
under: the Resource Management Act 1991 ('RMA')

in the matter of: the proposed Canterbury Air Regional Plan

and: **Fonterra Co-operative Group Limited**
Submitter 63146
Further submitter C15C/102825

Statement of evidence of Justine Mary Ashley

Dated: 18 September 2015

REFERENCE: JM Appleyard (jo.appleyard@chapmantripp.com)
BG Williams (ben.williams@chapmantripp.com)

Chapman Tripp
T: +64 3 353 4130
F: +64 3 365 4587

245 Blenheim Road
PO Box 2510, Christchurch 8140
New Zealand

www.chapmantripp.com
Auckland, Wellington,
Christchurch



STATEMENT OF EVIDENCE OF JUSTINE MARY ASHLEY

- 1 My full name is Justine Mary Ashley.
- 2 I am a Director of Planz Consultants Ltd, a Christchurch based resource management consulting company.
- 3 I hold a Bachelor of Resource Studies (1997) and a Postgraduate Certificate in Resource Studies from Lincoln University (2003). I have 18 years experience as a resource management planner and I am a full member of the New Zealand Planning Institute. I am also an accredited Hearings Commissioner.
- 4 I have previously been employed as Regulatory Planning Team Leader for Selwyn District Council and subsequently as a consultant (for the preceding 14 years) by a variety of district councils and private clients involving a range of planning mechanisms. I have extensive experience in the preparation and processing of resource consents and designations, preparing and presenting officer reports and preparing and presenting evidence at Council Hearings and the Environment Court as both an employee and consultant to local authorities. Examples of specific projects involving air quality issues include chicken and pig farming operations, wastewater treatment facilities, large construction projects, panel beaters, contractor's yards, composting and landscape supplies.
- 5 My experience also includes policy analysis, formulation and development through the preparation of plan changes (or variations) to district plans for councils, the implementation and interpretation of district and regional plans and policy statements through both the preparation and processing of resource consent applications, and in the preparation of strategic plans in accordance with the requirements of the Local Government Act.
- 6 In relation to the proposed Canterbury Air Plan (*pCARP*) Review process I have provided planning advice to Fonterra since the release of the discussion document on the process in July 2014. I have subsequently had input into Fonterra's submissions on the pCARP.
- 7 In preparing my evidence, I record that have read the Council's s42A officer report. I have also read and relied on the evidence prepared by:
 - 7.1 **Mr Tim Keir** (Fonterra);
 - 7.2 **Mr Mike Copeland** (economic expert);

7.3 **Mr Roger Cudmore** (air quality expert);

7.4 **Mr Jason Pene** (air quality expert); and

7.5 **Mr Richard Chilton** (air quality expert).

SCOPE OF EVIDENCE

8 I have been asked by Fonterra Co-operative Group Limited (*Fonterra*) to provide planning evidence in relation to Fonterra's submissions and further submissions on the pCARP.

9 This includes:

9.1 an overview of the implications of the pCARP for Fonterra's manufacturing sites in Canterbury;

9.2 a summary of the relevant statutory and planning framework;

9.3 an assessment of the overall approach to air quality in the pCARP against the relevant statutory and planning framework;

9.4 an assessment of the pCARP's approach to reverse sensitivity;

9.5 an assessment of other Fonterra submission points; and

9.6 an overall assessment within the relevant statutory and planning framework, including an assessment of Part 2 of the Act.

10 To avoid repetition, I will reference the assessments made by other Fonterra experts and identify areas of agreement or disagreement with the authors of the s42A reports, where possible.

11 I note that although this is a Council hearing I have read the Expert Witness Code of Conduct set out in the Environment Court Practice Note 2014. I have complied with the code in preparing this evidence and I agree to comply with it while giving oral evidence. Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

EXECUTIVE SUMMARY

12 The key findings from my evidence are as follows:

- 12.1 that the notified pCARP has the potential to significantly impact on the substantial investment that Fonterra has already made in the Canterbury Region, thus creating uncertainty for future investment;
- 12.2 that the policy and rule framework of the notified pCARP exhibits internal inconsistencies that fail to achieve the requirements of section 32 and Part 2 of the Resource Management Act 1991 (*RMA*);
- 12.3 that the notified pCARP fails to give effect to the Canterbury Regional Policy Statement (*RPS*) with respect to addressing ambient and localised air quality effects and protecting existing industrial air discharges from reverse sensitivity;
- 12.4 that there is insufficient recognition afforded to significant industrial premises, such as Fonterra's manufacturing plants; and
- 12.5 that overall, the amendments sought by Fonterra are necessary to ensure that the pCARP are the most efficient and effective means of giving effect to the RPS and achieving Part 2 of the RMA.

IMPLICATIONS FOR FONTERRA

- 13 As outlined in the evidence of **Mr Keir**, Fonterra has five manufacturing sites in the Canterbury Region, being located at Kaikoura, Culverden, Darfield, Clandeboye and Studholme. Collectively, these sites process over 20 million litres of milk per day during the peak of the dairy season and produce over 2,650,000 tonnes of product each year for export. All of these sites hold discharge to air permits that will require either re-consenting or new applications for consents to enable operations to continue or expand in the future.
- 14 Two of Fonterra's three largest South Island sites are located in Canterbury (Clandeboye and Darfield), and accordingly their activities and operations are considered to be nationally significant, particularly in terms of employment and economic returns. Directly, Clandeboye and Darfield employ 1,025 staff. Approximately 70 further people are currently employed at the Kaikoura and Studholme sites.
- 15 Fonterra has recently lodged resource consent applications to expand its Studholme Site to include two new milk powder dryers, two associated solid fuel fired boilers and a drystore. This development is a significant investment and is intended to occur

over the next 10 years. It will create an estimated additional 235 jobs in the South Canterbury community.

- 16 The evidence of **Mr Chilton** is that the pCARP provisions could significantly impact on the ability for the Studholme site to expand, notwithstanding the use of the best practicable option (*BPO*) and that any actual or potential adverse effects of the proposed air discharge will be no more than minor. In this regard the Studholme expansion provides an example of the failure of the pCARP to distinguish between localised effects on surrounding rural land and ambient impacts that occur over a wider airshed.
- 17 **Mr Chilton** has advised that the requirement in the pCARP to maintain certain air quality at the relevant site boundary (despite the absence of any sensitive receptor or gazetted air shed) will generally not be able to be met in practice for not only Studholme but also many other large industrial activities. In particular, I note that even with the likes of the Darfield manufacturing site (which has been able to secure a reasonable buffer of land around it with a total land holding of 680ha), there is still the potential for sensitive activities to encroach upon the plant and limit opportunities for further development.
- 18 Depending on how the pCARP provisions are finally structured and administered, the expansion of an existing, or establishment of a new greenfield, manufacturing site – especially on one with a smaller land area outside any Clean Air Zone, may attract a prohibited activity status (under Rule 7.18). Denying any opportunity to apply for a consent, regardless of environmental effects or consideration of the economic or social benefits such a facility would provide to the region is in my view, inappropriate and unnecessarily onerous.
- 19 More generally, the evidence of **Mr Copeland** is that Fonterra’s milk processing plants within the Canterbury Region are significant contributors to the economic and social wellbeing of the Region’s dairy farmers, businesses and residents. In particular, these five plants are very important to the local communities near the plant sites (e.g. Timaru, Darfield, Waimate and Kaikoura) and metropolitan Christchurch. As such, any excessive restrictions placed on the operation or expansion of Fonterra’s Canterbury milk processing plants, will impact negatively not just on Fonterra and its shareholder farm suppliers but also other businesses and residents throughout the Canterbury region.

