

NELSON CITY COUNCIL

Nelson Air Quality Plan

Proposed Plan Change A3

s42A Report

Report Date

21 April 2016

Hearing Date

3 May 2016



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Appendices

For a list of appendices, refer Section 1 of the report below

Interpretation

This report utilises a number of abbreviations for brevity's sake as set out in the glossary below:

Abbreviation	Means...
"the Act"	Resource Management Act 1991
"the AQP"	Operative Nelson Air Quality Plan
"BCP"	Behaviour Change Programme
"the Council"	Nelson City Council
"ECan"	Environment Canterbury or the Canterbury Regional Council
"MfE"	Ministry for the Environment
"NESAQ" or "NES"	Resource Management (National Environmental Standards for Air Quality) Regulations 2004
"PCA3"	Proposed Change A3 to the Nelson Air Quality Plan
"the Plan"	Operative Nelson Air Quality Plan 2008
"the Plan Change"	Proposed Change A3 to the Nelson Air Quality Plan
"RMA"	Resource Management Act 1991
"RPS"	Nelson Regional Policy Statement 1997
"s32"	Section 32 of the Resource Management Act 1991
"ULEB"	Small scale ultra-low emission burning appliances

1.0 INTRODUCTION

Report Author

- 1.1 My name is Jason Christopher Jones. I am a Consultant Planner with Resource Management Group Ltd (also known as RMG), an urban and environmental planning consultancy with offices in Christchurch and Wellington.
- 1.2 I hold a Bachelor's Degree in Science from the University of Georgia's School of Geology (USA), and a Post-Graduate Diploma in Science from the University of Canterbury's School of Geography.
- 1.3 I am an Associate Member of the New Zealand Planning Institute, and have over ten years' experience in resource management planning in New Zealand, the majority of which has been in the employment of RMG. Prior to this, I worked for three years in the City Planning Unit at Wellington City Council. My experience there included the development of a number of District Plan Changes and planning policy projects.
- 1.4 I was engaged by the Council to prepare PCA3 and the associated s32 Report in late 2015, and have since been asked by the Council to prepare this report.
- 1.5 Along with contextual information and other matters of fact, this report includes my personal views and recommendations to accept or reject points made in submissions on PCA3. These views and recommendations are my own, except where I indicate otherwise.
- 1.6 Though not a requirement of Council plan change hearings, I have read and agree to abide by the Code of Conduct for Expert Witnesses, and have prepared this report in accordance with it. The report content is within my area of expertise except where stated otherwise. I have not omitted to consider the material facts known to me that might alter or detract from the opinion expressed in this report.
- 1.7 In some instances, I have specifically relied on the evidence, expertise and/or views of others, including the co-authors of this report, Mr

Popenhagen, Dr Wilton, Ms Barton and Mr McIlrath¹ and on advice provided by the Council's legal advisors². I also draw upon the evidentiary basis for the plan change established in the s32 report prepared in conjunction with the plan change, including the various references noted at the conclusion of that report³.

Purpose of this Report

- 1.8 This report is provided pursuant to s42A(1) of the RMA. The primary purpose of the report is to assist the Hearing Panel in evaluating and deciding on submissions made on PCA3.
- 1.9 The report is also provided to assist submitters in understanding how their submission relates to the relevant provisions proposed in the plan change and to any similar (or contrasting) views expressed by other parties. For the benefit of submitters, I note that this report is not a final decision on PCA3. That decision ultimately resides with the Hearings Panel, under delegation from the Council.

Report Structure

- 1.10 The report has been structured as follows:
- a. **Section 2** provides a factual summary of the Plan Change provisions and process;
 - b. **Section 3** outlines the statutory considerations of relevance for the proposal; and
 - c. **Section 4** includes an evaluation of the key issues raised in submissions.
- 1.11 Attached to the report are the following appendices:
- a. **Appendix 1** contains a summary table of the submissions received on the plan change, including recommendations on each submission;

¹ See Appendices 3-5

² See Appendix 7

³ Plan Change A3, s32 Report (16 January 2016), p. 53

- b. **Appendix 2** includes the plan change provisions with proposed amendments arising since notification;
- c. **Appendix 3** contains a report from the Council's Eco Building Design Adviser, Mr Richard Popenhagen, addressing submissions relating to space heating and behaviour change;
- d. **Appendix 4** contains a report from the Council's independent Air Quality Scientist, Dr Emily Wilton, addressing submissions relating to air quality and associated implications of regulatory methods on home heating;
- e. **Appendix 5** contains a report from the Council's independent Economic Expert, Mr Lawrence McIlrath, relating to the economic implications of the plan change and submissions received;
- f. **Appendix 6** includes a memorandum Council's Group Manager Strategy and Environment providing information about Council's Eco Building Design Advisor and other Council initiatives, advocacy and financial support to assist in making Nelson's housing stock warmer and healthier; and
- g. **Appendix 7** includes a memorandum from Council's legal advisors, Buddle Findlay, in relation to various legal matters.

2.0 PLAN CHANGE SUMMARY

Matters addressed in this section

- 2.1. This section of the report presents a factual overview of the process leading to the notification of PCA3, and of the submissions received on the plan change. It also addresses a procedural matter relating to the acceptance of submissions received after the closing period specified in the public notice.

Reference to s32 Report

- 2.2. The 'story' of the plan change's evolution leading up to notification has largely been recorded in Parts 1, 2 and 4 of the s32 report. That history is not reproduced here to the same level of detail, though some matters are repeated for context and/or complemented below. Accordingly, the relevant portions of the s32 report should be read in conjunction with this part of the s42A report.

Air pollution in Nelson

- 2.3. Air pollution has long been a significant resource management issue for Nelson. The City's air quality has historically been amongst the poorest in New Zealand, but substantial improvements have been made over the last decade.
- 2.4. The main contributor to Nelson's air pollution is fine grained particles discharged by domestic heating and other sources. These particles are commonly referred to in the AQP, the NESAQ and the various PCA3 supporting documents in two size categories, being PM_{2.5} and PM₁₀. The 'PM' prefix is an abbreviation for 'particulate matter' and the numerical subscripts describe the maximum size of particulates at 2.5 and 10 microns (respectively).
- 2.5. Over recent decades, PM₁₀ has been the more readily used size standard for air quality considerations, as is the case for the AQP. Emerging science and health policy suggests that a shift to PM_{2.5} may become more

common, but that is not expressly considered by PCA3 owing to the relatively narrow scope of the proposal and the interrelationship between the AQP and NESAQ, which also uses the PM₁₀ standard.

- 2.6. Data from Council's 2014 emission inventory indicate that domestic heating is responsible for approximately 84% of anthropogenic⁴ ambient PM₁₀ in Nelson, with the remainder generated by motor vehicles and industry.
- 2.7. Notwithstanding this, today's domestic emissions are a fraction of the levels observed in 2001. Council's latest monitoring data indicates that domestic reductions of 58-70% have been achieved, depending on location within the urban area.
- 2.8. The number of NES exceedances has also decreased in line with observed improvements in ambient PM₁₀ concentrations. For example, a total of 81 exceedances of the NES 50µg/m³ (24-hour average) level were recorded in Airshed A in 2001, with maximum observed concentrations being around 165µg/m³. In contrast, 1 exceedance of the 24-hour average was observed last year, with maximum concentrations peaking at 56µg/m³.
- 2.9. While some of the improvements observed over this period are related to differences in annual meteorological conditions and non-regulatory measures adopted by Council, much of the credit can be attributed to the policy approach and methods in the AQP. These provisions are briefly described below.

Operative Air Quality Plan overview

- 2.10. The AQP was made operative in November of 2008. It has been amended by two plan changes, both of which were made operative in 2012.

⁴ Ambient PM₁₀ also is borne out of natural sources, including seaspray and dust.

2.11. The AQP contains one objective, being:

A5-1 Air quality

The maintenance, and the enhancement where it is degraded, of Nelson's ambient air quality, and the avoidance, mitigation or remediation of any adverse effects on the environment of localised discharges into air.

2.12. The objective is broad in scope. It does not, in of itself, establish a different management approach for any specific pollutant or geographic area in the City; however, it enables such distinctions to be made at the policy and rule level.

2.13. Of particular relevance, the Plan's policy approach to the management of particulate matter includes the following:

- a. Policy A5-1.3: Ambient air quality targets;
- b. Policy A5-1.4: Fine particle pollution; and
- c. Policy A5-1.5: Solid fuel fire numbers (small-scale solid fuel appliances and open fires).

