognised and provided for in the resource consent process and, where appropriate, these places and values are adequately protected from the adverse effects of activities.

In practice, this method is implemented by way of Iwi/Hapū involvement in the consenting process. Since 2011, an average of 14 air discharge consent consultations per year have included Iwi and hapū. The average

¹² Figures based upon a record of the costs for applications granted or under appeal 1 July 2014 to 30 June 2016 as maintained on the Council database IRIS.

percentage over that time is 33% of air discharge consents. These figures compare to an average of 94 consultations and 31% of consents for other types of consents (excluding dairy discharges 2011/12 to 2015/16).

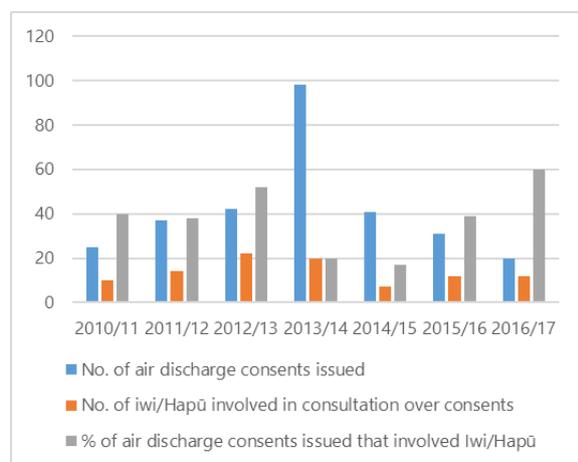


Figure 7: Iwi/Hapu involvement in consents

5.1.6 Enhanced certainty as to outcomes

Since the adoption of the RAQP, resource users have benefited economically through enhanced certainty as to the outcome of their air discharge permit applications. Business consent holders, in particular, have security and certainty of operation in the region due to the consistent return on their capital and operating expenditures by way of permitted air discharge activities.

Prior to the first RAQP becoming operative, all air discharge activities were a discretionary activity whereby consent applications were considered on a case by case basis with no certainty as to whether the Council would grant or decline the application or the conditions and standards that might be imposed. With the adoption of the current Plan, and the continued inclusion of regional rules specifying some air discharge sources or activities to be controlled activities, consent applicants can be certain that their application will be granted subject to conditions.

Figure 7 shows the number and type of air discharge permits granted since 2010. Sixteen percent of the air discharge permits granted under the RAQP since 2010 have been classified as controlled activities.

Under a controlled activity classification the Council cannot refuse consent and the consent can be subject to only those conditions and on those matters Council has specified in the Plan. Industries most likely to have air discharges authorised as controlled activities were for activities such as abrasive blasting, hydrocarbon industry (oil and gas), earthworks, and landfills.

Fifty-three percent of air discharge permits granted were classed as discretionary activities and 30% as restricted discretionary.¹³ Restricted discretionary and discretionary permits need to be considered on a case-by-case basis because of the size and significance of the activity or potential effects. Industries most likely to be classed as either discretionary permit type were abrasive blasting, earthworks, meat and by-product processing industries, piggeries and poultry industries.

This activity implements **Method 1** of the RAQP.

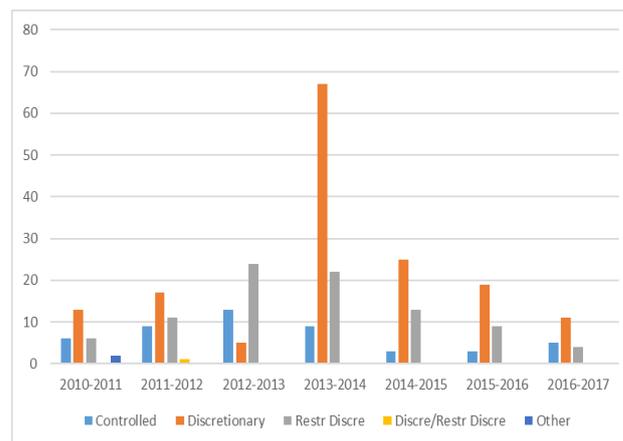


Figure 8: Controlled vs Discretionary Consents

5.1.7 Resource consent monitoring

When the Council grants resource consent for a significant activity, it implements an annual compliance monitoring programme to ensure the consent holders meet the conditions set out in the consent. These conditions usually relate to the manner of operation, the quantity and quality of the discharge, and the permitted extent of effects in the receiving environment. In the 2016/2017 year, the Council undertook 22 individual resource consent monitoring programmes that had an air quality monitoring component (See Table 3 below). Sites included sewage plants, petrochemical and petroleum production facilities, landfills, composting sites, dairy processing and manufacturing factories, metal smelting and galvanizing plants, meatworks, fertiliser storage, pig and poultry farms, quarries and abrasive blasters.

This activity implements **Methods 1, 2, 3, 5, 6, 9 and 13** of the RAQP.

¹³ One consented activity (representing 0.3% of air discharge permits) was approved as a combined restricted discretionary/discretionary consent.

Table 3: Number of resource consent monitoring programmes with air quality component since 2011

2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
23	22	24	24	21	20	20	22

5.1.8 Other consenting performance measures

Statutory timeframes

Along with the more streamlined resource consents process, the Council's performance in the processing of resource consents within statutory timeframes also improved with the RAQP.

The RMA sets out timelines under which regional councils should process air discharge permits. The statutory timeline for processing a non-notified air discharge permit is 20 working days. Since March 2015, for notified applications without a hearing, it is 60 working days. For Limited Notified applications with a hearing it is 100 working days, and it is 130 working days for a Public Notified application¹⁴.

In 2016/2017 the Council processed 100% of all consent applications within statutory timelines. This high performance is attributable, amongst other things, to increased certainty and clarity with respect to what policies, conditions and other matters are considered by Council for particular consent applications.

Of interest is the Council's performance in relation to other local authorities. As it does annually, in 2016/2017 MfE surveyed all territorial and regional authorities in relation to their compliance with statutory timelines for processing consents under the RMA (refer Table 5 below). That survey indicated that the Council compared extremely favourably with the national average. In 2016/2017, the national average for compliance with RMA timelines was 96%, compared to 100% for the Council.

Section 92 applications

Another indicator of Council efficiency, through less delays in the processing of resource consents, is that the Council made less use of section 92 of the RMA to request further information. In 2015/2016, the Council utilised the section 92 provisions for only 0.8% of all air discharge consent applications, compared with 11% for other types of resource consent applications. Again this compares favourably with MfE's national average, which showed 36% of councils utilised the section 92 provisions (and took more time) to request further information for resource consent applications.