RELEVANT STATUTORY AND PLANNING FRAMEWORK

- 20 The relevant statutory context and planning documents applicable to the pCARP are set out (comprehensively) within Section 3 of the

section 42A report. As such, I do not propose to repeat that material in my evidence.

- 21 Nevertheless, and despite the relevant requirements being identified upfront in the section 42A report, I do not consider that the subsequent recommendations contained therein have given adequate consideration to this statutory and planning framework. I therefore feel that it is necessary to highlight the following points that underpin the key issues identified in my evidence.

The need to give effect to the RPS

- 22 The pCARP is required to "give effect" to the operative RPS, which includes Chapter 14 – Air Quality, in accordance with section 67(3)(c) RMA (copy contained in **Appendix 1** to my evidence).
- 23 Given the strength of this directive, I am unclear why the notified pCARP¹ only briefly mentions the overarching provisions of Chapter 14 of the RPS, and nor does the pCARP clearly describe the outcomes sought by the objectives and policies of the RPS (or how the pCARP gives effect to these objectives and policies). The absence of this overarching strategic policy direction has, in my view, led to a blending of issues in the pCARP and a series of confusing and inappropriate outcomes that could have a significant impact on all Fonterra manufacturing sites.

The requirements of Section 32 of the RMA

- 24 Alongside the preparation of the pCARP is the requirement to prepare an evaluation report under section 32 of the RMA and to have particular regard to that evaluation report in preparing the regional plan in accordance with section 66 RMA. As set out in the section 42A report², the purpose of the evaluation report is to examine the extent to which the objectives of the pCARP are the most appropriate way to achieve the purpose of the RMA. It is also necessary to examine whether the provisions of the pCARP are the most appropriate way to achieve the stated objectives by (my emphasis added):
- (i) *identifying other reasonably practicable options for achieving the objectives; and*
 - (ii) *assessing the **efficiency and effectiveness** of the provisions in achieving the objectives³; and...*
- 25 In undertaking an assessment of the 'efficiency and effectiveness of the provisions' as referred to above, the evaluation must (my emphasis added):

¹ Notified pCARP, 1 Introduction, pages 1-6 & 1-7

² Section 42A report, pages 3-10 & 3-11

³ Section 32(1)(a) RMA

- (a) *identify and assess the benefits and costs of the environmental, **economic**, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—*
 - (i) **economic growth** that are anticipated to be provided **or reduced**; and
 - (ii) **employment** that are anticipated to be provided **or reduced**; and
- (b) *if practicable, **quantify** the benefits and costs referred to in paragraph (a); and...*

26 Based on the expert evidence of Fonterra's air quality and economic experts, I do not consider that the section 32 evaluation that has informed the provisions of the notified pCARP has given adequate consideration to the potential economic costs to Fonterra's manufacturing operations. I am also concerned that in failing to give effect to the RPS, the objectives of the pCARP do not represent the most appropriate way to achieve the purpose of the RMA, which is inherent within the higher order objectives and policies of the RPS.

OVERALL APPROACH TO AIR QUALITY

Ambient versus localised air quality

- 27 The RPS makes a clear distinction between ambient (Objective 14.2.1, Policy 14.3.1) and localised air quality effects (Objective 14.2.2, Policy 14.3.3), which is not reflected within the notified pCARP. In particular, the pCARP does not recognise the differences between ambient and localised air quality effects that are described in **Mr Chilton's**, **Mr Cudmore's** and **Mr Pene's** evidence. Likewise, the provisions draw no distinction between the two and are therefore applied uniformly, regardless of effect.
- 28 The section 42A report recommends that Fonterra's submissions seeking to distinguish between ambient and localised air quality effects, as recognised within the RPS, are rejected in their entirety. The primary reasons for this appears to be that "*there is no clear distinction as where local effects become ambient effects*" and that "*ambient air quality effects do occur outside of polluted airsheds, and cumulatively localised effects can result in an ambient air quality problem*"⁴.
- 29 All five of Fonterra's manufacturing sites are located in relatively isolated rural areas featuring very low population densities and few, if any, adjacent sensitive activities. These characteristics subsequently inform the appropriateness of the air discharge,

⁴ Section 42A report, pages 5-4 & 5-5

employment of the best practicable option, resultant air quality modelling, and overall assessment of the appropriateness of site location. The uniform approach of the pCARP fails to recognise this variation in the nature of the receiving environment, despite Objective 5.8 seeking to recognise *"that air quality expectations throughout the Region differ depending on location and characteristic of the receiving environment"*.

- 30 On the basis of **Mr Chilton's, Mr Cudmore's and Mr Pene's** evidence, I understand that while Fonterra's discharges may have localised effects on air quality within their rural locality they do not have an environmentally significant effect on ambient air quality within the wider airshed (comprising all of the rural areas of the region outside of the gazetted urban airsheds). In particular, Fonterra's discharges have a nil or negligible impact on polluted urban airsheds and Clean Air Zones, which appear to be the basis for the relevant pCARP provisions.
- 31 The proposed uniform approach may therefore have a potentially significant impact on Fonterra's operations while having minimal corresponding benefits to ambient air quality.
- 32 As currently drafted, it is unclear how this uniform approach is to be implemented, particularly in terms of requiring individual discharges to be assessed in the context of the wider airshed (polluted or otherwise). Such provisions also appear internally inconsistent, particularly in light of the locational references contained in notified Policies 6.6 and 6.8, together with the 'enabling' context of Policy 6.19 that seeks to 'minimise' rather than 'avoid' adverse effects of industrial air discharges.
- 33 In addition, I note that the section 42A report⁵ recommends the inclusion of an additional policy (Policy 6.11A) to specifically recognise the *"locational constraints of discharging activities"* by enabling *"operational discharges"* where the best practicable option is applied. Notwithstanding that the recommended policy does not sit comfortably among other existing policies, including 'reverse sensitivity' Policy 6.7, the additional recognition afforded to the locational and operational characteristics of industry provides further support for distinguishing localised and ambient air quality, in line with the overarching RPS.
- 34 I therefore consider that it is appropriate to insert a new objective (Objective 5.10) that makes a clear distinction between managing localised air quality effects and any potential impact on the wider ambient environment, as set out in the 'Updated Set of Key Provisions' contained in **Appendix 2** of my evidence.

⁵ Section 42A report, Recommendation R-5, page 9-2

Use of Ambient Air Quality Guidelines (AAQG)

- 35 As outlined in the evidence of **Mr Cudmore**, I note that while reference to the AAQG is supported in preference to the adoption of different regional air quality assessment criteria, significant concern has been raised about the proposed application of the AAQG within the pCARP.
- 36 In particular, I note that Policy 6.21 and Rule 7.18 seek to avoid/prohibit (respectively) industrial and large scale combustion discharges to air that will likely result in exceedances of the AAQG, including areas/airsheds where contaminant concentrations already exceed AAQG levels (e.g. all of the polluted airsheds in Canterbury), regardless of the effects of the individual discharge. I also note that the use of the term 'avoid' within the policy framework may have the effect of prohibiting the specified activity due to the strength of language used and the absence of balancing policies.
- 37 This issue appears to have been recognised within the section 42A report with an acknowledgement that the proposed package of Policy 6.21 and Rules 7.17 & 7.18 *"does not provide sufficient discretion to apply BPO and enable industrial and large scale discharges where they are appropriate"*. While subsequent amendments are recommended, unhelpfully, no replacement text has been proposed. In the absence of such specific relief it is very difficult to evaluate the appropriateness of what is proposed and whether it would work in practice. Although I acknowledge the intent of the Officers, without any advice as to how the relief might be informed and what it might look like, I refer to the amendments sought in Fonterra's submission (or as otherwise outlined in **Appendix 2** of my evidence).
- 38 It is further noted that Policy 6.2 requires that adverse effects on air quality is minimised where ambient air quality monitoring data is between 66% and 100% of AAQG levels. My understanding of **Mr Cudmore's** evidence is that the air quality alert category of 66% described in the AAQG document is intended to be used to assess ambient air quality measurements and to identify from those measurements where policy direction may be required to curb upward trends in ambient air quality monitoring data. It is not intended to be used to assess individual discharges yet this is not made clear in Policy 6.2 (or associated Policy 6.3).
- 39 Fonterra is therefore concerned that 66% of AAQG levels may be used as "pass/fail" criteria for the assessment of individual discharges. I understand that this is not the intention of the AAQG and would not be a representative indicator of adverse effects. As such, it is requested that both Policies 6.2 and 6.3 clearly refer only to measured regional ambient air quality monitoring data.