2.14. **Policy A5-1.3** focuses on ambient air quality across the entire City (generally), and links the AQP policy framework with MfE guidelines published in 2002. It targets a long-term reduction of ambient air pollution to an 'Acceptable' level (defined as 33%-66% of the relevant guideline for a particular contaminant⁵), recognising also that some areas have poorer air quality than others within the City. The Policy also emphasises the need to urgently improve air quality in areas where it is particularly degraded.

2.15. Related to this latter point, the AQP partitions the urban area into four airsheds for the purposes of air quality management. The four airsheds are shown on p.5 of the s32 report and are described as:

- a. Airshed A – Nelson South
- b. Airshed B1 – Tahunanui

⁵ The NES threshold for ambient PM₁₀ is particularly relevant to this proposal. The guideline values are 50 µg/m³ averaged over a given 24-hour period, and 20 µg/m³ annual average.

- c. Airshed B2 – Stoke
 - d. Airshed C – Rest of City
- 2.16. Table 1 of the s32 report indicates the current status for each airshed in relation to the MfE guidelines. When considered in the context of Policy A5-1.3, the upshot of the information presented in the table is:
- a. for Airshed A and B1 – air quality is to be enhanced to ‘Alert’ levels as soon as possible, then progressively improved to ‘Acceptable’ levels; and
 - b. for Airshed B2 and C – air quality is to be progressively improved to ‘Acceptable’ levels
- 2.17. **Policy A5-1.4** specifically manages PM₁₀ pollution. The policy sets out ‘mid-term’ targets for the respective airsheds to prioritise achievement of ‘Alert’ category, consistent with the aim of Policy A5-1.3 described above. For Airshed B, the expectation is that ‘Alert’ will be achieved by September of this year⁶, whereas Airshed A is given a later achievement target date of August 2020. Over the interim period, the Policy allows for up to three annual breaches of the NES 24-hour limit in Airshed A. Airshed C is already in ‘Alert’ and the policy anticipates it will remain there⁷.
- 2.18. To achieve these mid-term targets, the Policy sets specific PM₁₀ emission reduction goals from domestic heating, outdoor burning, industrial and transport sources. Of particular relevance to this proposal, the reduction aim for domestic heating is 70% relative to 2001 levels.
- 2.19. **Policy A5-1.5** establishes the AQP’s prohibitive policy stance on wood burners as a means of implementing Policy A5-1.4. It anticipates no increase in the number of solid fuel fires within the urban area as a whole and reductions of up to 30% of solid fuel fires in the most polluted airsheds.
- 2.20. The policy outlines two exceptions to the prohibitive approach. The first of these is for low emission pellet burners, which were enabled by Plan Change A2 in 2012.

⁶ This policy does not differentiate between Airshed B1 and B2, so it can be inferred that both are subject to the expressed aim.

⁷ When read in tandem with Policy A5-1.3, however, the long term aim is to improve to ‘acceptable’ notwithstanding this mid-term target.

- 2.21. Secondly, the policy sets out a process for reviewing the prohibitive approach where cleaner burning technology is made available. Specifically, the review contemplates that new solid fuel appliances must be capable of consistently operating well below the NES laboratory emission level of 1.5g PM₁₀ per kg of fuel burned. In considering the appropriateness of any potential change in approach, the policy expects that regard will be had to:
- a. the expected emissions of new appliances under real-life conditions;
 - b. the City's progress in meeting air quality targets (Policy A5-1.4);
 - c. new National air quality guidelines/standards released or in preparation; and
 - d. whether increases in burners will still allow current or likely future air quality targets.
- 2.22. This review process limb of the policy is particularly relevant to the current proposal, as discussed further below.
- 2.23. The **AQP rule approach** for implementing these (and other) policies is summarised at Part 1.3 of the s32 Report, and described in Dr Wilton's addendum to this report. In short, the approach includes:
- a. prohibition on burning certain materials, including wet or treated wood⁸;
 - b. prohibition of new solid fuel domestic fires, apart from pellet fires which are permitted⁹;
 - c. requirements for all discharges, including particular focus on avoidance of nuisance effects¹⁰;
 - d. phase out of burners that pre-date the NES, with some provision for replacement of those appliances with NES-approved burners¹¹; and
 - e. various technical requirements for NES and pellet burning appliances, including stack design and emission requirements¹².

⁸ Refer Clause AQR.20

⁹ Refer Clause ARr.21 and AQR.26 (resp)

¹⁰ Refer Clause AQR.22

¹¹ Refer Clause AQR.24 and AQR.25 (resp)

- 2.24. Similar to Policy A5-1.5, the AQP rules signal that changes in technology may provide for a more enabling approach to domestic wood burners (see explanation AQR.21.5 for example).

Towards a new approach for woodburners

- 2.25. In 2013, the Council requested Officers to examine the potential to review the current prohibitive approach to woodburners in the AQP. Subsequently, a significant amount of work has been undertaken to inform the consideration of additional woodburners in Nelson's airsheds. The s32 report¹³ summarises the extent of investigations undertaken, some of which are described further in the report attachments of Dr Wilton, Mr McIlrath and Mr Popenhagen.
- 2.26. Council's engagement on the Plan's woodburner rules included public meetings in March and July 2015, Iwi Working Group meetings in October and November 2015, and targeted meetings with interested parties and industry groups from April through to October 2015. The s32 report provides a more detailed summary of Council's engagement at Part 1.6 and Part 4.3.
- 2.27. Community feedback sought a range of options for enabling households to use woodburners in situations where they are currently prohibited, with an emphasis on delivering decisions before winter 2016.
- 2.28. These options included allowing ULEBs, emission control technology, education to reduce smoke emissions (enhanced behaviour change), enforcement of smoky fires, tradable rights to install a woodburner, and a point of sale phase out of older fires.
- 2.29. Council resolved to undertake a woodburner plan change as a result of the feedback received, targeting a decision date of June 2016. The plan change is a short-term response to community concern regarding the prohibition of woodburners. Broader air quality matters, including the location of airshed boundaries, are anticipated to be considered as part of the wider Nelson Plan review in early 2017.

¹² Refer Appendix AQ2, AQ2A and AQ3

¹³ Refer Parts 1.7 and 4.2 of the s32 Report

- 2.30. Council considered three key options for the woodburner plan change in detail at a Council workshop on 17 November. Officers used Councillor feedback to inform the option analysis which culminated in the generation of PCA3 as notified.

Notified Plan Change provisions

- 2.31. The Council resolved to notify the plan change at its 17 December 2015 meeting. The proposal was subsequently notified on Saturday 16 January 2016.
- 2.32. Broadly speaking, PCA3 enables emissions from ULEB through three pathways, being through:
- a. **permitted activity rule** - a new permitted activity rule authorises 1000 ULEB in Airshed B2 and 600 in Airshed C;
 - b. **certification** - a *potential* future permitted allocation of ULEB may be enabled where future monitoring and modelling results demonstrate there is capacity to do so; and
 - c. **new non-complying activity rule** - ad hoc applications can be made as a non-complying activity for any ULEB in Airshed A or B1, or for greater than 1000 ULEB in Airshed B2 or more than 600 in Airshed C.
- 2.33. Reference should be made to the detailed description of the proposed rules and methods described in Part 2.2 of the s32 Report. In summary, the proposed provisions fall within the following four broad categories:
- a. a new definition for ULEB;
 - b. new Clause AQR.26A, which includes the permitted and non-complying rules referred to above;
 - c. new Appendix AQ2B setting out the minimum requirements for ULEB, including certification process that must be followed in conjunction with the building consent; and
 - d. consequential amendments to ensure the proposed permitted activity rule AQR.26A does not unintentionally frustrate, nor become frustrated by, other requirements of the Plan.

- 2.34. The plan change is also reliant upon a non-regulatory behaviour change programme. The BCP is designed to bolster the AQP's current policy approach of continual improvement by targeting a further 10% reduction in domestic heating-related emissions. This 10% reduction, in turn, has been translated into the 'capacity' to enable 1600 ULEB as proposed.
- 2.35. No changes are proposed to the AQP objective or policies. In this respect, the proposed PCA3 methods are designed to implement the operative policies to an equal or greater extent than the status quo.

Submissions and Further Submissions

- 2.36. A total of **108 submissions were received** on PCA3. The thrust of submissions ranged from full support to full opposition, with several parties seeking specific amendments to the proposed provisions.
- 2.37. A summary of submissions was prepared and publically notified on Saturday 5 March 2016, with the closing date set at 5pm on Friday 18 March. **Fifteen further submissions** were subsequently received.
- 2.38. A full list of submissions and further submissions received is contained in **Appendix 1**. This includes a summary of each submission, and my recommendation on the acceptance or rejection of the relief sought.

