Regional plans review – topic summary

Air quality

How can we improve the management of air quality in our regional plans? This is a summary of our initial ideas.

What is air quality?

The term “air quality” means the state of the air around us. Good air quality refers to clean, clear, unpolluted air. Poor air quality is a result of a number of factors, including emissions from various sources, both natural and human-caused.

The air quality topic includes all human-caused discharges into air from within the region (including the coastal marine area) as they impact on human health, cause a nuisance or have an adverse environmental effect. In Northland the discharges to air that have the most significant impact on air quality are smoke, odour, dust and spraydrift.

The air quality topic does not include the use of dust suppressants – this is covered by the hazardous substances topic.

Northland’s ambient air quality is generally good and we are compliant with national requirements[1].

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland’s regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with options or recommendations for the new regional plan.

We’ve split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

[1] The National Environmental Standards Air Quality 2004 (amended 2011).

What needs to change in the regional plans?

1 Greater recognition in plan policies that air quality expectations vary depending on the location of the activity

The policies in the current plan do not distinguish very well between the differing expectations of air quality based on location. Policies are generic and therefore do not account for the fact that, for example, in an industrial zone, certain effects may well be accepted and there may be greater tolerance of those effects than if the same activity was to locate in a residential zone. Similarly, a rural zone is a working agricultural environment and there is often an acceptance that certain effects will take place there that will be less tolerable in higher amenity zones. Conversely, a more precautionary approach in high amenity areas, particularly residential areas, could be signalled through plan policies. This is important because policies guide the rules and influence decision-making for resource consents.

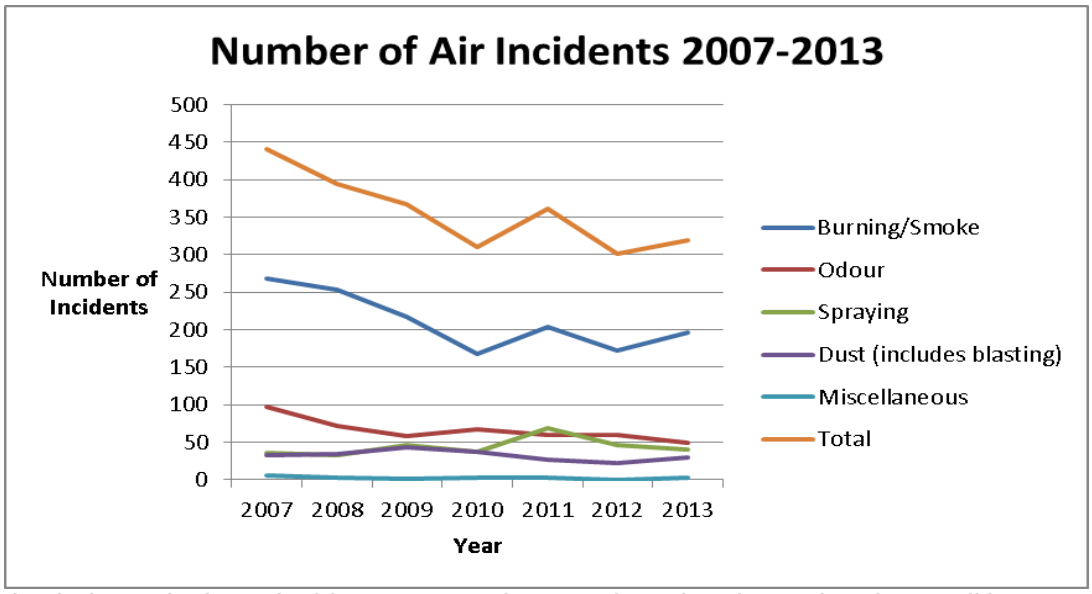
Discussion at the air quality stakeholder workshop covered this issue from the perspective of reverse sensitivity effects at the rural residential and rural boundary and urban-industrial boundary. There was recognition that the proposed Regional Policy Statement contained some direction on addressing this issue and this is starting to be felt through district plan reviews (e.g. Whangarei District Council Rural Plan Change 85). There was also some feeling that if district councils are allowing a land use to take place in a zone where the purpose of the zone is to accommodate that land use, we should also be permitting the discharge. The Proposed Auckland Unitary Plan) acknowledges this relationship by tying the permissiveness of the discharge to the underlying zoning.