APPROACH TO REVERSE SENSITIVITY

- 40 The concept of reverse sensitivity is identified and described in the RPS⁶ as (my emphasis):

*...the situation where an existing activity has **deliberately located away** from land uses that may be sensitive to the discharge, **but is subsequently encroached on**, resulting in pressure for that activity to cease or change the way it operates. Examples include residential areas encroaching on activities that produce odour, for example airports or certain industries.*

- 41 The RPS provides a clear framework for addressing reverse sensitivity effects and this has not been reflected within the pCARP. To this extent, I consider that while Policies 6.6, 6.7, 6.8 and 6.19 appear to recognise that reverse sensitivity effects can arise as a result of incompatible land use patterns, the provisions fail to protect the existing activity discharging to air (as required by Policy 14.3.5 of the RPS).
- 42 For instance, Policy 6.7 potentially seeks relocation of existing discharges subjected to reverse sensitivity effects without having regard to existing investment at the current location or to the potential adverse effects of relocation. In my experience, this is directly contrary to the outcomes generally sought through a reverse sensitivity regime – i.e. protection of the ‘first-in-time’ activity that is the cause of the effect.
- 43 Policies 6.6, 6.8 and 6.19 also refer to an assessment of whether or not the discharging activity is ‘located appropriately’. As identified within the RPS, an industry will assess the sensitivity of the receiving environment at the time of establishment (“*by deliberating locating away from land uses that may be sensitive to the discharge*”), thereby ensuring that it is ‘located appropriately’. It is the subsequent change in the sensitivity of surrounding land uses that leads to a reverse sensitivity effect on the established activity. In this context, Policies 6.6, 6.8 and 6.19 conflict with Policy 6.7, with Policy 6.8 also setting an unachievable expectation that is inappropriately linked to consent duration rather than environmental effects.
- 44 From Fonterra’s perspective, potential relocation is unacceptable as the economic costs associated with the loss of existing investment and the practicality of physically moving a large manufacturing site to another location would be prohibitive. Policy 6.7 also fails to take into account the multitude of other factors that Fonterra needs to consider for determining a suitable location for a new manufacturing

⁶ Canterbury Regional Policy Statement, Chapter 14, page 160

site or other related facilities, as identified in the evidence of **Mr Keir**.

- 45 In particular, the efficient operation of dairy manufacturing facilities is often dependent upon the site being in reasonable proximity to its product source (i.e. milk supply); having good access to strategic freight networks, including rail; having access to a secure and reliable water supply; having sufficient (and suitable) land available for the discharge of condensate water; and being in close proximity to an adequate labour resource. Other flow-on effects arising from a possible relocation include the social impact on employees and increased transport costs where any alternative site is located further from the raw milk resource.
- 46 I also recognise that the discharger has little control over the activities that locate beyond its property boundary, except in circumstances where the consent holder is identified as an affected party as part of a resource consent process or otherwise submits on a proposal to increase the sensitivity of adjacent land. Such discharging activities can only locate in a zone that provides for its type of activity and therefore, it must rely on the territorial authority to protect that zone from reverse sensitivity effects through appropriate land use planning decisions. As such, the RPS defers to district plans to protect established activities discharging contaminants to air from reverse sensitivity effects resulting from encroachment by sensitive land-uses.
- 47 Overall, I consider that the pCARP fails to accurately apply recognised reverse sensitivity principles and instead appears to focus on outstanding legacy issues within the Christchurch Airshed (for example) as a basis for addressing reverse sensitivity across the region. Reference to specific "*legacy reverse sensitivity issues*" continues to be made within the section 42A report⁷, yet no amendments have been recommended to narrow the applicability of Policy 6.7 to these isolated cases. I also consider that in light of the description of reverse sensitivity within the RPS, it is confusing and unnecessary to insert a different definition into the pCARP. While I note that the section 42A report appears to agree, I am concerned that the definition suggested⁸ to the Hearings Panel focuses on the sensitivity of new land uses, rather than as an effect on the existing discharging activity.
- 48 I am also concerned that there is a lack of explanatory text within the pCARP to assist in the understanding of how each of Policies 6.6, 6.7, 6.8 and 6.19 (and recommended Policy 6.11A) are intended to be implemented, either individually or collectively. In the absence

⁷ Section 42A report, page 10-7

⁸ Section 42A report, Recommendation R-T2.1, page 6-16

of any hierarchy within the policies, the level of inconsistency in the outcomes sought creates uncertainty as to which provisions will be given more weight in the consenting process. In my view, such an approach cannot be considered effective or efficient in achieving the relevant objectives of the pCARP under section 32 RMA, let alone giving effect to the RPS or satisfying Part 2 RMA.

- 49 For these reasons, and notwithstanding that reverse sensitivity matters are more appropriately dealt with through district plan provisions (as directed by the RPS), it is requested that the reverse sensitivity provisions within the notified pCARP are amended to more accurately reflect the directions contained in RPS, as set out in the relief sought by Fonterra submissions.

LACK OF RECOGNITION OF SIGNIFICANT INDUSTRIES

- 50 Policy 6.11 of the pCARP recognises the contribution that nationally and regionally significant infrastructure make to the economic, cultural and social wellbeing of communities. However, the applicability of these provisions is constrained by the definition of 'regionally significant infrastructure' in the RPS, which does not expressly extend to include significant industrial premises, such as Fonterra's manufacturing plants.
- 51 To this extent, I note that the section 42A report recommends the insertion of new Policy 6.11A to provide specific recognition to the locational constraints of "heavy industry" and enabling such activities where the BPO is applied to air discharge.
- 52 However, the 'enabling' function of this policy (and that of Policy 6.19) is undermined by other provisions that seek to avoid/prohibit industrial air discharges, including discharges that do not cause adverse effects on people's health and wellbeing. As outlined in **Mr Cudmore's** evidence, environmental sustainability needs to enable some level of effect from industrial discharges, while ensuring that the reduction in air quality can be absorbed by the receiving environment. This can be achieved by applying the BPO to prevent or minimise any actual or likely adverse effect on the environment.
- 53 **Mr Pene** has described the relevant matters to be considered in determining those measures that constitute the BPO on a case by case basis. I understand that this process involves a cost/benefit analysis and an assessment of the overall feasibility of the proposed method, relative to the sensitivity of the receiving environment. While Fonterra supports those provisions of the pCARP that require the application of the BPO to industrial discharges, I am concerned that other parts of the policy framework undermine the proper assessment of the BPO by imposing more stringent (and unjustified) air quality thresholds at the site boundary.