Pre-hearing meetings

Both before and after the adoption of the RAQP the Council, as a matter of policy, utilised the pre-hearing provisions of the RMA to avoid and/or reduce the length of costly hearings. In 2016/2017, the Council held pre-hearing meetings for only five notified air discharge consent applications for which submissions were received in opposition (note that not all notified consent applications necessarily result in submissions). The pre-hearing process resolved 100% of submitters' concerns to the extent that no formal hearing was necessary.

Appeals

There have been no successful references (appeals) to the Environment Court against Council's decisions on air discharge permits over the life of the RAQP. Equally important, the Council received no complaints from applicants regarding the time taken to process their applications. Indeed, many applicants for consent renewals seek extensions of time to allow valued pre-hearing meeting processes to run their course.

This activity implements **Methods 1, 2, 3, 5, 6, 11 and 13** of the RAQP.

5.1.9 Incidents investigated

The Council records the number of complaints received from the general public on air quality including complaints of odour. In the 2016/2017 year, the Council recorded 131 air incidents, accounting for 24% of the total incidents reported in that year.

The majority of air quality complaints relate to offensive odour. Complaints about air quality and odour arose mostly from dairy farms, fertiliser storage or distribution; meat and by-product processing; and sewage treatment. Fourteen of the air incidents were unsourced. Burning of materials and vegetation accounted for 29 incidents alone.

The number of air incidents reported in any given year has fluctuated over the past five years, from 217 incidents in 2011/2012, to 325 incidents in 2013/14, and back down to 131 incidents in 2016/2017. This is largely attributed to problems and complaints attributed to odour from backyard burning that year.

¹⁴ These times can be extended for further information [section 92], waiting for affected parties' approval [section 94], and/or other reasons [sections 37(1) and 37(5A)], with or without the approval of the applicant.

All complaints are investigated and enforcement action is taken where appropriate. However, a complaint does not necessarily constitute further action and in some cases, investigation can find a complaint to be unsubstantiated. In the 2016/2017 year, the Council issued four abatement notices and three infringement notices relating to air quality incidents. No prosecutions were undertaken in the 2016/17 year.

Air quality incidents, make up, on average, 36% of all pollution incidents reported to the Council between 2011 and 2017.¹⁵ Odour incidents make up approximately 23% of all air quality incidents reported to the Council over that time period. Other air quality incidents include complaints about dust, smoke and spray drift etc.

The number of complaints received by the Council each year is highly variable (272 or 50% in 2016/17 compared to 372 or 65% in 2015/16).

This activity implements **Methods 1, 2, 3, 5, 6, 8, 9, 12 and 13** of the RAQP.

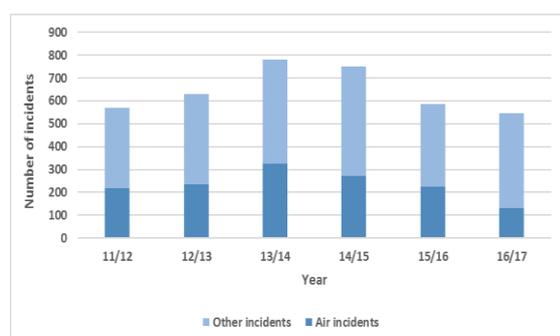


Figure 9: Air quality complaints 2011 to 2017

5.1.10 Enforcement and Prosecution

There have been few problems associated with the enforcement of the regional rules. In relation to enforcement, the Council has increasingly looked to utilise

Table 4: Enforcement actions for air quality incidents over time¹⁶

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
No. of unauthorised incidents	217	234	325	271	226	131
No. of abatement notices	6	8	19	11	10	4
No. of infringement notices	13	22	33	21	15	3
No. of prosecutions	0	0	2	0	0	0

enforcement provisions such as abatement notices, infringement notices and prosecution action to address significant air quality incidents.

In addition to punitive actions involving abatement and infringement notices and prosecutions to enforce compliance, the Council has also required a number of activities that would otherwise be permitted to obtain resource consent, because they were breaching the conditions allowing them to operate as a permitted activity.

Resource consents conditions specifically address odour or other air quality concerns and regular monitoring undertaken by the Council ensures those conditions are being complied with. Unfortunately, there are times when monitoring or resource investigations require further action, and on the rare occasion prosecution is warranted. In the 2013/2014 year, the Council brought two cases relating to air quality (odour) before the courts. One prosecution related to odour from a waste water treatment plant and one from a grain store. Both sites were situated in urban areas. Both prosecution actions were successful.

No infringement notice issued by the Council in respect of air quality has been overturned.

This activity implements **Methods 1, 2, 3, 5, 6, 9 and 13** of the RAQP.

¹⁵ All public complaints received by the Council, and breaches of discharge permit conditions notified by the permit holder or discovered by Council officers are recorded on the Unauthorised Incidents Register.

¹⁶ As per data maintained by the Council.

5.1.11 Information, education and advice

The Council provides information and advice to the public relating to air quality in the region.

Highlights since 2011 include:

- ▶ producing a guide to the requirements of the RAQP for all farmers in the region. The guide covers effluent disposal, burning, spraying, fertiliser applications and pig and poultry farming
- ▶ inclusion of information on air quality in the Council's *Environmental Management Guide* for businesses and industries
- ▶ 2012 distribution of a flier to all households in Taranaki providing information on the ban of backyard burning in the urban areas of Taranaki, together with advice and guidance on how to dispose of household waste.

This activity implements **Methods 5, 6, and 13** of the RAQP.

In summary all methods set out in the RAQP have been actioned.

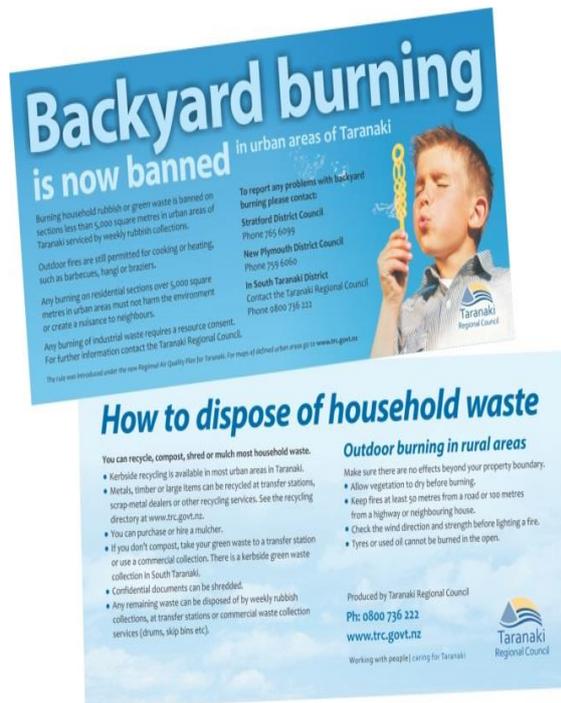


Figure 10: Information produced by the Council on backyard burning ban and disposal of household waste.