1.1 Possible changes to the regional plans

The plan could benefit from clearer policy on distinguishing between new polluting activities seeking to locate or taking place in an industrial or rural environment versus locating or taking place in more sensitive environments (such as residential zones). For example, smoke from burn-off and animal odour are clearly more associated with a farming environment (and thus with rural areas) than what would normally be expected in town.

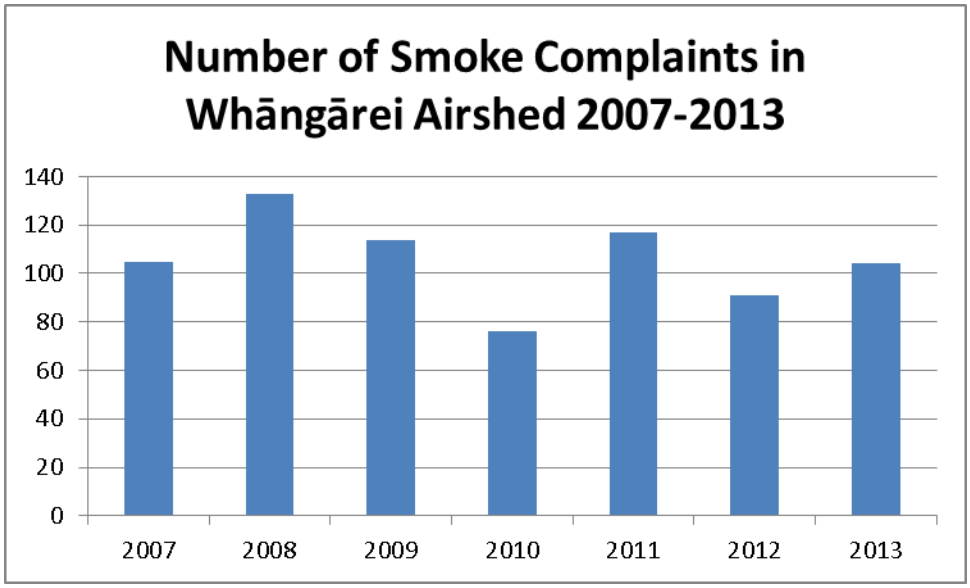
There was support at the stakeholder workshop for planning policy recognition that certain industries (for example ‘intensive farming’) produce effects (odour, noise etc…) that are typical to what is expected in rural areas. There was some feeling that a regional plan should quantify what constitutes intensive farming (for example poultry farming) and define it in terms that are separate from, on the one hand, small scale rearing of animals and on the other non-rural odorous activities such as wastewater discharges. In terms of adopting the Auckland approach of linking zoning to the discharge, this was considered to be difficult as district council zones are outside regional council control.

2 Reducing smoke nuisance complaints



(Includes only those incidents reported to or referred to the regional council.)

Smoke nuisance is the number one environmental complaint to the regional council. Sources of complaint are varied and include large rural fires, smaller domestic fires (backyard burning) and industry discharges. Complaints have fallen in recent years but now remain at the same level since 2010 (between 175-200 complaints a year). Complaints are also made and investigated by the district councils under the Health Act 1956 and local fire prevention bylaws.



(Includes only those incidents reported to or referred to the regional council.)

Typically around half the smoke nuisance complaints generated have been in Whāngārei. In 2008 new rules were introduced which meant domestic backyard burning in Whāngārei required a resource consent. This was because the airshed had the potential to breach ambient air quality standards for PM_{10} mandated in the National Environmental Standards Air Quality and there was concern about the health effects of backyard burning. A free kerbside recycling service is also available in Whāngārei (except for green waste). There is no compelling evidence for changing this rule.

Although complaints have trended downwards, they still remain high overall. The complaints are generally about open domestic fires (household rubbish or vegetation). Fewer complaints are received about domestic backyard burning where a waste incinerator[2] is used. Most people complain because of the nuisance factor, concern over perceived health effects and the fact they were not notified in advance.

Although the nuisance effects of smoke are widely known, more research is emerging that smoke, even from materials not considered toxic, has the potential to exacerbate health effects particularly in vulnerable population groups (for example, those with asthma or Chronic Obstructive Pulmonary Disease[3]). The combustion process from wood and vegetation is similar to that in tobacco and similar carcinogenic materials are released. The picture is more mixed as to whether this can cause adverse effects in healthy populations[4].

Backyard burning of most domestic waste occurs in an unselective manner, with little or no segregation of the waste streams. This complicates enforcement as it has to be established whether prohibited items are in the waste stream.