- 54 In particular, the pCARP seems to give little cognisance to the variation in the sensitivity of the receiving environment, in terms of distinguishing between localised and ambient impacts and in circumstances where reverse sensitivity effects have arisen, despite Objective 5.8 stating this fact and a number of other policies making various references to 'locational' impediments.
- 55 As such, I consider that the pCARP fails to provide a sufficiently clear, workable and balanced framework that appropriately recognises the level of investment and community benefits derived from regionally and nationally significant industries.

AMENDMENTS TO RELIEF SOUGHT BY FONTERRA

- 56 As a result of further consideration given to the recommendations made in the section 42A report, it is the collective view of Fonterra's air quality experts that the following amendments are required to address the concerns raised above.

- 56.1 That Policy 6.20 be amended to read:

*Apply the best practicable option to all large scale and industrial activities discharging contaminants into air so that **localised effects on degradation of ambient** air quality ~~is minimised~~ **does not cause significant adverse effects**.*

- 56.2 That Policy 6.21 be deleted and replaced with the following text:

Apply the best practicable option to all large scale and industrial activities discharging contaminants into air to avoid or mitigate cumulative airshed wide air quality effects, where this causes an exceedance, or exacerbation of an existing exceedance of the Ministry for Environment Air Quality Guidelines 2002, or National Environmental Standards for Air Quality 2004.

- 56.3 Delete Policy 6.22 and Rules 7.14, 7.17 and 7.18 in their entirety.
- 57 For the sake of clarity, the relief sought in Fonterra's remaining submission point's stand. An 'Updated Set of Key Provisions' is contained in **Appendix 2** of my evidence.

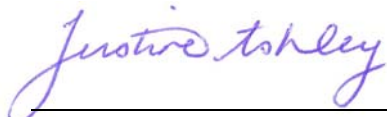
PART 2 OF THE RMA

- 58 In considering whether the notified pCARP will facilitate the achievement of the overarching purpose of the RMA being to "promote the sustainable management of natural and physical resources", I am concerned that there is a lack of recognition of the

potential impacts that the pCARP provisions may have on Fonterra's existing (and potential future) manufacturing sites within the section 32 evaluation. This has a direct correlation as to whether the notified objectives (and supporting policies and rules) are the most appropriate way to achieve the purpose of the RMA.

- 59 While dairy processing plants in rural areas are identified within the section 32 report as being 'appropriate', there is a lack of justification for costs arising from the 'management' that is deemed necessary outside of polluted airsheds, particularly where there is nil or only a negligible impact on ambient air quality. I also note that while the section 32 report includes numerous references to the requirement for the pCARP to give effect to the RPS, the only apparent discussion of issues raised in the RPS is in respect to reverse sensitivity, not in terms of the distinction made between ambient and localised air quality. Furthermore, the pCARP provisions fail to give effect to the RPS reverse sensitivity provisions in any event.
- 60 Based on the evidence of Fonterra's air quality experts, I do not consider that the potential compliance or opportunity costs to Fonterra required by the pCARP are balanced (or outweighed) by the benefits to air quality across the Canterbury region. I therefore consider that the notified pCARP will not achieve the sustainable management of natural and physical resources.

Dated: 18 September 2015



Justine Mary Ashley

APPENDIX 1:
CANTERBURY REGIONAL POLICY STATEMENT
CHAPTER 14: AIR QUALITY

CHAPTER 14

AIR QUALITY



Introduction

Most of the Canterbury region generally has good air quality most of the time. Safeguarding the life-supporting capacity and/or mauri of air is important for promoting the sustainable use of this natural resource.

Many activities that contribute to Canterbury's social and economic well-being, can also be sources of air pollution that can adversely affect the environment, and the health and well-being of people. Sources of air pollution such as home heating, industries, rural land management practices and the use of motor vehicles can result in significant air quality issues if standards of air quality are breached. This can result in significant public health problems and nuisance effects such as those associated with changes in visibility, odour, dust, smoke and agrichemical spray-drift.

The two principal regional air quality considerations in Canterbury are:

- (1) low or reduced ambient air quality, principally associated with discharges to air from combustion processes associated with home heating and industry.*
- (2) localised effects on air quality within the vicinity of a discharge to air, including odour and dust nuisance, particularly from industrial and trade processes, outdoor burning, small- and large-scale fuel burning devices, transport, rural activities and waste management processes.*

Air is significant to tāngata whenua because of the relationship of air to other resources such as water and flora and fauna, and its life-supporting capacity. To tāngata whenua air is a taonga. It is important that the physical, amenity, aesthetic and life-supporting qualities of the taonga are maintained.

The global air quality issues associated with the reduction in the ozone layer and human contributions to climate change are also important. These issues are addressed by central government including through the Ozone Layer Protection Act 1996 and its climate change strategies and policies. The Canterbury Regional Council is required to focus on the consequences of climate change, not the discharge into air of greenhouse gases.

ISSUE 14.1.1 — HEALTH AND NUISANCE EFFECTS OF LOW AMBIENT AIR QUALITY

Existing and potential health and nuisance effects of low ambient air quality in the urban and settled areas of Canterbury, particularly PM₁₀ ambient air quality in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate.

Explanation

Ambient air quality is the quality of the surrounding air, outside of buildings. It is measured as an average level over a specified period, or periods, within an identified geographic area.

Ambient air pollution comes from multiple sources. The contaminant that is the primary target of statutory planning controls in Canterbury is PM₁₀ - tiny particles that are so small (10 micrometres or about one-fifth the diameter of a human hair) they are suspended in the air. There is evidence that the much smaller PM_{2.5} particles also need to be managed as they can penetrate further into the lungs. Other contaminants that can affect ambient air quality include carbon monoxide, sulphur dioxide, nitrogen oxides, benzene, benzo(a)pyrene and polycyclic aromatic hydrocarbons (PAHs).

A number of towns in Canterbury have serious wintertime ambient air quality problems. The principal source of PM₁₀ ambient air pollution is from the combustion of solid fuel such as wood and coal for home heating. Emissions from industrial and commercial sources also contribute to the concentrations of PM₁₀. Although motor vehicles also emit PM₁₀, in Canterbury the existing contribution from this source is generally small. Emissions from industrial, commercial and motor vehicle sources will become proportionally more significant as emissions from home heating sources reduce, although motor vehicle contributions will likely remain relatively small.

ISSUE 14.1.2 – LOCALISED ADVERSE EFFECTS OF DISCHARGES TO AIR

Localised health and nuisance effects on social, cultural and amenity values, and adverse effects on natural and physical resources, caused by discharges of contaminants into air, including:

- (1) The contaminants from combustion processes, in particular generated from:
 - (a) domestic (small scale) fuel burning devices
 - (b) industrial (large scale) fuel burning devices
 - (c) motor vehicles
 - (d) outdoor burning.
- (2) Odours generated from waste treatment and disposal, agricultural activities and industrial or trade processes and premises.
- (3) Dust from abrasive blasting, quarrying, unsealed yards, construction, agricultural activities, land disturbance, and bulk material storage, handling and processing.
- (4) Chemical spray drifting beyond targeted areas or species.
- (5) The discharge of any other contaminants from industrial or trade processes and industrial or trade premises.



Explanation

Many air quality management issues relate to localised adverse effects of discharges, rather than effects on ambient air quality. Localised adverse effects are those which occur in open air within the vicinity of a discharge where the contaminated air has not reasonably mixed with ambient air and/or there is a specific adverse effect attributable to that discharge. A localised adverse effect from a discharge to air is readily identifiable as an effect relating to activities and processes which discharge smoke, odour, dust, agricultural sprays and other contaminants. If not appropriately managed, the products of localised combustion and/or contaminants being discharged to the air can result in localised adverse effects on human health and well-being and result in significant nuisance effects on people's enjoyment of their living and working environment. However, in some areas such as rural areas, amenity value can be expected to be different from urban areas as a result of standard farming practices and are a recognised component of the rural environment.

