

TE WAI ORA



Nelson Marlborough
District Health Board

**Submission on Nelson City Council
Nelson Air Quality Plan
Proposed Plan Change A3: Wood
Burners**

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Introduction

1. Nelson Marlborough District Health Board (NMDHB) is a key organisation involved in the health and wellbeing of the people within Te Tau Ihu. NMDHB's Public Health Service (NMDHB-PHS) appreciates the opportunity to comment from a public health perspective on the Nelson City Council (NCC) Nelson Air Quality Plan Proposed Plan Change A3 (the 'Wood Burner Plan Change').
2. The NMDHB-PHS makes this submission in recognition of its responsibilities to improve, promote and protect the health of people and communities under the New Zealand Public Health and Disability Act 2000 and the Health Act 1956.
3. The NMDHB-PHS considers that air quality is a key determinant of health and wellbeing. There are a number of health issues associated with poor air quality. For example, exposure to air pollution from open fires and wood burners is associated with increased respiratory symptoms such as coughing and wheezing, increased winter hospital admissions for respiratory and cardiovascular illnesses, and reduced life expectancy.¹ The pollutants of primary concern are particulates PM₁₀ and PM_{2.5}. These particles cause health effects, especially over the long term. There is a substantial body of evidence on the health effects of inhaling particulate matter with the smaller PM_{2.5} particles being more significant due to their ability to penetrate deeper into the lungs.¹
4. This submission sets out specific matters of interest or concern to the NMDHB-PHS including around the provision for ultra low emission burners (ULEBs) in specific areas, the behaviour change and monitoring programme, the future provision for additional ULEBs and cold homes.
5. The NMDHB-PHS would also like to take this opportunity to acknowledge the comprehensive manner in which NCC has considered the matters of air quality and wood burners, including through commissioning a number of independent studies, and the amount of work involved.

Provision for Ultra Low Emission Burners in Airsheds B2 and C

6. The NMDHB-PHS **supports** the proposed new rule AQr.26A allowing a specified number of ULEBs in certain areas. It is noted that these appliances will only be permitted in Airsheds B2 (Stoke) and C (Brook to Atawhai) where research undertaken by Environet Ltd indicates that there will be no degradation in air quality and a continuation of projected downward trends can be achieved. This outcome is subject to an enhanced behaviour change programme targeting a 10% reduction in PM₁₀ being implemented concurrently (discussed below).
7. In terms of the remaining areas of the city - Airsheds A (Victory) and B1 (Tahunanui) - research undertaken by Environet Ltd indicates that there is currently no capacity for the installation of

¹ Kuschel G, Metcalfe J, Wilton E, Guria J, Hales S, Rolfe K, Woodward A. 2012. *Updated health and air pollution in New Zealand study*. Volume 1: Summary report. Prepared for Health Research Council of New Zealand, Ministry of Transport, Ministry for the Environment and New Zealand Transport Agency.

ULEBs in these airsheds given their poorer winter air quality. The NMDHB-PHS **supports** the proposed rule not permitting additional ULEBs in these airsheds.

Decision sought

8. That new rule AQR.26A permitting a specific number of ULEBs in Airsheds B2 and C is made operative.
9. That the intent of new rule AQR.26A remains as written in that ULEBs are not permitted in Airsheds A and B1.

Behaviour change and monitoring programme

10. The implementation and success of the behaviour change programme is integral to the anticipated air quality results being achieved alongside the introduction of ULEBs under new rule AQR.26A. Accordingly, the NMDHB-PHS considers that it is important that the behaviour change and monitoring programme is amended to detail how the programme itself will be routinely monitored, evaluated and reviewed to ensure that it achieves at least a 10% reduction in PM₁₀, and also to detail the ongoing operational costs for implementing the programme over the life of the Nelson Air Quality Plan (further to the initial set-up costs already set out in the programme). It is also important that NCC commits long-term funding to the behaviour change programme to ensure its continuation.
11. Although the behaviour change programme targets reducing PM₁₀, the NMDHB-PHS supports the continuation of PM_{2.5} monitoring and considers that it should also be incorporated into the behaviour change monitoring programme to better inform the evaluation of the programme parallel to new rule AQR.26A. As the Nelson Air Quality Plan identifies, it is estimated that 90% of Nelson's PM₁₀ fits into the PM_{2.5} category due to the high use of wood and that these particles can cause serious health effects.

Decision sought

12. That the behaviour change and monitoring programme sets out how the programme itself will be routinely monitored, evaluated and reviewed to ensure that a 10% reduction in PM₁₀ is achieved as a minimum.
13. That the behaviour change and monitoring programme sets out the ongoing operational costs of implementing the programme over the life of the (reviewed) Nelson Air Quality Plan, and that NCC commits long-term funding to ensure the programme's continuation.
14. That the behaviour change and monitoring programme incorporates PM_{2.5} monitoring to better inform the evaluation of the programme parallel to new rule AQR.26A.