Currently open burning of certain types of rubbish and green waste is permitted in all main centres around Northland (except Whāngārei, as discussed above). Unlike Whāngārei, there are limitations on disposal with no free kerbside recycling service and these areas are not at risk of exceeding air quality standards in the National Environmental Standards Air Quality.

2.1 Possible changes to the regional plans

A new regional plan could include a 'hierarchical approach' to increase options to deal with smoke nuisance. This could include:

- Greater use of best practice and standards. A particular issue is the burning of wet vegetation which can cause greater smoke discharge. Requiring that in urban areas (not Whāngārei) the vegetation be dry when burnt will reduce smoke production and help enforcement.
- Require prior notification for large fires in rural areas or alternatively urban/rural interface. Large fires (for example, rural-burnoff) can be planned in advance. In this instance, where the fire is to take place near sensitive areas (for example, near houses), a requirement to notify may reinforce a simple courtesy without being onerous. This notification could also be time limited (for example, fire for more than one day beyond boundary).
- Requiring the use of incineration devices for open burning in urban areas (outside Whāngārei) and setting a design standard for the incineration device. Incineration devices can produce less smoke if designed properly. This might be appropriate if we continue to allow burning waste outside in urban areas.
- Another option is to include a rule requiring a resource consent for the burning of material in urban areas where a free recycling service is available for that material. This could include kerbside collection and/or a local transfer station.

[2] A waste incinerator is defined in the plan as a *device designed specifically for waste incineration.* Council monitoring records contain information on the source of complaints – typically they relate to open burning.
[3] Chronic Obstructive Pulmonary Disease is an umbrella term that includes conditions such as chronic bronchitis and emphysema.
[4] Evidence presented by Taranaki Regional Council – http://www.stuff.co.nz/taranaki-daily-news/news/4730648/Backyard-fires-extremely-toxic quoting research from the EPA in the US.

3 Reducing compliance costs for well-performing industrial and trade discharges

Getting a resource consent imposes costs on business and industry through having to obtain the initial resource consent, renewing the resource consent, uncertainty of resource consent being granted, and ongoing monitoring. Industries that are performing well are less 'risky' to the community than poorly performing industries that have been subject to enforcement proceedings.

3.1 Possible changes to the regional plans

- Dry abrasive blasting activities where they are contained in a blasting booth could be a permitted activity (they are currently controlled activities). This will be subject to performance standards including no objectionable effects beyond the boundary. Activities that cannot meet permitted standards could be subject to a restricted discretionary or discretionary consent, meaning consent may be refused in the future.
- One-off dry abrasive blasting activities of fixed structures taking place in the open air could be a controlled activity, provided there are appropriate setbacks away from sensitive activities. They are currently discretionary activities (or potentially prohibited activities). A discretionary activity status could be retained if the activity is proposed to take place close to sensitive activities, including ensuring that appropriate containment methods are used.
- Other consented activities, currently discretionary status, could be made controlled activities. There may only be a few activities where this would apply, for example industrial smoke discharges performing well without objectionable effects beyond the boundary but in excess of the heat release thresholds[5]. Specifying the requirement for notification of resource consents is another way of reducing compliance costs.

4 Agrichemical spraying rules are confusing and inconsistent

The main issues appear to be that:

- The Regional Air Quality Plan does not distinguish between the need for different notification requirements for ground and aerially based spraying.
- The Regional Air Quality Plan, Regional Water and Soil Plan and Regional Coastal Plan have rules on agrichemical spraying with different performance standards.
- Out of date references. The reference to the 8409:1999 New Zealand Standards Code of Practice for the Management of Agrichemicals is out of date. There are also new industry developed standards (Aircare) that have emerged that could be referenced as best practice.
- The handheld spraying definition is too loose and includes high pressure handguns as well as low pressure spot spraying. High pressure handheld spraying is more likely to overspray the boundary and thus requires greater recognition as a separate activity.
- Commercial or contractor spraying requires neighbour notification, record keeping, meeting New Zealand Standards and Growsafe certification for air and ground spraying. However, 'domestic' spraying is not subject to these requirements although the same effects can occur if undertaken close to a boundary.
- Aerial spraying needs more control if taking place in an urban environment - there have been occasions where this has occurred (as of right) as a permitted activity).