Activities which discharge to air, and the resulting health and safety considerations within workplaces, are often managed by other industry focused legislation, regulations and standards. These include controls on hazardous substances and new organisms, relating to occupational safety and health, and New Zealand standards like those pertaining to agricultural spraying. These industry related controls often assist in managing discharges to air. However, they do not directly control the adverse environmental effects of discharges, which are the focus of this issue.



Objective 14.2.1 — Maintain or improve ambient air quality

Maintain or improve ambient air quality so that it is not a danger to people's health and safety, and reduce the nuisance effects of low ambient air quality.

The following policies implement this objective:

Policy 14.3.1, Policy 14.3.2

Principal reasons and explanation

Our air must be safe to breathe. For Ngāi Tahu, air is a taonga. People and communities should not have to live with the unhealthy and unpleasant effects of low ambient air quality. Canterbury generally has good ambient air quality, with the exception of a number of urban areas that have low PM₁₀ ambient air quality. PM₁₀ is so small that it travels deep into people's lungs, causing respiratory difficulties and resulting in health problems.

Central government has the role of setting standards for vehicle emissions, however local and regional authorities can create patterns of urban form that reduce reliance on motor vehicle use, reduce trip distances and encourage greater modal choice, such as walking, cycling and public transport. These can indirectly contribute to reductions in motor vehicle emissions.

Objective 14.2.2 — localised adverse effects of discharges on air quality

Enable the discharges of contaminants into air provided there are no significant localised adverse effects on social, cultural and amenity values, flora and fauna, and other natural and physical resources.

The following policies implement this objective:

Policy 14.3.3, Policy 14.3.4, Policy 14.3.5

Principal reasons and explanation

Under Section 15 of the Resource Management Act 1991 (RMA) there is no automatic right to discharge contaminants to air from an industrial or trade premise, and such activities have to be enabled either via an air discharge permit or via a rule in a regional plan or other regulation. Restrictions also apply in relation to contravening national environmental standards and rules in regional plans. Many industries that are important to the social and economic wellbeing of the community involve discharges to air. While the ability to discharge needs to be provided for, it is important that these discharges do not cause significant adverse effects on people and other values.

Most air management issues relate to the localised effects of discharges on the environment and generally involve smoke, odour, dust, agricultural spray and other contaminants. These can cause significant, health, nuisance and amenity effects. Where there are localised adverse effects from discharges, an appropriate response to avoid, remedy or mitigate those effects needs to be found.

The objective also recognises that good air quality is of significance to tāngata whenua. To tāngata whenua, air is a taonga. Certain types of discharges such as those from crematoria and hospitals can be culturally offensive, especially if such discharges occur in close proximity to cultural facilities or sites of significance.

Policy 14.3.1 – Maintain and improve ambient air quality

In relation to ambient air quality:

- (1) To set standards to maintain ambient air quality in Canterbury based on concentrations of contaminants that cause adverse health effects and nuisance effects.
- (2) Where existing ambient air quality is higher than required by the standards set, to only allow the discharge of contaminants into air where the adverse effects of the discharge on ambient air quality are minor.
- (3) To give priority to ensuring that PM₁₀ ambient air quality improvements are achieved in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate.

This policy implements the following objective:

Objective 14.2.1

Methods

The Canterbury Regional Council:

Will:

- (1) Set out objectives, policies and methods in regional plans to control the discharge to air of contaminants, including setting standards that at least achieve the requirements of any national environmental standards or resource management regulations promulgated by central government.
- (2) In consultation with industry, Ngāi Tahu as tāngata whenua, territorial authorities and other interested parties, develop a framework for managing industry offsets in terms of the National Environmental Standard for Air Quality, and if appropriate, initiate a plan change.

Should:

- (3) Engage with territorial authorities, Ngāi Tahu as tāngata whenua, interested parties and the community about how to maintain or improve ambient air quality.
- (4) As appropriate, provide financial assistance and incentives in areas with low ambient air quality in order to meet the ambient air quality standards.

Principal reasons and explanation

Ambient air quality can affect entire communities. Maintaining or improving ambient air quality is therefore important to achieving the health and well-being of communities. Ambient air quality standards need to recognise this. Maintaining ambient air quality will require the control of discharges to air as well as implementation of other measures.

Ambient air quality standards are currently specified within the Resource Management (National Environmental Standards for Air Quality) Regulations 2004. The operative Canterbury Natural Resources Regional Plan also specifies standards in relation to the control of air discharges, and activities that result in air discharges.

Canterbury generally meets all of these specified ambient air quality standards with the exception of a number of urban areas that do not currently meet the PM₁₀ ambient air quality standard. Where communities currently enjoy high ambient air quality, generally this should be protected by ensuring air is not used as a significant pollution sink.

The urban areas that are known to not currently meet the ambient air quality standards are Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate. Significant progress has been made to resolve the ambient air quality issue at these locations. Comprehensive PM₁₀ reduction strategies are being implemented for Rangiora, Kaiapoi, Christchurch and Ashburton. These strategies include regional plan regulation of discharges to air and, where it is still appropriate, incentives for households to change the way homes are heated. An incentive package is also being implemented in Timaru. It is predicted that the PM₁₀ ambient air quality issues in Geraldine and Waimate will be resolved by households progressively upgrading their home heating device.

Policy 14.3.2 — Emissions from the use of solid and liquid based fuels

To promote measures, including the transfer to cleaner technology and fuel sources, that reduce the adverse effect on ambient air quality from the use of solid and liquid based fuels.

This policy implements the following objective

Objective 14.2.1

Methods

The Canterbury Regional Council:

Will:

- (1) Set out objectives, policies and methods in regional plans, or under any deemed regional plan under Section 369(11) of the RMA, to
 - (a) control the discharge to air of contaminants from home heating resulting from the use of small-scale fuel burning devices, particularly those devices which burn solid fuel.
 - (b) control the discharge to air of contaminants from commercial, industrial and institutional activities, including the use of large-scale fuel burning devices.
 - (c) encourage and enable the transfer to cleaner energy sources

Should:

- (2) Engage with industry, transport authorities, territorial authorities, Ngāi Tahu as tāngata whenua, interested parties and the community to reduce emissions from the use of solid and liquid based fuels, including where appropriate to replace the use of carbon-based fuel with non-carbon based fuels, and improve performance and efficiency of energy use.
- (3) Through the Canterbury Regional Land Transport Strategy:
 - (a) promote and implement strategies to reduce motor vehicle transport demand, especially with respect to single occupant private motor vehicle trips and motor vehicles powered by unsustainable fuels.

- (b) promote and favour transport infrastructure projects which significantly reduce trip generation and lengths.
- (c) support and implement programmes that make passenger transport services more effective and attractive.
- (d) support and implement programmes that encourage the use of walking, cycling, and other alternative forms of transport.
- (e) support and implement programmes that reduce emissions from transport services required for freight movement.

Territorial authorities:

Will:

- (4) Set out objectives and policies, and may include methods in district plans to ensure that the design of new subdivisions, built developments and urban areas:
 - (a) allow for and promote walking, cycling, and where appropriate passenger transport in urban design.
 - (b) encourage patterns and forms of urban settlement and infrastructure which decrease production of motor vehicle emissions.

Principal reasons and explanation

Policy 14.3.2 addresses health effects and nuisance effects resulting from pollutants in ambient air.