Future provision for additional Ultra Low Emission Burners

15. The Wood Burner Plan Change provides mechanisms to facilitate the introduction of additional ULEBs for the event that air quality initiatives improve the Urban Area's ambient air quality to a level where it is considered additional ULEBs can be enabled (including the possibility of Airsheds A and B1).
16. The NMDHB-PHS **supports this provision in part** and encourages the NCC to be cautious in considering the "capacity" of an airshed in accommodating increased numbers of ULEBs. The NMDHB-PHS notes that Nelson city has made very good progress in decreasing winter air pollution which primarily arises from the use of wood burners and it is important that this progress is not compromised.
17. The NMDHB-PHS strongly believes that the National Environmental Standard (NES) for PM₁₀ should not be seen as a level to which can be polluted up to. In support of this:
 - Policies of the Nelson Air Quality Plan aim to improve ambient air quality
 - The World Health Organization states that the health effects of PM₁₀ and PM_{2.5} are well documented and that there is no safe level of exposure to which no adverse health effects occur²
 - Environet Ltd, in its report prepared for the NCC³, states that "allowing the degradation of air quality, particularly polluting up to a guideline or standard, is inconsistent with the nationwide philosophy for air quality planning which typically promotes the maintenance or enhancement of existing air quality".
18. To this end, the NMDHB-PHS considers that the methodology for determining any future capacity as set out in proposed Appendix AQ2B.3.4 should be amended. Currently the overall aims for Airsheds A and B1, where air quality is poorer, are geared towards ensuring that PM₁₀ concentrations fall below NES requirements in evaluating the extent to which there may be capacity for new installations of ULEBs.
19. The NMDHB-PHS considers that the proposed criteria for determining whether additional ULEBs can be accommodated needs to ensure an environmental outcome consistent with Environet Ltd's findings that support the installation of ULEBs in Airsheds B2 and C under the Wood Burner Plan Change. Namely, that there will be no degradation in air quality and a continuation of projected downward trends can be achieved. The NMDHB-PHS believes that this approach will result in better environmental and health outcomes, and give better effect to the policy aims of the Nelson Air Quality Plan for improving ambient air quality.

² World Health Organization. 2013. *Health effects of particulate matter: Policy implications for countries in eastern Europe, Caucasus and central Asia*. Copenhagen: WHO Regional Office for Europe

³ Wilton E. 2015. *Air quality management in Nelson – Modelling of additional scenarios – 2015*. Prepared for the Nelson City Council. Christchurch: Environet Ltd

Decision sought

20. That the criteria for determining future capacity for additional ULEBs under proposed Appendix AQ2B.3.4 is amended to ensure an environmental outcome whereby there will be no degradation in air quality and a continuation of projected downward trends can be achieved.

Cold homes

21. The NMDHB-PHS notes that Airsheds A and B1 which have poorer winter air quality also contain some of Nelson's most socially deprived areas.⁴ The NMDHB-PHS is also aware that a greater proportion of the cities' cold homes are located within these areas.
22. The NMDHB-PHS considers it unlikely that the Wood Burner Plan Change will have an impact on addressing cold homes in Airsheds A and B1. Further to poor air quality currently restricting the installation of ULEBs in these areas, the cost of ULEBs is also likely to be prohibitive to many of these households if they were allowed in the future (either directly as owner-occupiers or indirectly due to landlords being unwilling to pay for their installation).
23. The NMDHB-PHS acknowledges that cold homes also have health effects and believes that it is important that this issue is addressed alongside improving air quality. However, good air quality should not be compromised at the expense of heating cold houses and therefore other initiatives, such as improving thermal efficiency of homes, are important.
24. The NMDHB-PHS is pleased to note that the study by Environet Ltd found substantial gains have been made in improving the insulation levels of Nelson homes and that it is unlikely that there has been an increase in cold homes since high emission wood burners were phased out. The NMDHB-PHS would like to acknowledge NCC's contribution in funding to support the Warmer Healthier Homes programme for insulation upgrades to Nelson residents in most need.
25. The NMDHB-PHS considers that it is very important that NCC continues to support initiatives to address cold homes and associated health effects alongside improving air pollution.

Decision sought

26. That NCC continues to support the Warmer Healthier Homes programme and/or other initiatives aimed at improving thermal efficiency and home heating.

⁴ University of Otago. *Socioeconomic deprivation indexes: NZDep and NZiDep*, Department of Public Health. <http://www.otago.ac.nz/wellington/departments/publichealth/research/hirp/otago020194.html>

Conclusion

27. The NMDHB-PHS thanks the NCC for the opportunity to comment on the Wood Burner Plan Change.
28. The NMDHB-PHS supports the overall intent of rule AQR.26A but considers that amendments to the supporting criteria for enabling additional ULEBs and the behaviour change programme are needed to ensure better environmental and health outcomes.
29. The NMDHB-PHS sees it very important to continue to work in partnership with the NCC on air quality matters. Of note, the NMDHB is currently developing a position statement on the interrelated issues of warm homes and air quality and looks forward to presenting it to NCC and other local authorities in due course.
30. The NMDHB-PHS **wishes to be heard** in support of its submission.

Yours sincerely



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