Procedural matter – waiver for late submissions

- 2.39. As part of its delegation, the Panel will need to make a ruling in respect of 8 submissions that were received after the closing date for submissions (being 5pm on Wednesday 17 February 2016).
- 2.40. **Submissions 101-106** were received one working day late, while **107** and **108** were received three working days late. Notwithstanding that the power to accept these submissions ultimately rests with the Panel, the Council included Submissions 101-108 in the summary of submissions.
- 2.41. The Panel's discretion to accept the submissions (or otherwise) is provided for by s37 and s37A of the Act.

2.42. Section 37 sets out that the Council may either extend a time period specified in the Act (in this case the time period for receiving submissions on a proposed plan) or to grant a waiver for failure to comply with such timeframes.

2.43. Section 37A then sets out the requirements for waivers and extensions if they are to be granted – in this instance, under s37A(1) and (2), which state:

[1] A consent authority or local authority must not extend a time limit or waive compliance with a time limit, a method of service, or the service of a document in accordance with section 37 unless it has taken into account—

- (a) the interests of any person who, in its opinion, may be directly affected by the extension or waiver; and*
- (b) the interests of the community in achieving adequate assessment of the effects of a proposal, policy statement, or plan; and*
- (c) its duty under section 21 to avoid unreasonable delay.*

[2] A time period may be extended under section 37 for—

- (a) a time not exceeding twice the maximum time period specified in this Act; or*
- (b) a time exceeding twice the maximum time period specified in this Act if the applicant or requiring authority requests or agrees.*

2.44. In the interests of assisting the Panel, my view is that:

- a. no party will be directly affected by waiving the time limit to receive the late submissions, owing to the similarity in content of the late submissions relative to those received on time;
- b. the interests of the Community in achieving an adequate assessment of effects will not be affected; and
- c. unreasonable delay was not generated by allowing the submission to be received, owing to their receipt shortly after the closing date and ability to be included in the summary of submissions.

2.45. Accordingly, I recommend that the Panel grant a waiver for the late submissions and that they be considered along with the other 100 submissions received on time.

3.0 STATUTORY CONSIDERATIONS

Introduction

- 3.1. The s32 Report¹⁴ provides an outline of key RMA matters to be considered by the plan change, including reference to:
- a. the Act's sustainable management purpose in s5, noting the matters of national importance under s6 and the other significant matters in s7;
 - b. Council's functions for achieving the Act's purpose, and notably to control discharges of contaminants to air under s30(f);
 - c. the purpose of the AQP under s63 to assist the Council to carry out its functions in order to achieve the Act's purpose;
 - d. the relationship between the NES and the AQP established by s43B;
 - e. the matters to be considered when changing the AQP under s66;
 - f. the requirements of s67 relating to the contents of the AQP; and
 - g. the requirements for preparing and publishing evaluation reports on the provisions of PCA3 under s32.
- 3.2. The s32 Report¹⁵ also discusses the relevance of the NES and its provisions. It records the relevant parts of the iwi management plan, *Nga Taonga Iho Ki Whakatu*, and the Council's 50-year sustainability strategy, *Nelson 2060*.¹⁶
- 3.3. The remainder of this report section briefly expands upon some of these statutory considerations, and notes additional matters of relevance for the Panel in complement to the s32 Report.

The NESAQ

- 3.4. Part 1.4.2 of the s32 summarises the key elements of the NESAQ. The NES contains 5 standards for ambient air quality, with the most relevant

¹⁴ s32 Report, Section 1.4

¹⁵ s32 Report, Section 1.4.2

¹⁶ s32 Report, Sections 1.4.3 and 1.5 (respectively)

being the 50 $\mu\text{g}/\text{m}^3$ (24-hour mean) threshold concentration for ambient PM₁₀. Where this threshold is exceeded in any 12-month period, the Council is deemed to be in breach of the NES; however, there are some exceptions to this.

- 3.5. Notably, the NES contains a phased approach to implementation for airsheds which historically exceeded the threshold concentration prior to the NES coming into effect. Specifically:
 - a. airsheds that experienced between 1 and 10 annual exceedances – like Airshed B1 - have until 1 September 2016 to become compliant with the standard; and
 - b. airsheds that experienced more than 10 annual exceedances - such as Airshed A – are 'allowed' 3 annual exceedances from September of this year, but must become compliant by August 2020.
- 3.6. These requirements are consistent with the mid-term targets codified in AQP Policy 1.4 discussed previously.
- 3.7. The NESAQ's design standard for wood burners in urban areas is also relevant. This standard prohibits emissions from such appliances unless they are compliant with the design standard of no more than 1.5g of PM₁₀ particles per kilogram of dry wood burnt in accordance with the testing method specified in AS/NZS 4013:2014 (or similar).
- 3.8. Under s28 of the NES, a rule, resource consent or bylaw *may* be more stringent than the NES, and in such circumstances, the more stringent provision prevails. Both the operative AQP and the AQP as proposed to be amended by PCA3 are more stringent than the NES; however, in a relative sense, the proposed plan is less stringent than the operative AQP.

The Nelson Regional Policy Statement

- 3.9. The relevant RPS objective for PCA3 is the '*improvement in Nelson's ambient air quality*¹⁷.' The objective is implemented by seven policies, which include the following relevant provisions (emphasis added):

¹⁷ Objective DA1.2.1

DA1.3.1 *To set minimum ambient air quality standards that are at levels which ensure that adverse effects on people or ecosystems at ground level are avoided or mitigated.*

DA1.3.2 *Where existing air quality is higher than the standards set under the above policy, no significant degradation to existing ambient air quality shall be permitted.*

DA1.3.4 *To ensure industrial, commercial, rural and domestic discharges avoid significant adverse effect on the environment, including people, plants or animals.*

3.10. The operative AQP has been prepared to give effect to the above objective and policies, and any change to the AQP must ensure the Plan continues that relationship.

s32 and s32AA of the RMA

3.11. The s32 report has outlined the requirements of s32 at Part 1.4.1. Section 32 requires an evaluation report to be produced which includes:

- a. an assessment of PCA3's objectives against the RMA's sustainable management purpose;
- b. an assessment of the appropriateness of PCA3's provisions (rules and methods) in achieving the objectives, including:
 - i. consideration of alternatives for achieving the objectives;
 - ii. assessing the efficiency and effectiveness of the provisions in achieving the objectives;
- c. a cost-benefit analysis of the effects anticipated by the implementation of the provisions, including consideration of:
 - i. any opportunities for economic growth and employment;
 - ii. the benefits and costs in quantifiable terms (if practicable);
 - iii. the risk of acting or not acting if there is uncertain or insufficient information about the provisions

3.12. The report required under s32 must contain a level of detail that corresponds to the scale and significance of the effects anticipated from the implementation of the provisions. Specific consideration is also required where a greater prohibition or restriction otherwise contained in a NES is justified.

- 3.13. Clause (6) of s32 clarifies that for proposals such as PCA3 where there are no amendments proposed to the objective in the AQP, the term 'objective' takes on a dual meaning for the purposes of s32. Firstly, the term relates to the existing objective of the operative AQP, and secondly to the purpose of PCA3.
- 3.14. Applying this dual meaning of 'objective' in the context of s32, the required evaluation must assess the appropriateness of:
- a. PCA3's purpose in achieving the RMA's sustainable management purpose; and
 - b. the PCA3 provisions in achieving *both* the plan change purpose and the settled objective of the AQP.
- 3.15. Section 32AA requires a further evaluation report to be prepared where any changes are proposed to the notified provisions of PCA3. The further evaluation must follow the same approach as the requirements of s32, including that the level of detail applied is commensurate with the scale and significance of the change proposed.
- 3.16. The report section that follows addresses the key issues raised in submissions within the context of the decision-making framework outlined above.

4.0 EVALUATION OF ISSUES

Introduction and evaluation approach

- 4.1. This part of my report considers the matters raised in submissions. I have adopted an 'issue-based' approach as opposed to a submission-by-submission analysis.
- 4.2. My recommendations on the specific relief sought in submissions and further submissions are included in the table at **Appendix 1**. While recommendations are provided on further submissions in Appendix 1, the discussion of issues raised in further submissions below relates more directly to the original submission(s) relevant.
- 4.3. The evaluation of issues is presented as a collegial effort from Dr Wilton, Mr Popenhagen, Mr McIlrath and myself. There are several issues which are relevant to more than one area of expertise, and so commonality in the issue headings has been used in our respective reports. A table of issues is provided below to assist navigation between my report and the addendums from Council's other experts.