The sources of ambient air pollution in Canterbury are from the combustion of solid and liquid fuel such as wood, coal and oil for domestic heating, commercial, industrial and institutional purposes, and to power motor vehicles.

Discharges from burning wood and coal for domestic heating include suspended particulate (including smoke) and sulphur and nitrogen oxides. Similar contaminants are discharged when wood and coal is burnt as part of commercial, industrial and institutional processes. There is further potential in the region for the use of cleaner renewable fuels which utilise wood pellets, firewood, fire logs and wood chips in residential, commercial and industrial wood burners. Efficient technology and burning of these renewable fuel sources can assist with reducing fine particulate matter when replacing older combustion technology. The use of gas and electricity has the greatest benefit in improving ambient air quality as they cause little or no emissions of PM₁₀.

Emissions from motor vehicles include suspended particulate, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrocarbons, sulphur dioxide and products of incomplete combustion.

Emissions from the combustion of solid and liquid based fuels are of concern because levels of suspended particulate exceed acceptable standards in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate.

The purpose of Policy 14.3.2 is to safeguard and improve ambient air quality through a reduction in the total quantity of emissions.

In Rangiora, Kaiapoi, Christchurch, Ashburton and Timaru significant programmes are in place to encourage people to use cleaner forms of home heating. To date, these programmes have resulted in thousands of households changing the way homes are heated, successfully reducing the emission of contaminants which adversely affect ambient air quality.

Policy 14.3.3 — Avoid, remedy or mitigate localised adverse effects on air quality

To set standards, conditions and terms for discharges of contaminants into the air to avoid, remedy or mitigate localised adverse effects on air quality.

This policy implements the following objective

Objective 14.2.2

Methods

The Canterbury Regional Council:

Will:

- (1) Set out objectives and policies, and may include methods in regional plans to control the discharge to air of contaminants.

Should:

- (2) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining localised adverse effects on cultural values.

Principal reasons and explanation

Localised adverse effects are those effects on air quality that occur in the vicinity of the contaminant discharge.

A large number of discharges occur as a result of everyday commercial activities in Canterbury. Many discharges may be acceptable if procedures or methods are followed which avoid localised adverse effects on people, flora and fauna, cultural values and natural and physical resources.

Policy 14.3.4 — Agrichemical spray drift

To avoid adverse effects of agrichemical sprays drifting beyond property boundaries or onto non-targeted properties and to avoid contamination of water.

This policy implements the following objective

Objective 14.2.2

Methods

The Canterbury Regional Council:

Will:

- (1) Set out objectives and policies, and may include methods in regional plans to control the discharge to air of contaminants.

Should:

- (2) Engage with territorial authorities, Ngāi Tahu as tāngata whenua, industry, interested parties and the community to identify and promote practices that help avoid agrichemical spray-drift occurring.
- (3) Engage with community and industry groups to identify and promote best practicable options regarding the spray application of agrichemicals.
- (4) Support industry led-guidelines, codes of practices and environmental accords where these would lead to the achievement of the objectives of the Regional Policy Statement.

Principal reasons and explanation

The Canterbury region includes many rural areas used for horticulture, pastoral farming, cropping and forestry. The spray application of agrichemicals to control plant and insect pests and manage fungal disease is a recognised, common and accepted practice provided the agrichemicals are properly applied. Where this does not occur, spray drift can cause odour nuisance, health effects, or damage to non-target flora and fauna.

Unintended effects of chemical sprays which drift across property boundaries or into water may be avoided by proper operating practices by users of agrichemical sprays. Unintended chemical sprays entering water is of particular concern to Ngāi Tahu as tāngata whenua.

Policy 14.3.5 – Relationship between discharges to air and sensitive land-uses

In relation to the proximity of discharges to air and sensitive land-uses:

- (1) **To avoid encroachment of new development on existing activities discharging to air where the new development is sensitive to those discharges, unless any reverse sensitivity effects of the new development can be avoided or mitigated.**
- (2) **Existing activities that require resource consents to discharge contaminants into air, particularly where reverse sensitivity is an issue, are to adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment.**
- (3) **New activities which require resource consents to discharge contaminants into air are to locate away from sensitive land uses and receiving environments unless adverse effects of the discharge can be avoided or mitigated.**

This policy implements the following objective

Objective 14.2.2

Methods

The Canterbury Regional Council:

Will:

- (1) Set out objectives and policies, and may include methods in regional plans to control the discharge to air of contaminants.
- (2) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining culturally sensitive receiving environments for inclusion in regional plans.

Should:

ANTICIPATED ENVIRONMENTAL RESULTS

- (3) Engage with territorial authorities, interested parties and the community to manage the relationship between discharges to air and sensitive land-uses.
- (4) Where appropriate, under Section 128 of the RMA, serve notice on consent holders of its intention to review the conditions of consent to establish that the best practicable options are being adopted to avoid or mitigate any adverse effects on the environment.
- (5) Collect information identifying existing consented activities discharging contaminants to air that have adopted best practicable options and make this available to territorial authorities.

Territorial authorities:

Will:

- (6) Set out objectives and policies, and may include methods in district plans to ensure that:
 - (a) Activities discharging contaminants to air are appropriately located.
 - (b) Provision is made to protect established activities discharging contaminants to air from adverse reverse sensitivity effects resulting from encroachment by sensitive land-uses if the established activity has adopted the best practicable option to prevent or minimise any actual or likely adverse effects.

Principal reasons and explanation

The concept of reverse sensitivity describes the situation where an existing activity has deliberately located away from land uses that may be sensitive to the discharge, but is subsequently encroached on, resulting in pressure for that activity to cease or change the way it operates. Examples include residential areas encroaching on activities that produce odour, for example airports or certain industries.

Sensitive land uses, receiving environments or developments which are vulnerable to adverse effects from the discharge of contaminants into air include residential dwellings, sites or places of cultural significance, educational and cultural facilities, hospitals, shops, other similar public buildings, and vulnerable flora and fauna.

Many adverse effects can be avoided if new activities discharging contaminants are not located near existing sensitive land uses and receiving environments, or conversely, if sensitive activities (such as dwellings, health facilities and schools) are not placed near existing areas or activities where contaminants are likely to be discharged (such as industrial zones). However, it may be possible for adverse effects to be avoided or mitigated by other means.

Situations can, and have, arise where the receiving environment of existing discharges to air changes, resulting in it being more sensitive to the adverse effects of those discharges. The discharger should adopt the best practicable option to control the adverse effects of the discharge in order to reduce reverse sensitivity effects, thereby limiting the potential impact on the dischargers continued operation and ongoing viability.

The best practicable option to prevent or minimise adverse effects from the discharge, as defined in Section 2 of the RMA, is the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to:

- (1) The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects.
- (2) The financial implications and the effects on the environment, of that option compared with other options.
- (3) The current state of technical knowledge and the likelihood that the option can be successfully applied.

Odour, spray drift, dust or other emissions which adversely affect people who unwittingly expose themselves to risks of contamination need to be avoided, or mitigated. Air quality in a place of work that is affected by discharges from that workplace is covered by occupational health and safety legislation.



APPENDIX 2: UPDATED SET OF KEY PROVISIONS

2 Definitions

Insert new definition as follows:

Ambient air quality -

Means the quality of air outside of buildings or structures where people are likely to be exposed to the contaminants. It does not include indoor air, air in the workplace, contaminated air being discharged from a source, or air that is enclosed or sheltered in a way which makes it untypical of the air in the surrounding area. Ambient air quality does not include air quality that is substantially modified by the localised effects of specific/individual sources.