Participants at the air quality workshop agreed that notification of spraying is a key issue, stating that many complaints arose from the lack of notification from spraying activities. Some felt that notification should not be a blanket approach to notify all neighbours but only

[5] Rules 9.1.1 and 10.1.1 – Regional Air Quality Plan

those near the area being sprayed. Some also felt that current requirements were too onerous (mainly the requirement to notify at least 18hrs before). There was also a feeling that technology has also moved on since the original plan was drafted and old style 'drift spraying' has been replaced by more precise equipment (placement sprayers) that can place droplets more accurately on target and this had not been reflected in plan rules.

Other issues raised include the use of off label uses as the regional air plan rules limit the use of chemicals to label requirements. It is however fairly common for applicators to use some chemicals for uses other than what is on the label requirements. Industry representatives at the workshop felt that overall, the regional plan should have rules and standards that are more risk based.

4.1 Possible changes to the regional plans

There are a number of measures that could be considered:

- Distinguish between the need for different notification requirements for aerial spraying. Consider measuring notification distance from the spraying area rather than the site boundary.
- Consider only requiring notification in rural/urban interface area rather than purely rural.
- Update references to more recent New Zealand standards and other applicable industry certifications.
- Amend 'handheld' spraying to distinguish between high pressure and low pressure uses. High pressure handheld spraying should require notification if taking place close to sensitive areas at the site boundary.
- Ensure there is one consistent set of plan rules (could be achieved through a single regional plan).
- Require a resource consent for aerial spraying in urban areas.

Consider having one set of requirements for contractors/commercial users/domestic users for ground-based and aerial spraying, or some elements of these requirements, for example, a requirement to notify.

Industry representation at the workshop favoured a more risk based model using an approach that is in the Auckland Proposed Unitary Plan (PAUP). More research and discussion will be needed to see if this is the right approach for Northland but this is something that should certainly be considered as part of a Section 32 analysis of a new regional plan.

5 Odour from chicken manure application has been a problem in recent years

The council receives a small number of complaints each year as a result of the spreading of chicken manure on land. A Regional Water and Soil Plan rule addresses the application of animal effluent to land generally (including a 'no offensive effects beyond the boundary' with regard to odour) however there are short-term, high intensity odour issues with chicken manure which means that the 'no offensive effects beyond the boundary'[6] requirement cannot be met, particularly in situations where it is applied wet. Odour issues can also arise from the storage of the chicken effluent.

The council generally relies on the use of the FIDOL (Frequency, Intensity, Duration, Offensiveness, and Location)[7] to determine whether an effect is adverse. This issue was

[7] FIDOL is a quantitative and qualitative criteria used by enforcement officers to determine the offensiveness of odour.

discussed at the air quality workshop where was general support for the continued use of FIDOL.

5.1 Possible changes to the regional plans

Include a permitted rule which could include the following standards:

- Immediately cultivating the product into land if wet.
- Or, where this is not practicable, not spreading it in a wet form.
- Notification of neighbouring areas when applied close to sensitive areas (for example, residences), particularly in the rural/urban interface. In addition to the setback of 50m from the spreading of effluent under the current Regional Water and Soil Plan rules, it is recommended that in order to be a permitted activity, the spreading of poultry manure within 150m of residential buildings, public places and amenity areas where people congregate, and education facilities, requires notification.
- Regular monitoring of storage facilities is undertaken by the applicator to assess odour nuisance – compliance to be shown by providing written details at the request of council.

6 There is ongoing concern about dust from the public use of unsealed roads

There is a localised but high degree of public concern about dust emissions from public gravel roads. The issue is mainly a health issue, which may be better suited to intervention under the Health Act 1956 as the Resource Management Act is primarily set-up to deal with nuisance effects of dust. Nevertheless the management of dust is a Resource Management Act issue that can be influenced by a regional plan rule.

6.1 Possible changes to the regional plans

This is a very difficult matter to address in a regulatory plan. The regulatory options afforded by a rule in the plan could however see the activity be permitted subject to no objectionable or offensive cross-boundary effects (similar to other permitted rules). The reality is that many unsealed roads would require consent to operate under this rule. The council could require the use of the Best Practicable Option to minimise dust from unsealed roads. The Best Practicable Option requires the most cost-effective and efficient measure to be used to minimise emissions at source. A Section 32 process could look at whether this is a viable rule to put in a future regional plan.