Table 1: Evaluation of Issues by author (W=Wilton, P=Popenhagen, M=McIlrath, J=Jones)

Issue	W	P	M	J
General Support				•
Better monitoring, enforcement, education, and/or burning practice	•	•	•	•
ULEB should be enabled in more (or all) airsheds	•		•	•
Enable burners with reduced/no limits on the number or type	•		•	•
NES burners should be enabled instead of, or in addition to, ULEB	•	•	•	•
Adopt Option 3 from the Staff Report to December 2015 Council mtg.	•		•	•
Wood burners are better, more effective and/or more efficient than heat pumps	•	•	•	•
Change approach to Airshed monitoring or boundaries	•			•
Opposition to PCA3 due to effect of new burners on ambient air quality	•	•	•	•
Wood burners should only be authorised for 5 years		•		•
Opposition to PCA3 due to impact on industrial/commercial sectors	•			•
ULEB models with wetbacks should be authorised		•		•
Consider other methods outside of the AQP		•		•
Operative AQP has led to adverse health outcomes due to increased prevalence of cold damp homes	•			•
Plan Change has not considered all relevant information	•			•
Adequacy of s32 report			•	•
Proposed rules and methods	•	•		•

- 4.4. My response to submissions also relies on Ms Barton’s memorandum in **Appendix 6**, and the legal advice from Buddle Findlay in **Appendix 7**.
- 4.5. I have used annotations to illustrate amendments proposed to the notified PCA3 provisions. Text that is proposed to be added is shown as underlined and highlighted, and text that is proposed to be deleted is shown as ~~struck through and highlighted~~. Fully annotated versions of the provisions are contained in **Appendix 2**.
- 4.6. Where I have proposed amendments to the provisions, I have also tried to assist the Panel’s further evaluation required under s32AA within the narrative of the relevant issue discussion, which I now turn to.

General Support

- 4.7. Forty-six submissions¹⁸ generally support PCA3. Some of these submitters signal a desire to install a new appliance, while others specifically support ULEB.
- 4.8. Notwithstanding that I propose some amendments to the plan change provisions below, I recommend that these submissions in general support of the plan change be accepted.

Better monitoring, enforcement, education and/or burning practice

- 4.9. Twelve submissions¹⁹ raised the role of monitoring, enforcement, education and/or burning practice as important methods for managing ambient air quality.
- 4.10. These matters are central to the non-regulatory BCP approach promoted by the plan change. Specifically, the proposal targets a 10% reduction in domestic emissions through better education, burning practice, and (as a last resort) enforcement.

¹⁸ Submissions 3, 10, 12, 13, 17, 20, 21, 25, 27, 28, 30, 33, 39-41, 44-47, 49-52, 54, 55, 59, 60, 62, 64, 68, 69-73, 74, 79, 81-83, 86, 87, 90, 100, 102 and 105

¹⁹ Submissions 1, 16, 22, 29, 53, 61, 75, 85, 87, 89, 103 and 107

- 4.11. As described by Mr Popenhagen and Dr Wilton, the 10% target is readily achievable, with an important method being the targeting of the worst polluters at present. Halving particulate emissions from the 500 worst polluting households is expected to realise the 10% target alone, with greater gains possible through further focused engagement and education.
- 4.12. Mr Popenhagen and Ms Barton have also demonstrated the commitment of this Council to the achievement of improved air quality. While the Council has not finalised the specific measures and funding of the proposed BCP in advance of the Panel's decision on PCA3, my view is that the Panel can have sufficient confidence that the Council's commitment to air quality issues overall can be relied upon for the implementation of the BCP with a minimum 10% improvement target.
- 4.13. In addition, Mr McIlrath's addendum report illustrates that the estimated annual cost of the BCP to Council is modest, but the improvement levels targets can have substantial overall health costs savings to society.
- 4.14. To the extent that these submissions support the BCP programme as a means of achieving improvements in ambient air quality, I recommend they be accepted.
- 4.15. **Submission 103** prefers a more conservative target of 5% improvement for the BCP programme, and to adjust the number of allocated ULEBs accordingly. I adopt Dr Wilton's view that 10% is both appropriate and achievable, provided that the BCP is sufficiently resourced by Council.
- 4.16. Again, I also consider that comfort can be taken from the Council's track record that the BCP will be appropriately funded and implemented by Council. For these reasons, I do not recommend the more conservative 5% target proposed by Submission 103 be accepted.

ULEB should be allowed in more (or all) airsheds

- 4.17. Thirteen submissions²⁰ sought that the airshed restrictions for ULEB should be relaxed or removed.

²⁰ Submissions 2, 6, 16, 18, 23, 29, 34, 36, 53, 58, 60, 76 and 108

- 4.18. The studies undertaken by Dr Wilton during the preparation stages of PCA3 do not support enabling new appliances in Airsheds A or B1. Specifically, Dr Wilton's results showed that enabling additional appliances in these locations would compromise attainment of the NES for PM₁₀. Given Dr Wilton's findings, I do not recommend that the permitted activity rule in PCA3 be amended to enable any ULEB in Airsheds A or B1 in the short term.
- 4.19. For completeness, I note that parties in these airshed are able to apply for resource consent to install a ULEB as a non-complying activity under PCA3. There is also potential for future permitted allocations of ULEB in these airsheds where future monitoring and modelling indicate that is appropriate.
- 4.20. In either case, it must first be demonstrated that the mid-term targets for PM₁₀ in these airsheds are being met as anticipated under Policy A5-1.4 and that the allocation of a new appliance will not compromise the long term aim of continual improvement under Policy A5-1.3.
- 4.21. Dr Wilton's addendum report has specifically addressed **submissions 36 and 58**, which consider that elevated parts of Airsheds A and B1 should be treated differently to lower lying areas. For the reasons expressed by Dr Wilton in response to these submissions, I recommend that they be rejected.

Enable burners with reduced or no limits on the number or type

- 4.22. Eight submissions²¹ sought to relax or remove the limitations on the number and type of burners enabled by the plan change.
- 4.23. As described in the addendum report of Dr Wilton, the plan change has been designed to ensure that the number of appliances enabled does not compromise the policy aims of the AQP. This is achieved both by limiting the number of permitted appliances, and by taking advantage of improved technology with lower real life emission levels.

²¹ Submissions 4, 48, 69, 73, 75, 76, 89 and 91

- 4.24. In my view, removing these controls on the number and type of burners would create an unacceptable level of risk for the Council in terms of meeting its obligations under the NES. Relatedly, there would be insufficient measures in place to ensure the Plan's policy aims are implemented.
- 4.25. The addendum reports of Dr Wilton and Mr McIlrath likewise indicate that unchecked enablement of burning appliances can result in significant reductions in air quality and levels of human health, and significant increases in economic costs.
- 4.26. For the above reasons, I recommend that the submissions seeking no limits on the number or type of appliance enabled by PCA3 be rejected.

NES burners should be enabled instead of, or in addition to, ULEB

- 4.27. Twenty-three submissions²² sought that NES burners should be enabled by the plan change, either instead of or in addition to ULEB. A key focus of several parties is that ULEB appliances are too expensive to purchase relative to NES appliances.
- 4.28. As noted in the addendum report of Dr Wilton, there are several advantages to enabling ULEB instead of NES burners. Firstly, as ULEB have lower overall emission rates, a greater number of them can be allocated relative to the number of NES burners.
- 4.29. Secondly, the real-life testing regime associated with ULEB is anticipated to result in a lower likelihood of underestimating actual emission rates for ULEB relative to the process for authorising NES burners.
- 4.30. Mr McIlrath has noted that ULEB carry a greater capital cost than NES burners presently, but ongoing operational costs will be similar.
- 4.31. Mr Popenhagen's report has also shown that there is little to separate NES burners and ULEB in terms of their relative space heating efficiency and effectiveness.

²² Submissions 5, 7, 8, 22, 29, 35, 38, 42, 43, 53, 57, 61, 77, 80, 81, 84, 89, 93, 94, 99, 104, 106 and 107

- 4.32. In considering the option of enabling a mix of NES burners and ULEB, my view is that the plan change *could* conceivably be redesigned for such an approach; however, it would create additional complexities in the allocation regime, including the need to rely on a 'real-life' emission rate for NES burners for the purposes of determining the number of those appliances to be provided for.
- 4.33. While the plan change could be adapted to utilise NES burners for some or all of the allocation provided for, my view is that doing so is less compatible with the AQP policy framework than enabling ULEB. In particular, it is contrary to Policy A5-1.5 which establishes the prohibition on new solid fuel appliances in order to achieve the mid-term improvement targets in Policy A5-1.4.
- 4.34. Exception to this prohibitive stance on burners is only anticipated where clauses 'b)' and 'c)' of Policy A5-1.5 are met. As noted in Section 2 above, the former is predicated on new-generation burners with substantially lower emission rates than NES burners being available, while clause 'c)' sets out additional matters to be regarded when considering whether the prohibition should be relaxed.
- 4.35. In my view, the notified provisions are superior in their implementation of the policy relative to an NES allocation scenario as the plan change:
- a. provides for ULEB, with substantially lower emission rates to NES burners;
 - b. has considered real-life operational conditions and the progress in achieving both the midterm and continual improvement targets in determining the number and type of appliances to authorise; and
 - c. in considering these matters, has found that the number and type of appliances authorised in PCA3 will maintain the Plan's policy direction.
- 4.36. Regard has also been given to potential amendments to the NES, as noted in Dr Wilton's addendum report; however, no material findings can be made on any impact of NES changes given the uncertainty surrounding the timing and content of the anticipated NES review.