5.2 Costs of the RAQP

Costs associated with the administration and implementation of the RAQP are those incurred by the Council, (i.e. administration costs) and the wider community, (i.e. compliance costs and broader economic costs).

5.2.1 Administration costs

Administration costs are the costs incurred by Council to implement the methods of the RAQP.

Council has evaluated and rated the administration costs associated with RAQP as low. There are regulatory costs, associated with the consideration and issuing of consents, compliance monitoring and enforcement. Pursuant to the Council's charging policy, the consenting and administrative cost incurred by the Council are charged back to the applicant on a full cost recovery basis.

The non-regulatory methods of the RAQP include consulting with iwi and hapū, providing advice and information, supporting and promoting guidelines and certification programmes, working with various sector groups, and implementing and promoting effective integrated management with territorial authorities. These methods are an important but relatively minor investment (in scale) by the Council.

Other administration costs incurred by the Council include policy and planning costs associated with the preparation, monitoring and review of the RAQP (including state of the environment reporting), responding to public enquiries on its provisions, research into air quality issues and management, and general advocacy.

Overall administration costs (both regulatory and non-regulatory) are low in comparison with the net environmental benefits of maintaining Taranaki's high overall air quality. All administrative costs are publicly considered and tested on an annual basis through the Long Term Plan process and on other occasions through a full review of the RAQP.

5.2.2 Compliance costs

Compliance costs are the costs incurred by resource users to comply with RAQP provisions (e.g. costs associated with applying for consents and undertaking physical works to comply with consent conditions, through requirements to modify their practices and equipment, and/or other RAQP provisions).

Table 7 sets out the air consent costs for Taranaki for the last four financial years. While total costs are often increased by large industry consents and notified applications, median costs are more reflective of applicant costs in general. As approximately 98% of this Council's consent applications are non-notified, the median price of

a consent is relatively low. Overall, therefore, compliance costs have been assessed as moderate.

Table 5: Taranaki consenting costs

Year	2013/14	2014/15	2015/16	2016/17
Total Costs	\$92,362	\$121,640	\$47,341	\$39,228
Median	\$654	\$1626	\$1317	\$1749

Section 104(1) [Consideration of applications] of the RMA requires consent authorities to have regard to any relevant provisions of the Regional Policy Statement when considering resource consent applications and any associated submissions. However, as the RAQP gives effect to the RPS there are no added compliance costs associated with meeting RPS provisions.

5.2.3 Broader economic costs

Broader economic costs refer to the potential for costs associated with the RAQP, as a regional plan, constraining production and innovation or resulting in the sub-optimal allocation of resources.

The standards, terms and conditions set out in the RAQP's rules and in the Council's resource consent process are generally consistent with industry standards and best practice. The evaluation to date has not identified any issues where the RAQP has unnecessarily constrained production and innovation, constrained resource use, or resulted in the sub-optimal use of resources.

5.2.4 Summary of the economic costs of implementing the RAQP

A summary of the economic costs of implementing the RAQP is set out in Table 5 below.

Table 6: Assessment of the costs of implementing the RAQP

Type of costs	Measures	Evaluation			Comments
		Low	Moderate	High	
Administrative cost (costs incurred by Council to administer the RAQP & implement non-regulatory methods)	Added costs incurred by Council to deliver regulatory methods	√			Overall administrative costs have been assessed as low. The cost of implementing the RAQP's methods principally relate to the administration, monitoring and enforcement of rules. Most of these costs are recovered from the resource user. Other costs are associated with delivery of non-regulatory methods such as advice and education, advocacy and liaison, and state of the environment monitoring.
	Costs incurred by Council to deliver non regulatory methods	√			
	Planning costs incurred by Council to develop, monitor and review RAQP	√			
Compliance costs (costs incurred by resource users to comply with RAQP provisions)	Added consenting and other costs charged to resource users		√		Overall compliance costs incurred by resource users remains relatively low. On average, 42 air discharge permits are granted per annum with approximately 94% of applications being non-notified.
Other economic costs (broader costs associated with RAQP constraining production & innovation, or resulting in the sub-optimal allocation of resources)	Constraints limiting resource users' flexibility to achieve environmental results anticipated	√			No issues so far identified. RAQP provisions generally consistent with industry best practice & should not unnecessarily constrain production, new entrants or resource use flexibility. Only six rules out of 63 rules prohibit any form of discharges to air.
	Production constraints placed upon targeted sectors	√			
	Constraints limiting new entrants to a sector / industry, or limiting resource use flexibility	√			
	Constraints through a lack of certainty to resource users about what they can do & how they manage resources	√			
Overall economic cost of RAQP provisions					LOW

5.3 Benefits of the RAQP

The benefits of the RAQP are the environmental outcomes outlined in Section 4 [Effectiveness of the RAQP] above. These benefits are considered to be considerable and ongoing.

Unsustainable air resource use can have (and historically has had) significant adverse environmental and economic costs through increased health risks and degradation of amenity and cultural values. However, over the last decade, state of the environment monitoring confirms generally positive trends. Taranaki has good health-supporting air quality as assessed against national and international air quality guidelines. Its clear air – air which has no vehicle smog or chronic evening smoke haze – has high amenity value.

In addition to its positive environmental outcomes, the RAQP has enabled appropriate use of air resources and has not unnecessarily restricted activities.

As stated in section 5.1.6, the benefits of the RAQP also include increased certainty and clarity to resource users, who have benefited economically through enhanced certainty as to the outcome of their air discharge permit applications. As noted elsewhere, the RAQP rules effectively minimise the need for the Council to publicly notify most air discharge permit applications it receives. The implications of whether an air discharge permit is notified or non-notified are significant to applicants, particularly in relation to the time and cost of processing the application.

In addition, just under half (31 out of 63) of the RAQP rules are for permitted activities. A further 11 of the rules are for controlled activities, which means that consent applicants can be certain their application will be granted subject to conditions.

The high number of non-notified, permitted, and controlled activities gives business consent holders consistent returns on their capital and operating expenditures.

5.4 Comparing the benefits and costs of the RAQP

Monetising all benefits and costs is impracticable. While it is possible to quantify costs to Council of implementing programmes (although not necessarily in monetary terms), it is less easy to quantify community and land occupier costs. It is even harder to quantify the monetary value of the environmental outcomes achieved. Assessing the RAQP has necessarily relied on a combination of qualitative and quantitative evaluation.