...

5 Objectives

- 5.1 Where air quality provides for people's health and wellbeing, it is maintained.
- 5.2 Where air quality does not provide for people's health and wellbeing, it is improved over time.
- 5.3 Air quality protects the mauri/life supporting capacity of the environment.
- 5.4 Discharges to air are managed to maintain the amenity values of the receiving environment.
- 5.5 Discharges to air do not adversely **a**ffect the relationship of Ngāi Tahu with their culture and traditions.
- 5.6 Developments and innovation in technology are enabled to provide solutions to air quality issues.
- 5.7 Nationally and regionally significant infrastructure is enabled and is resilient and positively contributes to economic, cultural and social wellbeing through its efficient and effective operation, on-going maintenance, repair, development and upgrading.
- 5.8 It is recognised that air quality expectations throughout the Region differ depending on location and the characteristics of the receiving environment.
- 5.9 **Discharges to air from new Activities** are spatially located so that they result in appropriate air quality outcomes being achieved both at present and in the future.

5.10 Manage localised air quality effects of individual discharges while recognising that individual discharges may have effects on ambient air quality.

6 Policies

Central Policies Applying to All Activities

- 6.1 Discharges of contaminants into air, either individually or in combination with other discharges, do not cause:
 - a Adverse effects on human health and wellbeing; or
 - b Significantly diminished visibility; or
 - c Corrosion or significant soiling of structures or property; or
 - d Adverse effects on the mauri/life supporting capacity of ecosystems, plants or animals.
- 6.2 Manage adverse effects on **ambient** air quality where **regional ambient monitoring results indicate** concentrations of contaminants are between 66% and 100% of the guideline values set out in the Ambient Air Quality Guidelines 2002 Update, so that **ambient** air quality does not exceed 100% of those guideline values.

- 6.3 Where **regional ambient monitoring results indicate** concentrations of contaminants exceed 100% of guideline values set out in the Ambient Air Quality Guidelines 2002 Update, action is taken to improve air quality.
- 6.4 Reduce overall concentrations of PM_{2.5} in clean air zones **(as measured at regional ambient monitoring sites)** so that by 2030 PM_{2.5} concentrations do not exceed 25µg/m³ (24 hour average), while providing for industrial growth.
- 6.5 ~~Offensive and objectionable effects are unacceptable and the frequency, intensity, duration, offensiveness and location of discharges into air must be identified and managed.~~
- Avoid discharges into air that are assessed as causing offensive or objectionable effects in accordance with Schedule 2.**
- 6.6 ~~Discharges of contaminants into air, and the effects of those discharges, occur in appropriate locations, taking into account the distribution of land use as provided for by the relevant district plan.~~
- Existing activities that discharge to air (including the re-consenting or expansion of those activities), are to adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment, so as to reduce the potential for reverse sensitivity effects.**
- 6.7 ~~Where, as a result of authorised land use change, land use activities within the neighbourhood of a discharge into air are significantly adversely affected by that discharge, it is anticipated that within a defined time frame the activity giving rise to the discharge will reduce effects or relocate.~~
- New activities that discharge to air are to locate away from sensitive land uses and receiving environments unless adverse effects of the discharge can be avoided or mitigated.**
- 6.8 ~~Where activities that discharge into air locate appropriately to avoid the potential for reverse sensitivity effects, then longer consent duration may be available to provide ongoing operational certainty.~~
- Provide longer consent durations for the discharge of contaminants into air where the sensitivity of the receiving environment, the level of investment made in the activity and the ability to minimise adverse effects on air quality achieves sustainable management.**
- 6.9 Recognise the value of air quality as a taonga to Tangata Whenua and work with Ngāi Tahu to manage adverse effects of discharges into air on wāhi tapu, wāhi taonga, and sites of significance to Ngāi Tahu.
- 6.10 All activities that discharge into air apply, ~~at least,~~ the best practicable option so that cumulative effects are minimised.
- 6.11 Recognise the contribution of nationally and regionally significant infrastructure **and large-scale industrial and trade activities** to the regional and national economy and provide for the operation and development of that infrastructure.
- 6.12 Recognise that there is likely to be improvement in the management of the discharges of contaminants into air **to manage adverse effects** over the life of resource consents and consider this for new and replacement consents.
- 6.13 Provide for discharges of contaminants into air necessary for the protection of production species and other biodiversity from biosecurity risks.
- ~~6.14 Adopt the precautionary approach when assessing the effects of discharges where the effects are not predictable because of uncertainty or absence of information.~~

Outdoor burning

...

Industrial and large scale discharges to air

- 6.19 Enable discharges of contaminants into air associated with large scale, industrial and trade activities and nationally and regionally significant infrastructure, in locations where the discharge is compatible with the surrounding land use pattern and while ensuring that adverse effects on air quality are minimised.
- 6.20 Apply the best practicable option to all large scale and industrial activities discharging contaminants into air so that **localised effects on degradation of ambient air quality is minimised does not cause significant adverse effects.**
- 6.21 ~~**Avoid the discharge of contaminants into air from any large scale burning device or industry or trade premise, where the discharge will result in the exceedance, or exacerbation of an existing exceedance, of the guideline values set out in the Ambient Air Quality Guidelines 2002 Update.**~~
- Apply the best practicable option to all large scale and industrial activities discharging contaminants into air to avoid or mitigate cumulative airshed wide air quality effects, where this causes an exceedance, or exacerbation of an existing exceedance of the Ministry for Environment Air Quality Guidelines 2002, or National Environmental Standards for Air Quality 2004.**
- ~~**6.22 Within Clean Air Zones, significant increases of PM₁₀ concentrations from discharges of contaminants are to be offset in accordance with the Resource Management (National Environmental Standards for Air Quality) Regulations 2004.**~~
- 6.23 Provide for the strategic management of electricity supply by electricity network suppliers, where network generation capacity is significantly reduced due to meteorological conditions, while ensuring the use of distributed diesel generation in this circumstance is limited to the period of the supply crisis and preference is given to the use of generators outside of Clean Air Zones.
- 6.24 The discharge of contaminants into air from waste management processes, other than combustion of waste, is acceptable where the waste management activity is appropriately located and where offensive or objectionable effects or adverse effects on human health are avoided.

...

7 Rules

...

Industrial, trade and large scale discharges to air

Rules 7.14 - 7.59 in this Plan apply everywhere in the Region, including within and outside of industrial and trade premises, unless a rule specifies otherwise.

~~7.14 Within a Clean Air Zone, the discharge of PM₁₀ into air from a large scale burning device, where concentrations of PM₁₀ will likely equal or exceed 2.5µg/m³ at ground level at or beyond the boundary of the property of origin, is a restricted discretionary activity provided the following condition is met:~~

- ~~1. 100% of the discharge will be off set within the gazetted airshed in accordance with Regulation 17 of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004.~~

~~The exercise of discretion is restricted to the following matters:~~

- ~~1. The proposal to off set 100% of the emissions within the gazetted airshed to ensure that there is no net increase of PM₁₀ emissions, and~~
- ~~2. The matters set out in rule 7.2.~~

7.15 Within a Clean Air Zone the discharge into air of PM₁₀ **of a concentration at a rate** exceeding 250mg/m³ air, when tested in accordance with schedule 6 and adjusted to 0° Celsius, dry gas basis, 101.3 kilopascals, and 8% oxygen or 12% carbon dioxide is a non-complying activity.