- 4.37. In my view, the ULEB-led approach in PCA3 is more appropriate for implementing this policy than a NES burner-led approach or a combination.
- 4.38. For the above reasons, I recommend that submissions that prefer NES burners or a combination of NES burners and ULEBs over the notified provisions to be rejected.

Adopt 'Option 3' from the Staff Report to the 12/15 Council meeting

- 4.39. Two submissions²³ sought that a discarded option considered as part of the PCA3 consideration of alternatives – 'Option 3' – be favoured to the notified provisions. The key difference between Option 3 and the notified provisions is that the former uses the NES levels as a benchmark for the purposes of allocating new appliances, whereas the plan change aligns with the operative AQP policy direction of continual ambient air quality improvement.
- 4.40. Consistent with the view I expressed above on submissions seeking no limits on burner number or type, my view is that these two submissions are contrary to the AQP's objective and policies, and are inappropriate.
- 4.41. Accordingly, my view is that the submissions preferring Option 3 to the notified provisions should be rejected.

Wood burners are better, more effective or more efficient than heat pumps

- 4.42. Seven submissions²⁴ cite the shortcomings of heat pumps as a reason to liberalise the proposed plan change provisions.
- 4.43. Mr Popenhagen has noted in his addendum report that heat pumps and woodburners are comparable in terms of their space heating efficiency and effectiveness, though there is some variation based on different models compared.

²³ Submissions 35 and 97

²⁴ Submissions 5, 8, 11, 14, 16, 17 and 29

- 4.44. Mr McIlrath has considered these submissions from an economic perspective. He notes that heat pumps typically have a lower capital cost to burners, and the two have similar operating costs (though some variation will occur).
- 4.45. In addition, Dr Wilton's research has found that Nelson's homes have not become colder overall than they were before the AQP's prohibition of wood burners was implemented. With this change in the AQP approach, came a greater reliance upon heat pumps and other non-solid fuel sources; and the expectation would be that homes would be demonstrably colder presently if the submitters' contentions were accurate.
- 4.46. For the reasons set out in the addendum reports and summarised above, I do not agree with the submissions that the PCA3 allocation approach should be more generous owing to burners being more effective or efficient than heat pumps.

Change the approach to airshed monitoring or boundaries

- 4.47. Three submissions²⁵ sought amendments to the Council's approach to airshed management.
- 4.48. The advice of Buddle Findlay (in **Appendix 7**) is that the submissions seeking changes to airshed boundaries (**Submission 76 and 94**) are beyond the scope of the plan change. Accordingly, the Panel need not reach a substantive view on these submissions.
- 4.49. The remaining submission (**Submission 9**) relates to the position of Council's monitoring station in Airshed B1 to distinguish between elevated and lower-lying areas. Dr Wilton has addressed this matter from an air science perspective. I note my agreement with her view that the monitoring station should be located where worst case concentrations are likely to occur, which will be in lower areas in this case.
- 4.50. I note also that the Council is undertaking a full review of the AQP and other RMA plans presently under the banner of 'the Nelson Plan'. There are opportunities under that process to refine the Council's overall

²⁵ Submissions 9, 76 and 94

approach to airshed management, including modification of boundaries (for example). If the Panel considers, based on the information presented at the hearing, that there is merit in considering any particular amendments in the current airshed approach, it may be appropriate to signal this to Council through non-statutory recommendations.

Opposition to PCA3 due to impact on ambient air quality

- 4.51. Ten submissions²⁶ oppose the plan change due to concerns that the provisions will degrade ambient air quality levels.
- 4.52. As noted above, the plan change is designed to enable new ULEB, whilst also continuing to achieve improved air quality overall. This outcome is reliant upon the 'capacity' created by the BCP, which is anticipated to deliver a minimum of a 10% reduction in domestic PM₁₀ contributions.
- 4.53. Provided that the BCP is successfully implemented, there should be no reduction in air quality resulting from the plan change. Again, I believe the addendum reports of Dr Wilton and Mr Popenhagen demonstrate that the 10% target is readily achievable
- 4.54. Accordingly, I recommend that submissions seeking withdrawal of the plan change on this basis be rejected.

Wood burners should only be authorised for 5 years

- 4.55. **Submission 24** proposes a 5 year maximum authorisation period for new burners to ensure that the most efficient and lowest emission burners are the standard stock in Nelson, providing ongoing protection of air quality.
- 4.56. I agree with Mr Popenhagen that this would not be an appropriate limit to impose given the cost of ULEBs and given that normal life for solid fuel appliances is typically three times longer.
- 4.57. I recommend that the submission seeking a 5 year operational limit for new ULEB be rejected.

²⁶ Submissions 15, 19, 31, 32, 37, 56, 78, 92, 96 and 101

Opposition to PCA3 due to impact on industrial/commercial sector

- 4.58. Five submissions²⁷ have raised concerns about the impact of enabling additional woodburners on the ability for industrial and commercial entities to emit pollutants.
- 4.59. These submissions have been considered in detail in Dr Wilton's report, and have been further discussed by Mr McIlrath as well. Both have considered scenarios allowing for a nominal level of growth in industrial emissions in the City's four urban airsheds on top of the modelling scenarios relied upon for the purposes of PCA3.
- 4.60. In my view, some key conclusions that can be drawn from this further modelling are:
- a. the permitted allocation of ULEB in Airsheds B2 and C is unlikely to affect existing or new industrial or commercial operations;
 - b. notwithstanding that, allowing for a (nominal) 10% increase in industrial emissions would additionally have a negligible impact on overall ambient PM₁₀ levels in these two airsheds;
 - c. the potential impact on Airshed B2 is more notable, but this will be more a consideration for allocations via the future certification process rather than in the short term (owing to nil ULEBs permitted in Airshed B1); and
 - d. there are potential economic effects (GDP and employment) associated with precluding industrial growth, if the demand for growth exceeds current levels.
- 4.61. As noted in part 1.6 of the s32 Report, Council engaged with the industrial sector in the development phase for PCA3, including with parties who have lodged submissions on the proposal. Anecdotally, the Council was told by the parties it engaged with that some had plans for expansion, others were anticipating reduced emissions (i.e. from rolling out emission reduction technology), and others had no plans to change their operations (in terms of scale, location or function).

²⁷ Submissions 26, 65, 66, 92 and 98

- 4.62. On that basis, the Council factored in an assumption of modest increases overall (if any).
- 4.63. Absent of any more detailed information to the contrary, it is difficult to recommend any specific response to the submissions through amendments to the provisions at this stage. That said, I have conferred with Dr Wilton on the matter and am confident that an amendment could be made to accommodate an industrial growth factor in the future certification process if required and/or appropriate.²⁸
- 4.64. In my view, more detailed consideration will need to be given to the exact quantum to be factored in (if any), given the absence of detailed evidence currently available. On that basis, I do not recommend any amendments to the provisions at present, but will be happy to revisit the matter at the hearing following presentations from submitters.
- 4.65. That said, I do not consider that any change to the permitted allocation of appliances in Airsheds B2 or C is warranted given the above, and the findings of Dr Wilton.

ULEB models with wetback should be authorised

- 4.66. This matter is addressed in the addendum report of Mr Popenhagen. I simply record here that a ULEB model with wetback option is currently commercially available, and the plan change does not preclude further models from being authorised in the future.

Consider other methods outside the AQP

- 4.67. Several submissions suggested a range of methods to be adopted instead of, or in conjunction with, the proposed PCA3 methods. Most of these have been discussed under more specific headings, but there are two that have been organised into this general issue heading here.

²⁸ Among other methods, this could be implemented through a further reduction in the 'Step 4' target for Airshed B1 from the revised 33ug/m3 figure currently proposed. See the 'Proposed Rules and Methods' section of the report below for further context.