Table 10 summarises the results of the Council's assessment of the benefits and costs of the RAQP. In brief, the RAQP has been assessed as being very efficient with the benefits being substantially greater than the cost.

Table 7: Summary of the benefits and costs of the RAQP

Benefits (Summary from cost effectiveness assessment)	Costs (Summary from cost estimation)
<p>Environment (outcome) benefit</p> <p>No air quality issues</p> <p>High ambient air quality</p>	<p>Administrative costs</p> <p>Administrative costs include the cost of implementing the RAQP’s rules, including regulatory costs associated with the consideration and issuing of consents, compliance monitoring and enforcement.</p> <p>Non-recoverable administrative costs incurred by the Council in administrating the RAQP principally relate to policy and planning costs associated with the preparation, monitoring and review of the RAQP (including state of the environment reporting) and the implementation of non-regulatory methods.</p> <p>Overall, administrative costs have been assessed as low.</p>
	<p>Compliance costs</p> <p>Implementation costs incurred by resource users have now largely fallen away. As approximately 98% of this Council’s consent applications are non-notified, the average price of a consent is relatively low. Overall compliance costs have been assessed as moderate</p>
<p>Other benefits</p> <p>Protection of air resources and associated values, while also avoiding, remedying and mitigating adverse effects associated with resource use</p>	<p>Economic costs</p> <p>Few constraints on resource users in terms of RAQP constraining production and innovation, or resulting in the sub-optimal allocation of resource</p>
<p>Summary</p> <p>Benefits of RAQP assessed as high. Environmental monitoring shows overall quality of air in the Taranaki region is excellent.</p>	<p>Summary</p> <p>Costs and constraints associated with RAQP administration and implementation have been assessed as low overall.</p>
<p>Conclusion</p>	
<p>The RAQP has a positive ratio of benefit to cost</p>	
<p>This conclusion is based on Council’s assessment that:</p> <ul style="list-style-type: none"> • The RAQP is meeting its objectives. This assessment has not identified any objectives that were not being achieved. In relation to the maintenance of the quality of our air, state of the environment monitoring indicates that Taranaki is on track in terms of data trends. • The administrative costs associated with the consenting and enforcement regime are moderate, with minimal costs on resource users. The costs of implementing non-regulatory methods are moderate and the costs are minor in comparison to the environmental outcomes being achieved. 	
<p>The efficiency of the RAQP is regarded as:</p> <p>High (the benefit is substantially greater than the cost)</p>	

6. Discussion of implementation issues arising

Council staff have undertaken an evaluation of the RAQP to identify any issues relating to the scope or interpretation of regional methods and rules. This review has noted that the Plan is, in the main, very effective and efficient in maintaining and in some cases improving Taranaki's good air quality and has not identified major deficiencies in the methods or rules or in the standards, terms and conditions as they are currently drafted.

Notwithstanding that, the review has identified some minor areas where, with the benefit of experience and evolving best practice, the methods and rules could be improved, sharpened or made more comprehensive, or alternatively, where discussions with other parties could assist or enhance implementation. Having regard to the criteria for review outlined in Appendix III, the benefits of undertaking those changes at this point would not outweigh the cost. Instead it is suggested that these areas be identified and addressed when the lifespan of the RAQP is reached, i.e. in 2021. Sections 6.1 – 6.3 below discuss potential improvements to implementation highlighted by this interim review, including recommended amendments to the RAQP. Section 6.4 summarises the significance of the issues identified.

6.1 Amendment to existing rules

Inevitably over the life of a regional plan, experiences with its implementation will identify areas where Plan provisions could be improved to address new or emerging issues. Through this interim review, this report identifies the following eleven rules where it is recommended that changes would be useful.

6.1.1 Rule 31: Waste incineration on site

Rule 31 applies to discharges of contaminants to air from the disposal by combustion of industrial and trade waste, where the waste material is generated on the premises, and the activity occurs in an incinerator.

Rule 31 allows institutions to incinerate their waste on-site as a restricted discretionary activity. A consent will be granted subject to the applicant complying with various conditions. The setting of the conditions is limited to those matters specified in the Rule.

The RAQP does not include a definition of 'incinerator'. On occasion this has been problematic in that there is some uncertainty and clarity as to what is an incinerator.

Compliance monitoring has indicated that some institutions are using old drums or similar containers as incinerators, which do not have lids, grills, or flues and are therefore inadequate. Officers recommend that as part of any plan review that the RAQP be amended to:

- Include a definition of 'incinerator' in the Plan
- include additional Control/Discretion matters to address the kind of incinerator that should be used plus other appropriate matters
- include policy (and supporting guidance) setting out decision-making considerations for allowing incinerators, including when they should be used and whether there are any other options for disposal).

6.1.2 Rule 33: Combustion of solid waste material generated on production land

Rule 33 applies to discharges to air from the combustion of certain solid waste material generated on production land. This kind of discharge is a permitted activity subject to certain stated conditions being met. The conditions include specifications of materials that may be combusted, including non-chlorinated plastics.

Over the life of the RAQP, compliance monitoring surveys have highlighted challenges with farmers properly identifying non-chlorinated plastics and improperly disposing of this and other forms of waste.

For the purposes of certainty and clarity, it is recommended that Council, as part of any plan review, amend Rule 33 conditions to specify particular on-farm plastics that can be combusted as a permitted activity.

It is also recommended that Rule 33 conditions be further amended to clearly preclude the burning of domestic waste such as fridges and stoves.

It is also considered necessary to clarify the category of area to which Rule 33 refers to. For example, if the rule is restricted to production land only, does that category cover the curtilage of farm houses that are used to house owners and/or staff? Alternatively, what happens when a piece of production land is retired from productive use?

6.1.3 Rule 34: Combustion of waste material in defined urban areas

Rule 34 prohibits backyard burning in defined urban areas¹⁷ on sections of under 0.5 hectares, which are used primarily for residential purposes¹⁸ and are serviced by a weekly municipal refuse collection service. The Rule only bans burning for the purpose of waste disposal, not for cooking (bbqs or hangi), or heating purposes.

The application of Rule 34 excludes residential property in rural areas, subdivisions and undeveloped land, and possibly some lifestyle blocks. This situation has created reverse sensitivity issues (see 6.1.4 below) that could be addressed.

Options to mitigate the problem include–

- Extend the boundaries of defined 'urban areas' to include more properties;
- Map larger areas in conjunction with District Councils so that the Council can police them;
- Increase the lot size to include rural properties;
- Define a "rural property", and specify a buffer zone that prohibits backyard burning within that buffer on a rural property, to limit any adverse effects.

As a consequence of the above mitigation options Council officers suggest that backyard incinerators may need to be banned.