7 The management of closed municipal landfills

Both the Regional Water and Soil Plan and Regional Air Quality Plan contain rules on the management of closed landfills. The Regional Water and Soil Plan requires a consent to be obtained for leachate if certain water quality standards are breached or if no leachateminimisation and containment measures such as lining or capping have been included in the construction. Consequently, many historic landfills are consented and monitored for leachate. The Regional Air Quality Plan requires a consent to be obtained for any landfill closed from 1995 (the date of notification of this plan) onwards to manage landfill gas emissions[1]. As a general rule of thumb however, landfills should be actively monitored for in excess of 30 years from their closure date, with the timeframes dependent upon the size of the landfill and if, and/or when, the landfill has been capped, which can occur significantly after their closure date. Best practice in fact states that it can take between 30-

[1] Under Rule 19 of the Regional Water and Soil Plan

50 years for ongoing anaerobic processes that can lead to gas generation to diminish. The 1995 date is therefore arbitrary and not aligned with best practice.

7.1 Possible changes to the regional plans

We propose a holistic approach to managing closed landfills for landfill gas emissions using the 30 year closure date of the landfill as a guideline. All closed landfills that have been closed for less than 30 years not currently subject to a resource consent for landfill gas emissions will remain permitted but will be required to demonstrate that the emissions are managed through risk assessment against Ministry for Environment guidelines (A Guide for the Management of Closed and Closing Landfills – NZ, Tonkin and Taylor 2001) by a defined date in the plan. Where closed landfills are assessed as being in a higher risk category, according to these guidelines they will be subject to the resource consent process. Closed landfills that are currently in receipt of a resource consent after 1995 will become permitted 30 years after their closure date providing landfill gas emissions are not offensive and objectionable beyond the boundary, and also subject to the results of a similar risk assessment against the Ministry for Environment guidelines that identifies them as no longer being a risk.

8 List of prohibited materials unclear

The current plan prohibits the burning of a range of substances including, 'hazardous substances'. The term 'hazardous substances' applies quite widely (the term used in the plan relates to the Health and Safety and New Organisms Act definition) – plans in other regions have more specific lists of prohibited items. This can make it difficult for plan users who may be unfamiliar with what a hazardous substance is.

Some material, such as asbestos-containing material, do not fall within the Health and Safety and New Organisms Act definition of a hazardous substance and can technically be burnt if a resource consent is applied for. There is also a list of other material in the plan that is also not specifically prohibited and where a consent can be applied for. Examples include plastics (other than halogenated plastics), chemical waste, medical waste, metals, chemically treated or artificial construction materials. Council has never received a resource consent application for the burning of these materials, and consent is unlikely to be granted as there are better alternatives to burning. As a final point the National Environmental Standards Air Quality mandatorily prohibits the burning of certain items (for example, bitumen). These are not listed in the current plan.

8.1 Possible changes to the regional plans

We could have a 'one stop shop' list of prohibited materials including those listed in the National Environmental Standards Air Quality and clearer examples of 'hazardous substances'. Items that can technically currently be burnt with a resource consent (for example, asbestos) could be moved to 'prohibited activity' status. There is a question mark over prohibiting the burning of all plastics, as for example polyethylene (used in silage wrap) is less harmful than halogenated plastics. Nationally however there is a move away from burning farm plastics such as these (recycling alternatives are available) and therefore the activity could also be made prohibited[8]. This approach will improve education and enforcement and simplify the plan structure. It may be appropriate to openly burn some of these materials in certain circumstances, such as in a biosecurity emergency or as part of fire training, however due to the toxicity of materials, neighbour and council notification should be required first.

[8] Burial of farm plastics is allowed under Regional Water and Soil Plan 19.1.3. This is being reviewed through the hazardous substances and waste disposal work-stream.

9 Other issues

- Enable the burning of ‘clean’ material such as paper, cardboard as well as bio-diesel and biogas by making them permitted activities for industrial heating purposes (currently the plan is silent on this thus a resource consent is technically required).
- Provide clearer guidance on where a consent is required for associated discharges from fuel burning processes (for example, volatile organic compounds emanating from wood kilns).
- Clarify that waste openly burnt on private land from a trade or industrial premise does not fall within the scope of a permitted rule.
- Improve consistency where consent is required for large-scale earthworks and when the need for a dust management plan arises.
- Structurally it is recommended that the plan has a single ‘rules’ section rather than separate rules for ‘other place or source’ and ‘industrial and trade’. There is some duplication with the current approach with repetition of the same rules in different sections. The current table in the plan summarising activities and their associated consent status is considered helpful but could be expanded to include more detail. Rules in the plan are generally not overly complex, although there are exceptions where greater explanation could be given. Some terms used in rules are also not well-understood and could be simplified and replaced with less technical terminology. The plan also needs to be updated to reference the National Environmental Standards Air Quality 2011.