- 4.68. **Submission 32** supports alternative methods to wood burners as a means of making homes warmer and drier overall. Specifically, the submission suggests that the following be considered:
- a. programmes to encourage and subsidise insulation
 - b. warrants of fitness/minimum standards for rental accommodation
 - c. rates rebates for the installation of efficient electric heating systems
 - d. lobbying central government for regulatory alteration of electricity pricing mechanisms.
- 4.69. Similar to the previous issue, this matter is discussed in depth by Mr Popenhagen.
- 4.70. The plan change does not preclude these methods from being adopted in the future, and this may in turn enable air quality improvements to be realised the future. As noted by Mr Popenhagen some of the measures, such as insulation subsidy, have been adopted with good effect by the Council.
- 4.71. The plan change attempts to balance the priority of improving Nelson's air quality, with the community aspirations of reintroducing the ability for people to install solid fuel appliances for domestic heating.
- 4.72. While the submitter's suggestions could have substantial advantages for the overall level of warmth experienced in homes across Nelson, they are not effective at achieving the purpose of the plan change to strike this balance.
- 4.73. Accordingly, I recommend that the submission be accepted in part insofar as it aligns with methods already deployed by the Council; however, I do not recommend any changes be made to PCA3 as a result.
- 4.74. Submission 103 similarly supports additional measures to be adopted, including:
- a. continuation of the Eco Building Advisor position for a further 10 years;

- b. financial assistance from Council to help cover the cost of ULEB and associated insulation and double-glazing – direct reference is made to the Council’s Clean Heat Warm Home Programme; and
 - c. continuation or increase of Council’s financial contribution to the Warmer Healthier Homes Nelson Tasman project.
- 4.75. As Mr Popenhagen is Council’s Eco Building Advisor, and to avoid any perceived conflict related to his consideration of this submission, I have sought input on this matter from Clare Barton – Council’s Group Manager Strategy and Environment.
- 4.76. Ms Barton’s response is provided at **Appendix 6** and provides useful context on the Eco Building Advisor Role and other endeavours the Council has taken on to make homes warmer in Nelson. She notes that Council has previously considered funding for home heating, but ultimately opted to resource a programme targeting assistance for home insulation.
- 4.77. I understand that any future assistance in relation to appliances or insulation will be based on a number of factors, including effectiveness monitoring of existing programmes.
- 4.78. In my view, the suggestions of the submitter are more appropriately managed through Council’s annual and long term financial planning channels than by this plan change process. Accordingly, I do not recommend any amendments to the provisions as a result of the submission.

Operative AQP has led to adverse health outcomes due to increased prevalence of cold damp homes

- 4.79. Two submissions²⁹ contend that the current prohibitive approach to wood burners in the AQP has led to adverse health outcomes from increased prevalence of cold or damp homes. The submissions cite increased hospital admissions since 2006 as an indicator of this effect.
- 4.80. In 2014, the Nelson Medical Officer of Health, Dr Ed Kiddle, presented a paper to Council that discussed the health impacts of both air pollution and

²⁹ Submissions 35 and 99

cold homes. Among other matters, the paper cited information on Nelson and Marlborough hospital admission rates over the 1999-2013 period. Notwithstanding Nelson's improving air quality over this timeframe, the information identified that a small increase in respiratory admission rates was observed.

- 4.81. The Officer explained that the relationship between air quality and hospital admission rates is not wholly correlative, however, as a number of other factors contribute to respiratory problems, including cold homes and variations in mean temperature and circulation rates of influenza/other respiratory viruses. The Officer also noted that it is not possible to distinguish which factor (or factors) has contributed to each admission.
- 4.82. As discussed in the addendum report of Dr Wilton, Council commissioned a survey in 2014 to determine if Nelson's homes have become colder overall as a result of the AQP approach to wood burners. The results of that study were that homes are likely to be warmer on average now than they were in 2006.
- 4.83. In my view, the above information from Dr Kiddle and Dr Wilton casts substantial doubt upon the contention that the AQP is responsible for any increase in hospital admissions for respiratory conditions. There is no compelling evidence, in my view, that supports an increase in burner allocations relative to the notified version of PCA3 in order to achieve improved health outcomes.
- 4.84. Irrespective of this, I note that PCA3 provides for 1,600 more solid fuel appliances than available under the status quo over the short term, and enables further allocations through the proposed non-complying resource consent and future certification pathways.

PCA3 has not considered all relevant information

- 4.85. Three submissions³⁰ have suggested that not all relevant information has been considered in the preparation of the plan change.

³⁰ Submissions 53, 89 and 92

4.86. These submissions have been addressed in the addendum report of Dr Wilton, which I adopt for the purposes of this report.

4.87. For the reasons expressed by Dr Wilton, I do not recommend any amendments to the plan change provisions as a result of these submissions.

Adequacy of the s32 Report

4.88. Three submissions³¹ have challenged the adequacy of the s32 Report. No specific details are provided in that respect; however, in light of the submissions, the Council has asked me to review the s32 Report with 'fresh eyes' to ensure it is complete and fit for purpose.

4.89. In addition, the Council obtained advice from Buddle Findlay to assist on this matter. The response (**Appendix 7**) was that the notified s32 assessment meets the requirements of s32 RMA, but that additional matters could be further discussed for completeness. Noting that the s32 process is 'ongoing', the response recommends that the following matters be addressed:

- a. clarification in the economic assessment that the behaviour change scenario modelled is not simply the BCP in isolation, but also includes the enabling of 1600 ULEB;
- b. more explicit consideration of the effects of the proposal on economic growth and potential for employment; and
- c. a more explicit assessment of the purpose of the plan change as an 'objective' for the purposes of s32.

4.90. Mr McIlrath has considered the recommendations labelled as 'a' and 'b' above in his addendum report.

³¹ Submissions 65, 66 and 103

- 4.91. As for the final matter, I firstly note that the s32 report accompanying the plan change includes an assessment of the provisions against the AQP policy framework and operative objective at sections 3.1 and 3.3. Similarly, section 3.3 of the report includes an assessment of the plan change against the purpose of the RMA.
- 4.92. The recommendations for further assessment that are relevant for my report include:
- a. express consideration of the PCA3 provisions against the purpose of the plan change; and
 - b. more explicit evaluation of the plan change purpose as the most appropriate means of achieving the Act's purpose.
- 4.93. The purpose of PCA3 is described in section 1.2 of the s32 Report as "*a discrete plan change to remove some unnecessary restriction by making the AQP more enabling of certain wood burning appliances for domestic heating.*" As part of the enabling purpose of the proposal, the s32 Report also identifies here that the BCP is a key method for achieving the Plan's policies.
- 4.94. The proposed provisions have been expressly designed to give effect to PCA3's purpose; however, they have equally been designed to implement the existing policies of the AQP and in turn the Plan's sole objective of maintaining or enhancing Nelson's ambient air quality. While not explicitly stated in the s32 Report, the evaluation at section 3.3 demonstrates that the proposed provisions are the most appropriate to achieve both 'objectives' in this case.
- 4.95. In considering the status quo and two alternative scenarios canvassed in the s32 Report, I consider that:
- a. the status quo fails to meet the plan change purpose, and is inferior to the proposed provisions and the two alternative scenarios in that respect; while
 - b. the two alternatives considered fail to meet the Plan's policy aims and in turn the aim of Objective A5-1 to enhance air quality where it is currently degraded, and are accordingly inferior to the status quo and the proposed provisions.

- 4.96. In short, the PCA3 provisions are the only option that implements both 'objectives'.
- 4.97. Turning to the alignment of the plan change purpose with Part 2 of the Act, my view is that the proposal to increase the number of solid fuel burning appliances for domestic heating in a way that meets the AQP's continual improvement aims is appropriate as it:
- a. amounts to the use of the air resource in a way that enables people to provide for:
 - i. their health - both in terms of air quality and home heating; and
 - ii. their social, cultural and economic well-being – including through enabling some people to realise the social and cultural benefits derived from solid fuel appliances for domestic heating, while minimising associated health costs to society;
 - b. safeguards the life-supporting capacity of air and the ability of future generations to use the air resource by perpetuating the AQP's continual improvement aims;
 - c. ensures adverse environmental effects will be managed appropriately;
 - d. is consistent with the ethic of stewardship and kaitiakitanga; and
 - e. has been designed to ensure amenity values and the quality of the environment are maintained or enhanced, having particular regard to the finite characteristics of air quality in Nelson.
- 4.98. For the avoidance of doubt, I have considered the amendments to the plan change in **Appendix 2** in reaching the conclusions above.
- 4.99. In my view, the notified s32 report was consistent with requirements of s32 of the Act. Moreover, the evolution of the PCA3 s32 assessment will continue through the hearing process in concert with any further evaluation under s32AA for amendments to the provisions made subsequent to notification.

Proposed Rules and Methods

4.100. Notwithstanding the more general amendments to the proposal discussed above, nine submissions³² have made specific comments about the proposed rules and methods, and/or sought specific amendments to them.