6.1.4 Rule 40: On-farm liquid waste management processes and the issue of Reverse Sensitivity

Rule 40 applies to the discharge of contaminants to air from on-farm waste management processes for liquid contaminants, which arise from the use of production land or through intensive farming, subject to certain conditions. Essentially this rule allows the Council to proactively manage any odour that arises from the disposal of on-farm liquid waste.

Sometimes discharge of liquid waste results in 'reverse sensitivity' issues in certain locations. Reverse sensitivity refers to situations where lawfully-established industries, which have addressed offsite effects as far as is practicable and reasonable, may become constrained by the emergence of new and often incompatible land uses in the neighbourhood – such as residential subdivisions.

Farms with effluent ponds, spray irrigation processes, holding sumps or feed pads may create odour at various sites and times on the property. This has the potential to create a cumulative odour effect for neighbours. However these activities are legitimate on-farm discharges and lawful

existing activity of this kind should ideally not be restricted or compromised over time by changing land use patterns occurring in and around the area.

Better alignment is necessary between the policies and methods of the *Regional Policy Statement for Taranaki 2010* (the RPS) in respect of reverse sensitivity issues (Refer **Appendix IV**) and the policies and methods of the RAQP.

Policy 2.5 of the RAQP notes that reverse sensitivity should be managed through district plans and territorial authority consent conditions:

Land use and subdivision should be managed to avoid, remedy or mitigate adverse effects on people and the environment from reverse sensitivity effects arising from the inappropriate location of sensitive activities in proximity to legitimate activities discharging contaminants to air.

Problems arising from reverse sensitivity effects shall be avoided, remedied or mitigated primarily through district plans and territorial authority consent decisions which:

- a) prevent the future establishment of potentially incompatible land-use activities near each other; or*
- b) allow the establishment of potentially incompatible land-use activities near each other provided no existing lawful activity, operating in a lawful manner is restricted or compromised.*

Method 10 of the RAQP states that, *in conjunction with the territorial authorities, the Council will implement memoranda of understanding to promote effective integrated management of air quality issues.* Implementation of Method 10 may need to be reviewed.

Rule 40 issues

Under Rule 40 any activity that involves discharge of liquid effluent on farms must not result in offensive or objectionable odour beyond the boundary of the property, and any farm effluent ponds or zones of spray irrigation must be located at least 150 metres away from any dwelling-house or place of public assembly, unless prior approval has been obtained.

However, although Method 10 of the RAQP refers to memoranda of understanding, there does not seem to be plan alignment between this Council and the district councils in respect of reverse sensitivity and air quality.

In particular, there is currently no mechanism with which Council officers can control activities or require compliance in respect of the location of new dwelling houses and/or places of public assembly.

Officers recommend that, as part of a Plan review, the Council explore options for better addressing the issue of reverse sensitivity (and Rule 40) with Federated Farmers and the local territorial authorities, to assess the issue and

¹⁷ As shown in Appendix II of the Plan.

¹⁸ As defined in Section 2 of the Plan.

consider how it might be improved. It may be that the size of the buffer area could be reduced, and a restricted discretion be created for the local authorities to investigate the potential for odour issues, in relation to the initial location of any new dwelling-house sites or potential places of public assembly.

6.1.5 Rules 51-54: Discharges from Intensive Poultry Farming Processes

When the previous RAQP was prepared, poultry farms were beginning to increase in size and had reached sizes of $\geq 120,000$ birds. At the date of this review, however, newer farms can contain over a million birds. This is more than 10 times the size envisaged when buffer distances and best practice guidelines were put in place (see Appendix IV and V of the RAQP).

A structural change of this magnitude requires consideration of the need to include an additional category and more Council discretion in the RAQP for these larger farms.

6.1.6 Rules 56-58: Discharges of agrichemicals into the air

Rules 56 and 57 are 'permitted activities' and apply to the discharge of contaminants to air from the spraying of agrichemicals on production land (i.e. farmland - Rule 56) and from public amenity areas or roadside and railway verges (Rule 57). Rule 58 applies to the discharge of contaminants to air from the land types described in Rule 56 and 57 where the discharge does not satisfy the rule conditions. Rule 58 is a restricted discretionary "catch-all" rule. Two issues have arisen with respect to this group of rules.

First, Rules 56 and 57 make reference in conditions (f)(i)-(ii) to the requirement to hold current GROWSAFE® certificates of various kinds to be a ground or commercial spray operator. Other quality assurance schemes are now operating and it would be helpful to provide for them in the conditions. This report therefore recommends that the conditions and rule be amended to "providers registered under s95A of the Hazardous Substances and New Organisms Act 1996 for the application of agricultural chemicals."

Second, Rules 56 and 57 refer only to the discharge of contaminants to air to **production land**. The definition of production land—

- (a) *means any land and auxiliary buildings used for the production (but not processing) of primary products (including agricultural, pastoral, horticultural, and forestry products;*

- (b) *does not include land or auxiliary buildings used or associated with prospecting, exploration, or mining for minerals –*

*and **production** has a corresponding meaning.*

Accordingly any land or an area on a farm property that has been retired from productive use (e.g. wetland, area of bush, riparian margin), or in a domestic garden, would fall outside the 'production land' component of the property and Rule 56 would not apply.

Currently there are no RAQP rules that provide for discharges to air either in domestic gardens or on retired land. Consequently the RAQP does not align with the Council's Freshwater Plan, which does contain such provisions. This report recommends that this misalignment and omissions be remedied when the RAQP is fully reviewed in 2021.

In addition, the landowner or occupier must give notice to "all occupied dwellinghouses, owners or occupiers of properties, sensitive crops and farming systems and places of public assembly located within 30 metres of the area to be sprayed (if spraying is by ground application) or within 100 metres of the area to be sprayed (if spraying is by aerial application." It is noted that the above buffer areas are smaller than the buffer distance set out in Rule 40 (i.e. 150 metres) and alignment may be beneficial.

Refer to section 4.5 and Table 12 for an assessment of the urgency in which the RAQP should be reviewed and possibly amended to better address the above activities.

6.1.7 Implementation issues

The review of the RAQP has also identified several issues with the implementation of the RAQP that require further consideration when a full review takes place in 2021.

- **Enforcing the ban on backyard burning:** Rule 34 of the RAQP prohibits burning of waste material in defined urban areas (see section 6.1.3 above). Implementation of this rule has been transferred to the respective district councils and enforcement is inconsistent across council areas. Better alignment and clarity is required.
- **Managing beach bonfires:** A similar issue has arisen in respect of bonfires on beaches, where the Council has transferred its air quality monitoring and compliance powers to the respective district councils in New Plymouth and South Taranaki districts. Enforcement is inconsistent across council areas and better alignment and clarity is required.
- **Licensing of woodburning appliances:** Method 14 of the RAQP states that the Council will "encourage the installation of cleaner forms of heating, and clean heating appliances, and increases in energy efficiency of dwellings."