7.16 Outside a Clean Air Zone, the discharge into air of PM₁₀ **of a concentration at a rate** exceeding 250mg/m³ air, when tested in accordance with schedule 6 and adjusted to 0° Celsius, dry gas basis, 101.3 kilopascals, and 8% oxygen or 12% carbon dioxide is a discretionary activity.

~~7.17 The discharge of contaminants into air from a large scale solid fuel burning device or from an industrial or trade premise established prior to 28 February 2015, outside a Clean Air Zone, that will likely result in guideline values, set out in the Ambient Air Quality Guidelines 2002 Update, being exceeded is a non-complying activity.~~

~~7.18 The discharge of contaminants into air from a large scale fuel burning device or from an industrial or trade premise established either inside a Clean Air Zone, or outside a Clean Air Zone after 28 February 2015, that will likely result in guideline values, set out in the Ambient Air Quality Guidelines 2002 Update, being exceeded is a prohibited activity.~~

Schedule 2: Assessment of offensive and objectionable effects and odour assessment tools

Criteria for assessing offensive or objectionable odour

The Canterbury Regional Council, for the purposes of assessing compliance with permitted activity conditions, resource consent conditions, or sections 17(3)(a), 314(1)(a)(ii) or 322(1)(a)(ii) of the RMA, will have regard to the following matters when determining whether or not a discharge of odour from an activity is likely to, or has caused "offensive or objectionable" effects beyond the property boundary:

1. the frequency of odour events; and
2. the intensity of events, as indicated by the degree of strength, ~~but taking account of character or quality~~; and
3. the duration of each odour event; and
4. the offensiveness of the discharge, having regard to the character of the odour; including reference to the "hedonic tone"; and
5. the location of the odour, having regard to the sensitivity of the receiving environment, ~~including taking into account the relevant zone(s) and provisions in the relevant District Plan.~~

~~Assessment will be based on the combined impact of items 1 to 5 above, determined from some or all of the following applicable information which outlines a range of assessment tools, situations where they are best applied and specific details regarding their implementation.~~

In the event that an assessment determines that a discharge has caused an "offensive or objectionable" effect beyond the property boundary, a copy of the written assessment containing that determination will be provided to the emitter if this would result in the discharge no longer being permitted by the Plan.

The New Zealand Ministry for the Environment report Good Practice Guide for Assessing & Managing Odour in New Zealand, (June 2003, ISBN:0-478-24090-2) suggests a national approach to assessing and managing offensive odours and contains recommendations, based on expert advice, of good practice for the assessment and management of odour. Table 4.1 of the Good Practice Guide provides specific procedural advice to council officers undertaking odour complaint investigations.

List of tools

The odour assessment tools that may be used to determine whether an existing discharge of odour is causing objectionable or offensive effects beyond the property boundary for the purposes of compliance and those available for assessment of consent applications (for new or existing odour discharges) may differ.

Assessment tools focused on the effects of existing discharges (or on existing background odour effects prior to introduction of a new discharge) may be used for either compliance or consenting purposes and include the following:

1. complaint records; and
2. community consultation; and
3. odour annoyance surveys, ~~and other surveying tools such as field investigations; and~~
4. odour diary programmes; and

5. field investigations; and

6. analysis of site specific wind and topographical features; and

Other odour assessment tools are focussed on the potential for odour effects to occur in future and are therefore relevant to the assessment of odour for consenting purposes (for either new or existing discharges) and include:

75. review of process controls & design, including consideration of the best practicable option; and
86. review of site management & contingency plans; and

97. odour emissions measurement and dispersion modelling; and

~~**8. analysis of site specific wind and topographical features; and**~~

109. experience and information from other sites where the discharge is of a similar nature and scale.

The applicability of each of these assessment tools will depend on the characteristics of the discharge and the nature of the receiving environment. The Good Practice Guide for Assessing & Managing Odour in New Zealand (2003) contains detailed guidance on the selection of appropriate tools.

Tool selection and assessment criteria

The ~~appropriateness of various odour~~ assessment tools listed in the preceding section and recommended evaluation criteria are ~~outlined~~discussed in Tables 1 and 2 below. Existing and new activities are discussed separately. When assessing potential odour effects that may result from the granting of consent for a discharge from new activities it is important that odours released from both normal (controlled) and abnormal (un-controlled) emission scenarios (and the potential or likelihood for the latter emission scenario to occur) are considered.

...

Implementation notes

This section provides guidance on the utilisation of odour assessment tools available for assessments conducted for compliance investigations and for the assessment of consent applications for conducting site investigations, odour surveys and odour modelling assessments.

List of Tools Tools available for assessment of existing odour discharges for compliance investigations and assessment of consent applications

[Include text of Schedule 6 in the *List of Tools* section for the following topics:

- 1 Site Investigation in response to complaints**
- 2 Odour diary programmes**
- 3 Odour annoyance surveys**

Tools available for assessment of consent applications for new or existing odour discharges

[Include text of Schedule 6 in the *List of Tools* section for the following topics:

- 4 Odour emissions measurement & dispersion modelling**
- 5 Best practicable option (BPO)]**

Schedule 6: Testing for particulate matter in exhaust gases

Combustion sources having a net energy output of less than or equal to 2MW within a Clean Air Zone or 5MW outside a Clean Air Zone

~~As a minimum requirement~~ **For these smaller combustion sources it is recommended that** the particulate sampling ~~must comply be undertaken in accordance with~~ either ISO9096:2003(E), ASTM D3685M-98, AS 4323.2-1995, USEPA Method 5, USEPA Method 17 or a current equivalent method that complies with the fundamental sampling requirements of ISO9096:2003(E). Where this methodology is used alone, it will be assumed for compliance purposes that all particulate matter is PM₁₀ **unless sufficient supporting information is provided to demonstrate this is not the case.** In circumstances where additional size specific sampling is necessary to demonstrate compliance with PM₁₀ emission limits in the Plan, **it is recommended that** the particulate sampling ~~must comply be~~ **undertaken in accordance** with USEPA Method 201 or USEPA Method 201A or a current equivalent method that complies with the fundamental sampling requirements of that method.

Combustion sources having a net energy output of more than 2MW within a Clean Air Zone or 5MW outside a Clean Air Zone

For these larger combustion sources **it is recommended that** both filterable and condensable particulate matter are ~~to be~~ measured. ~~As a minimum requirement~~ **It is recommended that** the filterable particulate sampling ~~must comply be undertaken in accordance~~ with either ISO9096:2003(E), ASTM D3685M-98, AS 4323.2-1995, USEPA Method 5, USEPA Method 17 or a current equivalent method that complies with the fundamental sampling requirements of ISO9096:2003(E). Where this methodology is used alone it will be assumed for compliance purposes that all filterable particulate matter discharged is PM₁₀ **unless sufficient supporting information is provided to demonstrate this is not the case.** In circumstances where additional sizes specific sampling is necessary to demonstrate compliance with PM₁₀ emission limits in the Plan, **it is recommended that** the particulate sampling ~~must comply be undertaken in accordance~~ with USEPA Method 201 or USEPA Method 201A or a current equivalent method that complies with the fundamental sampling requirements of that method. **It is recommended that** ~~The~~ condensable particulate sampling **is** **undertaken in accordance** with USEPA Method 202 or a current equivalent method that complies with the fundamental sampling requirements of that method. The test results should specify total particulate matter as the sum of filterable and condensable components. ...

[Text to be inserted at the end of Schedule 6]

Where use of the testing methods specified in this Schedule are not appropriate for discharge specific circumstances, the testing method is to be agreed with the CRC. For example, it is noted that for sampling of stacks that are saturated with water vapour or contain entrained water droplets may not be practicably undertaken using USEPA Method 201 or USEPA Method 201A.