4.101. I have discussed each of these submissions in numerical order below.

4.102. **Submission 63** seeks clarification around the testing procedures for ULEB and a definition of 'real life'.

4.103. The original approach to ULEB real life testing adopted by the plan change was designed to provide sufficient certainty to applicants that appliances are authorised where:

- a. they meet the real-life testing regime used by ECan entitled "Canterbury Method 1"; or
- b. where the appliance is included on the Council's list of authorised appliances as having already satisfied the real-life testing requirements;

4.104. The approach purposefully left open the possibility for some variation to be applied to the real-life testing to provide for innovation and new technology.

4.105. Given the suggestion by the submission that the proposed approach is unlawful, Council has sought advice from Buddle Findlay on this matter. The response in **Appendix 7** is that (in summary):

- a. there are no fundamental issues with the notified approach; but
- b. the provisions could be made clearer by expressing the processes and constraints under which Council officers may, and may not, approve alternative testing methods and amend the list of authorised appliances.

³² Submissions 63-67, 87, 88, 92 and 95

4.106. The advice includes the following drafting solution to improve the clarity of the issue, through amendments to the proposed definition for 'small scale ultra-low emission burning appliance':

A2-76 Small-scale ultra-low emission burning appliance

means any small-scale solid fuel burning appliance that has been shown, following the authorisation process in Appendix AQ2B.1 and AQ2B.2, to ~~can~~ meet either of the following emissions and efficiency standards under real-life testing:

- (a) 38 milligrams per megajoule; or
- (b) no more than 0.5 grams of total suspended particulate per kilogram of fuel burned and a thermal efficiency of 65% or greater.

For the purposes of this definition:

- (c) "real-life testing":
 - (i) means Canterbury Method 1 for testing of ultra-low emission wood burners (Revision 1.5, January 2015); and
 - (ii) includes any other testing method approved in writing by Council which represents real life operating conditions, including start up and wood as it would be typically available from a local firewood merchant, such as hardwood, softwood or unseasoned wood;
- (d) the appliances on the Council's 'List of Authorised small-scale ultra-low emission burning appliances' described in Appendix AQ2B satisfy the above emissions and efficiency standards for real-life testing; and
- (e) ultra-low emission burning appliances do not include:
 - (i) small-scale pellet burning appliances, which are authorised under Appendix AQ2A; and
 - (ii) small scale solid fuel burning appliances, which are authorised under Appendix AQ2.

4.107. In my view, the above amendments will improve the intent of the proposed approach to provide sufficient certainty and to avoid the scenario where future real-life testing innovations or technological change are stymied (for example though a Method 1 equivalent from MfE or some other Council).

- 4.108. I note also that I have adopted the recommended consequential amendment to change footnote '1' in proposed Appendix AQ2B to refer to the amended definition (rather than identifying Method 1 as an example of real-life testing, as originally proposed).
- 4.109. In terms of the s32AA implications for the proposed amendments to the definition, I consider the above drafting to be superior to the notified provision. In my view, the scale and significance of the changes are relatively small, and purely for the purposes of improving certainty and clarity for the reader as to what 'real-life' means in this context. This translates to improved effectiveness in terms of the method implementing the AQP's policy aims, and improved efficiency through the avoidance of misinterpretation.
- 4.110. To the extent that it aligns with the amendments described above, I recommend that Submission 63 be accepted.
- 4.111. Along with **Submissions 65 and 66**, **Submission 63** also challenges the legality of the certification process outlined in section AQ2B.3 of proposed Appendix AQ2B.
- 4.112. Again, Council sought advice on this matter as discussed in **Appendix 7**. Similar to the definition for ULEB, the advice is that the proposed approach is generally sound, but that some refinements can improve clarity and certainty about future certification processes. The advice recommends that two sets of drafting solutions be adopted, being:
- a. an amendment to Clause AQ2B.3.3 to clarify that the 'cap assessment' to ensure no more than 1000 ULEBs are permitted in Airshed B2 and nor more than 600 ULEBs are permitted in Airshed C is made when the BAC application is received, applying the established RMA principle of first-in-first served; and
 - b. refinements to the 'methodology for determining capacity' for the respective airsheds under AQ2B.3.4.
- 4.113. Addressing these in turn, the specific drafting amendment proposed in respect of matter 'a' above is as follows:

The Council will issue a BAC provided that the if:

- (a) ~~the small-scale ultra-low emission burning appliance is located on a site in Airshed B2 or Airshed C; and the following limits are not exceeded (from the date that Plan Change A3 was made operative):~~
- (b) ~~when an application for a BAC is received by Council:~~
- (i) ~~if the application is for an appliance (a) in Airshed B2, no more than 1,000 appliances shall be certified hold a BAC in that airshed; or~~
- (ii) ~~if the application is for an appliance (b) in Airshed C, no more than 600 appliances shall be certified hold a BAC in that airshed.~~

4.114. I support the proposed amendments, and agree they will better clarify that Council will issue a BAC in Airshed B2 or C provided that the permitted allocation cap of 1600 (in total) is not exceeded.

4.115. The second amendment proposed is to 'Step 5' under the certification methodologies for Airsheds A and B1. The intent of the notified provisions was simply to ensure all relevant matters were considered by the Council when determining the extent to which additional capacity could be considered 'available'. The suggested refinements in **Appendix 7** enhance the level of specificity of these matters, relative to the notified drafting as follows:

Step 5: ~~Assess the ability for additional burner numbers by considering the extent of capacity available, Issue a BAC if the targets in Policy A5-1.3 and Policy A5-1.4 can be met.~~

~~In determining whether these targets can be met, the Council must consider having regard to:~~

- (a) ~~the impact of worst case meteorological conditions established under steps 1-3; on concentrations (including airshed dispersion); and~~
- (b) ~~the capacity for compliance with the NES established under step 4;~~
- (c) ~~the number of ULEBs in the Council's inventory of certified appliances burners installed (and therefore the number that may still be certified/installed under the current allocation); and~~
- (d) ~~real life emission factors and fuel use for new small-scale ultra-low emission burning appliance installations.~~

- 4.116. The above changes introduce objective criteria against which the future assessment can be based, and I agree that the amendments reduce the subjectivity of the provisions as notified to an appropriate degree.
- 4.117. It is clear from the amendments that the overall aim of Step 5 is to test any future allocation against the continual improvement aims of Policy A5-1.3 and the mid-term targets set out in Policy A5.1-4. This more deliberate drafting will better ensure the certification methodology is fit-for-purpose as a method to implement the AQP's policies. There are further amendments to clause '(b)' of this revised wording which I discuss subsequently. The version of the provisions attached at Appendix 2 accounts for this refinement.
- 4.118. New sub-clauses '(a)' and '(b)' improve clarity by directly linking back to the results obtained through Steps 1 and 4. New sub-clause '(c)' is largely consequential and for legibility's sake given the wider changes to the structure of the clause.
- 4.119. As a further point of clarification, I note that the proposed amendment to Step 5 for Airshed B2 adopts a slight variation. Namely, Step 4 for this airshed requires a cross referencing exercise to compare the findings of Steps 1-3 against the 'natural attrition' trend line established in Table 1 of the Appendix (rather than against the 33ug/m³ concentration). Dr Wilton has further explained the reasoning behind this variation in approach relative to Airsheds A and B1, and I agree with her that the approach for Airshed B2 as set out in **Appendix 2** is appropriate.
- 4.120. Adopting Dr Wilton's additional recommendation on this matter, I've also proposed a consequential change to the last paragraph of the method for Airshed C such that Steps 1-5 for Airshed B2 (rather than Airshed A) are applied to Airshed C after the necessary future monitoring.
- 4.121. An additional minor amendment proposed in **Appendix 7** is a change of the word 'can' to 'will' in the last sentence of the Method for Airshed C before Table 2. I have adopted that change in the annotated provisions in **Appendix 2**.
- 4.122. In reviewing these provisions, I have also noted a drafting error in Clause AQ2B.3.4. The Heading should refer back to Clause AQ2B.3.3, rather than AQ2B.2.3 as follows:

AQ2B.3.4 Certification: Any appliance in Airshed A or B1 and any appliance in Airshed B2 or C where AQ2B.23.3 does not apply

- 4.123. Finally, I have considered further amendments to improve the clarity of the certification process in light of the recommendations in Appendix 7. One such amendment is to incorporate the flow diagram from p.26 of the s32 Report as a non-regulatory information tool in proposed Appendix AQ2B. Time has not allowed this alteration (or corresponding changes to the Appendix text) to be made prior to the circulation of my report; however, I will table an amended copy of the appendix at the hearing for discussion purposes.
- 4.124. Insofar as they align with the amendments to the certification provisions in proposed Appendix AQ2B proposed above, I recommend that Submissions 63, 65 and 66 be accepted in part.
- 4.125. An additional decision requested in **Submission 63** is that the permitted activity approach under proposed rule AQr.26A be supplanted by a requirement for resource consent for any new ULEB.
- 4.126. In relation to Airsheds A and B1, the submitter's proposed approach is essentially the method adopted by the plan change over the short term. Any applicant seeking a ULEB in these airsheds will need to obtain a resource consent as a non-complying activity.
- 4.127. I do not support the consent-based approach for Airsheds B2 and C over the short term as it would amount to an unnecessary layer of regulation and a substantially less efficient method for achieving the AQP and PCA3 objectives.
- 4.128. The Plan Change has been designed to 'centralise' the necessary technical assessments that would otherwise be required through ad hoc resource consent applications for the first 1600 ULEB collectively applied for in these airsheds. Requiring a resource consent to authorise these appliances would result in a double-handling of the technical work undertaken in support of PCA3 to date.
- 4.129. In my view, there is merit in considering the resource consent process as an alternative to the future certification process, *if* the Panel arrives at a

finding that the latter is ultra vires or that it is not the most appropriate way to implement the Plan's policies, and in turn the AQP and PCA3 objectives and purpose of the RMA.