However, although local district councils consent to woodburner installation, they do not have jurisdiction to ascertain whether the particular model of woodburner is licensed under the NES. Moreover coal and/or pellet burners do not have to be licensed. Both of these issues are anomalies arising under the NES-AQ. This is a matter that has to be addressed at central government level.

Refer to section 4.5 and Table 12 for an assessment of the urgency in which the RAQP should be reviewed and possibly amended to address implementation issues.

6.1.8 Other matters

In the future, digital and spatial technology will be investigated to further improve efficiency by improving the accessibility and user-friendliness of all the Council's planning documents (i.e. E-Planning).

Typographical or reference errors or improvements to wording for the purposes of certainty & clarity may also be required. Minor typos can be corrected immediately. Other changes, such as changes to agency and standards names and other assessment factors, are more significant but the benefits of immediately reviewing the Plan would not outweigh the costs incurred by the Council.

6.2 Evaluation of urgency for change

The criteria for considering making immediate changes to the RAQP are outlined in **Appendix III** of this report.

Following the adoption of any regional plan, experience in the implementation of that plan will inevitably highlight minor typographical errors or areas for improvement in Plan provisions. Similarly, this review has identified rules in the RAQP for which the conditions and wording could be improved or fine-tuned.

Of note, this review has identified eleven rules (out of 63) where changes are recommended. The recommended changes relate to the inclusion of additional matters in Rules 31, 33, and 34, the consideration of reverse sensitivity effects in Rule 40, an additional category and more Council discretion in Rules 51-54, plus the discharges of agrichemicals to air in Rules 56-58. Other recommended changes relate to implementation issues including consistency of enforcement of the ban on backyard burning and in managing beach bonfires; and licensing of wood burning appliances.

The aforementioned issues are relatively minor and, in their current form, have not adversely impacted on the achievement of RAQP objectives. Furthermore, Council has experienced little difficulty in the interpretation and application of Plan provisions (as demonstrated by the small number of occasions issues have been raised during the resource consents process or legal challenges to the

Environment Court).

After having regard to these criteria, none of the issues discussed in sections 6.1 above, individually or collectively, warrant the Council initiating an immediate and full review of the RAQP under section 79 of the RMA.

Table 8: Evaluation of recommended amendments to the Plan

Recommended amendments	Are changes required to the Plan based upon?						Comments
	Issues	Lawfulness	Clarity	Practicality & affordability	Efficiency	Equity	
Inclusion of additional matters							
Rule 31: Include an additional condition describing the incinerator required to be used and providing criteria for its use.	Minor	No	Minor	No	No	No	Additional matters that have arisen since the RAQP was last fully reviewed in 2011. In the case of Rule 40 there are regional reverse sensitivity issues that will need discussion in order to address, and those discussions can begin following this interim review, allowing more time to resolve the issue prior to the full review. However, the benefits of immediately reviewing the Plan would not outweigh the costs incurred by Council.
Rule 33: Specify which on-farm non-chlorinated plastics can be burned; and Restrict the burning of domestic waste such as fridges and stoves; and Consider varying the areas that the rule relates to.	Minor	No	Minor	No	No	No	
Rule 34: Provide for areas currently omitted including residential property in rural areas, subdivisions, undeveloped land and lifestyle blocks.	Minor	No	Minor	No	Minor	No	
Rule 40: Address reverse sensitivity issues across the region with Federated Farmers and local territorial authorities to provide more control of on-farm liquid waste management and enable greater compliance	Moderate	No	No	No	No	No	
Rules 51-54: Consideration of need for additional category and more Council discretion for farms of above 250,000 birds.	Moderate	No	No	No	No	No	
Rules 56-68: Consideration of need for alignment with Council's Freshwater Plan.	Minor	No	No	No	No	No	

Recommended amendments	Are changes required to the Plan based upon?						Comments
	Issues	Lawfulness	Clarity	Practicality & affordability	Efficiency	Equity	
Implementation issues							
Enforcing the ban on backyard burning: Address consistency of regional implementation in light of Council transfer of its air quality monitoring and compliance powers to the respective district councils.	Minor	No	No	Minor	No	Minor	The review of the RAQP has also identified some implementation issues that require some consideration when a full review takes place in 2021.
Managing beach bonfires: Address consistency of regional implementation in light of Council transfer of its air quality monitoring and compliance powers to the respective district councils.	Minor	No	No	Minor	No	Minor	
Backyard burning incinerators: Submit to Government that, as a consequence of previous and recommended changes to Rule 34, (see above), backyard incinerators may need to be banned.	Minor	No	No	Minor	No	Minor	
Licensing of heating appliances: Submit to Government on anomalies arising under the NES-AQ in respect to ability to enforce compliance as to required woodburner models, and other burner licensing.	Minor	No	No	Minor	No	Minor	
Align rules with new government standards	No	No	No	No	No	No	Government is still developing a new NES for Air Quality so it is not appropriate or timely to make changes at this time
Correct typographical errors or references or improve wording for the purposes of certainty & clarity	No	No	Minor	No	No	No	Minor typographical errors, or areas where change or fine-tuning would be useful to clarify Council's interpretation. Typos do not require a full review & should be immediately corrected. Other changes such as changes to agency

Recommended amendments	Are changes required to the Plan based upon?						Comments
	Issues	Lawfulness	Clarity	Practicality & affordability	Efficiency	Equity	
							names and standard versions and other assessment factors are more significant but the benefits of immediately reviewing the Plan would not outweigh the costs incurred by the Council.

No = in relation to that criterion, no issue of concern

Minor = in relation to that criterion, an issue of minor concern but not significant enough to warrant an immediate review of the Plan.

Moderate = in relation to that criterion, an issue of moderate concern but not significant enough to warrant an immediate review of the Plan.

Major = in relation to that criterion, an issue of major concern that necessitates an immediate review of the Plan.



7. Conclusion

In conclusion, the RAQP is working well. The Council has progressively implemented the policies and methods, with successful outcomes so far.

State of the environment monitoring programmes confirms that the RAQP objectives and policies for managing air quality are being achieved. Of note:

- The overall quality of air in Taranaki is excellent due to lots of wind, light traffic, and scattered industry. National air quality standards have never been exceeded in Taranaki.
- Taranaki's air quality is rated overall as 'good' to 'excellent' according to MfE environmental performance indicators for air based upon data from the region's representative monitoring sites, including built-up areas and areas of high vehicular use.
- Compliance monitoring programmes confirms that 97% of air permit holders routinely achieved a 'high' or 'good' performance.
- Over the life of the RAQP, increased levels of poultry farming and hydrocarbon exploration and production have resulted in increased numbers of resource consents for air discharges. However, effective regulation and monitoring means there has been a negligible impact on air quality in the region.
- Overall, Taranaki's clean air provides significant health and amenity benefits to the region.