4.130. However, my view is that the approach is the most appropriate for the reasons expressed above, having also accepted Council's legal advice that the approach is lawful.

4.131. Similar to the 1600 ULEB permitted allocation, the future certification process sets out a more efficient assessment framework for determining future capacity than ad hoc resource consent processes in the future, though again applicants can opt for the non-complying resource consent pathway if that is their preference.

4.132. In either case, if it cannot be demonstrated that additional capacity exists such that Policies A5-1.3 and A5-1.4 are achieved, additional appliances should not be allocated under either the resource consent or future certification scenarios.

4.133. For the above reasons, I recommend that Submission 63 be accepted in part, only to the extent that PCA3 enables the resource consent approach in certain circumstances and/or for certain airsheds.

4.134. **Submission 64** considers that the non-complying activity 'default' status under Rule AQR.26A is too onerous, and prefers a discretionary approach.

4.135. In my view, the non-complying activity status is the most appropriate default category for this proposal, particularly given:

- a. the AQP's strong policy direction for mid-term targets and continual improvement, and the associated need for this direction to be assured by the consideration of future applications;
- b. the results of the latest monitoring and modelling data, which support only a limited amount of appliances in limited locations at present.

4.136. Accordingly, I recommend that Submission 64 be rejected to the extent that it prefers a discretionary default status to non-complying.

- 4.137. **Submissions 67 and 88** seek amendments to the stack requirements in AQP Appendix AQ3 and the requirements for ULEB in proposed AQ2B (respectively).
- 4.138. These matters are discussed in detail in Mr Popenhagen's addendum report, and I note my agreement with his findings that:
- a. while there is considerable merit in the amendments to the stack requirements proposed by Submission 67, these measures are not precluded by the plan change and can comprise part of the suite of measures adopted by appliances manufacturers to achieve the minimum efficiency requirements; and
 - b. similarly, it is not necessary to specify automation requirements for downdraft controls as sought by Submission 88.
- 4.139. For the reasons summarised above and in the other officer reports, I recommend that submissions 67 and 88 are rejected insofar as they seek specific amendments to the stack requirements and the requirements for ULEB.
- 4.140. **Submission 87** seeks that the future certification approach for Airshed A and B1 is amended to achieve continual improvement, rather than simply achieving compliance with the NES.
- 4.141. I agree with the thrust of this submission and have proposed some refinements to the proposed certification approach for these two airsheds with assistance from Dr Wilton.
- 4.142. Before describing those amendments, however, I note that the clear intent of the plan change is for all three ULEB-enabling methods³³ to be consistent with both the mid-term ambient air quality targets under Policy A5-1.4 and the long term continual improvement to 'acceptable' levels aim of Policy A5-1.3.
- 4.143. In my view, the methodologies for future certification in Airsheds A and B1 (as notified) implement the mid-term targets as they are geared towards achieving compliance with the NES (or reaching the 'Alert' level). However, the submission is correct in noting that the methods do not

³³ Permitted allocation, non-complying resource consent pathway, and future certification pathway

provide for continual improvement to an 'Acceptable' level, and (therefore) implementation of Policy A5-1.3.

4.144. Dr Wilton has recommended a refinement to 'Step 4' of the methods for Airshed A and B1 to reduce the target concentration level for determining 'capacity' from $50\mu\text{g}/\text{m}^3$ to $33\mu\text{g}/\text{m}^3$. I agree with her rationale for adopting this approach versus the method used for Airshed B2, and have proposed an amendment to the provisions accordingly. I have also proposed consequential amendments to the following for the purposes of clarity:

- a. amendment to the first paragraph of the 'Background' narrative for the Airshed A and Airshed B certification methodologies to clarify the aim is the 'Acceptable' category level, rather than 'Alert' category (or below the NES);
- b. a footnote reference included for the above amendment to the Airshed A background linking the reader back to Table A5-2 of Policy A5-1.3 for clearer understanding of what is meant by 'Acceptable';
- c. a similar consequential amendment to the third paragraph of AQ2A.3.1 (Context) to refer the reader back to Table A5-2 for the purpose of defining 'Alert'; and
- d. alteration to clause 'b)' of Step 5 (as amended above) to align with the revised aim of Step 4 to target the 'Acceptable' category value, rather than the NES.

4.145. To assist with s32AA considerations, I note that the estimated trend in 'natural attrition' rates of existing appliances in Airshed B2 is not anticipated in Airsheds A or B1. In the absence of any evidence to the contrary, I consider that continual improvement to 'Acceptable' levels could be compromised by setting interim capacity 'targets' in these airsheds (i.e. concentrations between 33 and $50\mu\text{g}/\text{m}^3$).

4.146. By avoiding that scenario and adopting the more conservative target proposed by Dr Wilton, the result will be a more effective method for achieving Policy A5-1.3 in my view. In that same respect, the amended approach provides greater certainty that once concentrations are 'Acceptable' (i.e. below $33\mu\text{g}/\text{m}^3$), they will stay there.

- 4.147. A consequence of the amendment is a lower likelihood of ULEB being allocated through future certification relative to the notified approach; however, I consider that is an appropriate outcome, given the Plan's policy expectations and the requirement for the methods to implement the policies.
- 4.148. For these reasons, I recommend that the Panel amend the methodology for future certification in Airsheds A and B1 as set out in **Appendix 2**, and that Submission 87 be accepted.
- 4.149. **Submission 92** proposes several amendments to the provisions in support of its relief sought to delay any allocation of ULEB to January 2018 at the earliest.
- 4.150. For the reasons given by Dr Wilton, I do not support the delay in ULEB allocation, and accordingly do not consider that the proposed amendments are needed. On that basis, Submission 92 should be rejected.
- 4.151. **Submission 95** has raised a drafting issue with the proposed permitted activity rule clause AQR.26A.1. The decision sought is that the clause is more clear that sub-clauses 'a)' and 'b)' apply both to new buildings and existing buildings (sub-clauses 'i)' and 'ii)').
- 4.152. The proposed drafting of the rule (as notified) used the same approach as the preceding rule for pellet fires (AQR.26) to achieve as much consistency with the existing AQP provisions as possible.
- 4.153. However, I agree that the structure of the rule could lead to the incorrect interpretation that sub-clauses 'a)' and 'b)' are only requirements for existing buildings under 'i)'. To resolve that ambiguity, I have proposed a drafting solution that mirrors the approach in Clause AQR.25A.1.³⁴
- 4.154. I note that there are several alternatives that could be adopted which bear less (or no) resemblance to current AQP drafting. I would be happy to discuss these further with the Panel if desired.
- 4.155. In any case, I recommend that Submission 95 be accepted.

³⁴ I note this amendment is likewise aligned with the recommendation in Appendix 7.

Closing comments

- 4.156. Having considered the submissions on the plan change as discussed above, my recommendation is that the plan change be **approved with the amendments set out in Appendix 2.**
- 4.157. In my view, the amended proposal is consistent with the role of the AQP to assist the Council in carrying out its functions under the RMA, and it is also consistent with the NESAQ.
- 4.158. The amended provisions are the most appropriate way to implement the AQP policy framework, and in particular Policies A5-1.3, A5-1.4 and A5-1.5. The proposal is likewise the most appropriate way to implement the settled objective of the AQP and the proposed PCA3 objective.
- 4.159. The plan change has been prepared in accordance with the sustainable management purpose of the Act, and the proposal gives effect to the Nelson RPS.