This review further confirms that the regional rules in the RAQP are efficient. Of particular note:

- Most air discharge permits are non-notified (94% in 2016/17);
- Resource users have certainty as to the outcome of their air discharge permit application with 42% of the air discharge permits granted being classified as controlled activities;
- Since the adoption of the 2011 RAQP, the Council has continued to maintain its performance, with 100% of consent applications being processed within statutory timelines.

Notwithstanding that this review identifies the RAQP as efficient and effective, inevitably change is required over time. This interim review has highlighted a small number of provisions that could be improved, sharpened or made more comprehensive.

Based upon the Council's experience in the administration of the Plan some minor changes to the Plan are proposed but they are not so significant that a full review of the Plan

is necessary or appropriate. These changes (other than typographical errors, which can be addressed immediately) can be addressed when the Plan is fully reviewed in 2021.





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Appendix I

Arrangement of rules according to discharge source or activity

Category	Source or Activity	Rule No.	Rule Category
Industrial or trade premises	Products of combustion		
	Burning of natural gas or LPG as a fuel	1 to 4	Permitted or controlled
	Burning of wood, diesel, kerosene, petroleum, coke, coal, charcoal, oil & non-chlorinated alcohols as a fuel	5 to 7	Permitted or controlled
	Burning of coated or covered metal cables, motor vehicles or other metals	8	Prohibited
	Flaring of petroleum	9 to 10	Controlled or restricted discretionary
	Gas treatment or production plants	11	Controlled
	Hydrocarbon-produced well head or well sites	12	Restricted discretionary
	Trade processes		
	Sale of motor fuels	13	Permitted
	Manufacture, preparation or cooking of food or beverages for human consumption	13	Permitted
Dry cleaning	13	Permitted	
Sale, service, repair of motor vehicles, trailers & boats	13	Permitted	
Painting, varnishing, dyeing, polishing & other coating processes	13	Permitted	
Dying, printing or finishing of yarns, threads, fabrics or garments	13	Permitted	
Storage, loading & unloading of waste materials	13	Permitted	
Manufacture of concrete products	13	Permitted	
Welding, soldering or other metal fusing	13	Permitted	
Hydrocarbon distribution and transmission networks	14	Permitted	
Power stations, electrical substations or switchyards not covered by Rules 1-54 and / or 56-63	15	Permitted	
Recreational areas or trade premises	16	Permitted	
Abrasive blasting processes			

Category	Source or Activity	Rule No.	Rule Category
	Wet and dry abrasive blasting	17 to 21	Permitted, controlled, restricted discretionary or prohibited
	Other moveable and fixed industrial sources		
	Road burners	22	Prohibited
	Moveable or permanent asphalt / bitumen plants	23	Discretionary
	Heat or water vapour-based plumes from fixed sources		
	Air-cooled heat exchangers	24	Permitted
	Water-based cooling systems	25 & 26	Permitted or discretionary
	Steam	27	Permitted
	Cooling towers that do not comply with Rules 25 or 26	28	Restricted discretionary
	Fumigation		
	Fumigation activities	29	Permitted
Waste management processes	Combustion		
	Specific waste materials other than in an incinerator	30	Prohibited
	Industrial or Trade waste in an incinerator	31	Restricted discretionary
	Industrial or Trade waste in a high temperature hazardous waste incinerator	32	Restricted discretionary
	On-farm solid waste disposal by combustion	33	Permitted
	Residential waste disposal by combustion	34	Prohibited
	Disposal of solid wastes to land		
	On-farm solid waste disposal to land	35	Permitted
	Composting or disposal to land of waste material – residential areas	36	Permitted
	Active landfills	37	Controlled
	Closed landfills	38	Permitted
	Cleanfills	39	Permitted
	On-farm liquid waste management processes	40	Permitted
	Sewage treatment	41	Permitted
Site development, earthworks or application of soil conditioners	Site development and landscaping	42	Permitted
	Earthworks		
	Small-scale earthworks	43	Permitted

Category	Source or Activity	Rule No.	Rule Category
	Large-scale earthworks	44	Controlled
	Fertiliser and other Soil Conditioners		
	Fertiliser and other Soil Conditioners	45	Permitted
Aquaculture or intensive farming processes	Aquaculture	46	Permitted
Intensive Pig Farming Processes	Small intensive pig farming processes	47	Permitted
	Existing intensive pig farming processes	48	Restricted discretionary
	New large intensive pig farming processes	49	Restricted discretionary
	Intensive pig farming processes that do not comply with Rules 47-49	50	Discretionary
Intensive Poultry Farming Processes	Small intensive poultry farming processes	51	Permitted
	Existing intensive poultry farming processes	52	Restricted discretionary
	New large intensive poultry farming processes	53	Restricted discretionary
	Intensive poultry farming processes that do not comply with Rules 51-53	54	Discretionary
Other discharges	Discharges to air that cannot comply with Rules 1 - 54	55	Discretionary
Agrichemicals	Agrichemicals sprayed onto production land	56	Permitted
	Agrichemicals sprayed onto public amenity areas or roadside railway verges	57	Permitted
	Agrichemicals sprayed that do not comply with Rules 56 - 57	58	Restricted discretionary
Burning	Burning of vegetation on production or forested land	59	Permitted
	Burning of vegetation that does not comply with Rule 59	60	Controlled
	Burning of tyres or untreated waste oil	61	Prohibited
	Fire training activities	62	Permitted
	Fire training activities that do not comply with Rule 62	63	Controlled

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Appendix II

Section 35 of the RMA

35. Duty to gather information, monitor, and keep records
- (1) Every local authority shall gather such information, and undertake or commission such research, as is necessary to carry out effectively its functions under this Act or regulations under this Act.
 - (2) Every local authority shall monitor—
 - (a) the state of the whole or any part of the environment of its region or district—
 - (i) to the extent that is appropriate to enable the local authority to effectively carry out its functions under this Act; and
 - (ii) in addition, by reference to any indicators or other matters prescribed by regulations made under this Act, and in accordance with the regulations; and
 - (b) the efficiency and effectiveness of policies, rules, or other methods in its policy statement or its plan; and
 - (c) the exercise of any functions, powers, or duties delegated or transferred by it; and
 - (d) the exercise of the resource consents that have effect in its region or district, as the case may be; and
 - (e) in the case of a regional council, the exercise of a protected customary right in its region, including any controls imposed on the exercise of that right under Part 3 of the Marine and Coastal Area (Takutai Moana) Act 2011—and take appropriate action (having regard to the methods available to it under this Act) where this is shown to be necessary.
 - (2A) Every local authority must, at intervals of not more than 5 years, compile and make available to the public a review of the results of its monitoring under subsection (2) (b).

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Appendix III

Criteria for review

The following criteria were applied when considering making changes to the *Regional Air Quality Plan for Taranaki*.

(a) Issues:

- There is a new issue of regional significance that has emerged since adoption of the Plan that is not addressed in the Plan or in other policies, strategies or plans and, after considering criteria (b) to (g) below, it is necessary and appropriate for that issue to be included in the Plan; or
- An issue already identified in the Plan is no longer appropriate or necessary and after considering criteria (b) to (g) below, that issue should be removed from the Plan.

(b) Lawfulness:

- The Plan is clearly leading directly to outcomes that are contrary to the **purpose and principles** of the Act; or
- The Plan is clearly failing in its purpose of achieving **integrated management** and this failure is a consequence of the Plan itself; or
- The provisions of the Plan are **ultra vires** and require immediate change in the interests of clarity and certainty and the efficient, effective and legally correct administration of the Act.

(c) Clarity:

- The provisions of the Plan are so **unclear or uncertain** that those provisions are causing confusion and problems in administration and implementation of the Plan to the extent that the Plan requires immediate change.

(d) Practicability and affordability:

- The provisions of the Plan have emerged as being not practical or affordable and cannot realistically be undertaken **and** these provisions are causing problems in administration of the Plan that require its immediate change.

(e) Efficiency:

- The provisions of the Plan do not promote the efficient management of resources, result in excessive compliance costs or are not cost-effective for the community (ie, costs are too high relative to the benefits expected) to the extent that the Plan requires immediate change.

(f) Equity:

- The provisions of the Plan impose unacceptable costs or benefits on one sector and not others to the extent that the Plan requires immediate change.

(g) Section 32 duties:

Any change to the Plan is subject to the duties imposed under section 32 of the Act and these must be considered in the review process. In proposing any changes to objectives, policies, or methods the Council must have regard to:

- The extent to which the objective, policy or method is **necessary** in achieving the purpose of the Act;
- **Other means** to achieve the purpose of the Act;
- The **reasons** for adapting the objective, policy or method, the principal alternative means available or of taking no action where the Act does not require otherwise;
- **Benefits and costs** of the principal alternative means;
- The **appropriateness** of the objective, policy or method having regard to its efficiency and effectiveness relative to other means;
- The **risk of acting or not acting** if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.

Part of this assessment will need to include consideration of the:

- **Timeliness** of any change (particularly in view of any proposed changes in legislation, and roles or responsibilities); and
- **Costs** to the Council in processing a change to the Plan and compliance costs imposed on resource users.

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Appendix IV

The Regional Policy Statement for Taranaki 2010 – Reverse sensitivity

The *Regional Policy Statement for Taranaki 2010* (the RPS) contains policies and methods that address reverse sensitivity issues with respect to discharging contaminants to air, as follows:

AQU Policy 3 provides:

Land use and subdivision should be managed to avoid, remedy or mitigate adverse effects on people and the environment from reverse sensitivity effects arising from the inappropriate location of sensitive activities in proximity to legitimate activities discharging contaminants to air.

AQU Method 6 provides:

In conjunction with the territorial authorities, implement memoranda of understanding to promote effective integrated management of air quality issues.

The RPS also suggests that the territorial authorities may wish to consider AQU Method 8, which states –

*Include in **district plans** or **resource consents**, provisions or conditions to control either or both:*

- (a) The siting and establishment of land uses that discharge contaminants to air that have an adverse effect on the amenity and character values of the adjacent land uses; or*
- (b) The siting and establishment of sensitive or incompatible land uses in the vicinity or neighbourhood of the discharging land use.*

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Appendix V

Summary of Progress: implementing RAQP methods

What did we promise to deliver?	Where are we at?	Conclusion
Applying regional rules to allow, regulate or prohibit activities.	All 63 rules are applied as appropriate and necessary.	Commitment is being delivered.
Applying policies and section 104 of the RMA when granting discharge to air permits or the conditions of such a permit.	Statutory provisions and guidelines are adhered to when granting discharge to air permits.	Commitment is being delivered.
Requiring applicants for discharge to air permits to adopt the best practicable option to prevent or minimise adverse effects.	All applicants are required to demonstrate that they are implementing best practice in their air discharge processes.	Commitment is being delivered.
Consulting with iwi and hapū regarding identification of places of special cultural and traditional value associated with the air resource.	Iwi and hapu have been involved in an average of 33% of all air discharge consent applications since 2010.	Commitment is being delivered.
Providing advice and information, including guidelines, to landowners, resource users, and the public.	Advice and public information is provided through visits by officers and social and print media.	Commitment is being delivered.
Supporting and promoting the preparation and adoption by sector groups of guidelines and certification programmes.	Provided ongoing support and promotion of guidelines and other certification to sector groups as appropriate.	Commitment is being delivered.
Working with the poultry growing industry to reduce the effects of broiler operations on air quality.	Worked with the poultry industry to effect best practice mitigation of air quality effects.	Commitment is being delivered.
Monitoring and gathering information.	Ongoing monitoring and gathering of air quality information by science and technical officers.	Commitment is being delivered.
Receiving and responding to public complaints.	Inspectorate and compliance officers received and responded to all public complaints,	Commitment is being delivered.
Implementing and promoting effective integrated management of air quality issues with territorial authorities.	Integrated management implemented by officers liaising with territorial councils in respect of shared and delegated activities.	Commitment is being delivered.
Applying and contributing to the monitoring of national environmental standards for air quality.	Advocacy and response through National Working Group on Air Quality and other fora in respect of national environmental standards for air quality.	Commitment is being delivered.
Advocating to relevant agencies.	Advocacy and response to relevant agencies in respect of air quality guidelines and standards.	Commitment is being delivered.

What did we promise to deliver?	Where are we at?	Conclusion
Providing information on the location of electricity transmission networks.	Provided information on location of electricity transmission networks when requested.	Commitment is being delivered.
Encouraging the installation of cleaner heating methods and appliances and increases in home energy efficiency	Continued to encourage installation of cleaner and more efficient home heating methods together with territorial authorities.	Commitment is being delivered.
Defining a Port Air Zone to provide boundaries for controlling the effects of air emissions in the coastal marine area at Port Taranaki.	Port Air Zone defined as per Figure 2 of the RAQP.	Commitment is being delivered.